Utilization of Information and Communication Technology between Older and Younger Lecturers in Business Education in Nigerian Universities in the South-South Geo-Political Zone

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Abstract

This study was conducted to ascertain the level of utilization of information and communication technology equipment in teaching of Business Education courses in the Department of Business Education in Universities in South-South geo-political zone of Nigeria. A population of 117 business education lecturers in seven federal and state universities of south-south geo-political zone of Nigeria was used. The instrument for data collection was a four point scale questionnaire. Three research questions were answered using mean ($\bar{x}$) and standard deviation. Hypotheses 1-3 were tested using ANOVA statistics. All the hypotheses were tested at 0.05 level of significance. Results from the analyzed data showed that the null hypothesis is accepted because the critical p-value is less than P< .05.

The null hypothesis is accepted because the critical p-value is less than P< .05. This is because Lecturers with less years of experience has higher proportion of utilization of ICT equipment more than those Lecturers with long years of experience. The null hypothesis was accepted because the calculated p-value is less than P< .05. This is because Lecturers with lower qualification had a higher proportion of the utilization of ICT equipment more than those with higher qualification. Conclusion and recommendations were made such as University authorities should provide incentives to encourage the older Lecturers to encourage them in ICT training. Government and university authorities should provide electricity as well as solar generating sets for all the universities. Government and university authorities should connect all the universities, faculties as   well as departments to ICT nationwide. The government should assist by reducing the high cost of ICT hardware in Nigeria.

Introduction

Business education encompasses office technology and management education, accounting education, marketing education and computer education. Business education is a unit of vocational and technical education which is usually housed under the faculty of education. The course focuses attention on the pedagogy of teaching and learning of business education courses.

According to Esene and Ohiwerei (2005) as cited in Omo-Ojugo and Ohiwerei (2008) business education subjects have not been popular in the Nigerian secondary schools because of the bias against vocational education. This is further reinforced by the attitude of Nigerian parents who prefer the conventional grammar schools to business schools whose curricular are directed towards the training of secretarial and clerical personnel (Esene and Ohiwerei, 2005). This impression was prior to the release of the National Policy on Education Revised (2004). The policy which recommended the   6-3-3-4 educational system was instrumental to the inclusion of business subjects in the secondary school curriculum.

According to Ohiwerei (2005) information and communication technology encompasses all those technologies that enable the handling of information and facilitate different forms of communication among human actors, between human beings and electronics systems. Okoro, Ikpotokin and Ekong (2002) affirmed that information and communication technology is a variety of means, which enables the capture or creation, storage or distribution of data, information and knowledge. Through information and communication technology business educators are able to collect data, which represent raw fact, numbers and figures. The knowledge gained is the ability to make best use of the information and also to practicalize it to the growth of business education.

Adebayo and Adesope (2007) claimed that information and communication technology (ICT) is the scientific, technological and engineering disciplines and the management technologies used in the handling of information, processing and application related to computers. It is also concerned with the interactions with man and machines; and associated socio-economic and cultural matters (United Nations Educational Scientific and Cultural Organiszation in Osuagwu, 2001). Information technology, according to Marshall in Madu and Adeniran (2000), is the coming together of computing and telecommunications for the purpose of handling information. ICT is also used to describe the tools and processes to access, retrieve, store, organize, manipulate, produce, present and exchange information by electronic and other automated means. These include hardware, software and telecommunications in the forms of personal computers, scanners, digital cameras, handhelds/PDAs, phones, faxes, modems, compactable Disk and Digital video disk players and recorders, digitalized video, radio and television and programs like database systems and multimedia applications. The bottom-line is that information technology is all applications that are computer-based for the purpose of sharing ideas, data, and other relevant information.

The world today is a global village, whereby all activities relating to the performance of works in the offices, teaching and learning are all tagged to information and communication technology. A business educator upon graduation is expected to work in the office, as well as to teach students business subjects. The lack of the knowledge of information and communication technology on the part of business educators poses a serious problem to the teaching of business education courses in Nigerian Universities where Business Education courses are being offered.

Ololube (2006), reveals that many universities are not information and communication technology oriented even at this stage of development. The problem therefore would be as a result of inadequate funding by the government, weak infrastructure in place, lack of skilled personnel to instruct, lack of relevant teaching software and also limited access to the internet. These problems have made teaching and learning (pedagogy) especially in the 21st century inadequate. Some of the lecturers who have been working for over twenty years and above find it difficulty to learn computer while others as counting years toward retirement

therefore, saw no reason to stress themselves in information and communication technology treaining.

The magnitude of these problems and their implications on students has inspired this research on utilization of information and communication technology in business education. The researcher therefore, tries to ascertain the extent of utilization of information and communication technology in the Nigerian Universities offering business education with a view to ascertaining the leve of usage of information and communication technology in universities offereing Business Education.

The purpose of this study is to determine the level of utilization of information and communication technology between older and younger Lectuters in Business Education Departments in Nigerian universities. Specifically, the study will;
1. Ascertain the level of utilization of information and communication technology equipment based on the age of Lectuters in teaching courses in Business Education Departments in south-south geo-political zone of Nigeria.
2. Determine the level of utilization of information and communication technology equipment based on years of Experience of Lectuters in teaching courses in Business Education Departments in south-south geo-political zone of Nigeria.
3. Ascertain the level of utilization of information and communication technology equipment based on Qualification of Lecturers in teaching courses in Business Education Departments in south-south geo-political zone of Nigeria.

Research Questions
1. What is the level of utilization of information and communication technology equipment based on age of Lectuters in teaching Business Education courses in Universities in South-South (geo-political zone) of Nigeria?
2. What is the level of utilization of information and communication technology equipment based on years of experience of Lectuters in teaching Business Education courses in Universities in South-South (geo-political zone) of Nigeria?
3. What is the level of utilization of information and communication technology equipment based on Qualification of Lecturers in teaching Business Education courses in Universities in South-South (geo-political zone) of Nigeria**?**

Research Hypotheses
The following hypotheses have been formulated and would be tested at 0.05 alpha levels of significance.
HO_1: The responses of business educators in the level of utilization of information and communication technology equipment for teaching Business Education courses will differ significantly based on age.
HO_2: The responses of business educators in the level of utilization of information and communication technology equipment for teaching Business Education courses will differ significantly based on years of Experience.
HO_3: The responses of business educators in the level of utilization of information and communication technology facilities used for teaching Business Education courses will differ significantly based on their Qualification.

The research aims at the level of utilization of information and communication technology between older and younger Lectuters in all universities where business education courses are

offered in South-South geo-political zone of Nigeria. Specifically ages, experiences and qualification would be covered.

Review of Related Literature
Utilization of ICTS by Older and Younger Business Education Lecturers

Aduwa-Ogiegbaen and Isah's study in 2005 at the University of Benin investigated the years of experience in a university setting can be seen as years of personal involvement with teaching/research in a university. Years of experience represent how mature people are in their careers and how ready they are to embrace change. Academics vary in their years of teaching experience. To understand the influence of research/teaching experience on information and communication technology use for knowledge generation, academics were sub-grouped according to number of years of experience. The grouping yielded the following categories of academics: 1-5, 6-10, 11-15, 16-20, and 20 and above years. And the result revealed that senior, middle and junior academics use information and communication technology to a large extent for scholarly communication which shows that the use of information and communication technology was highest for junior academics.

Though some research reported that teachers' experience in teaching did not influence their use of computer technology in teaching (Niederhauser & Stoddart, 2001), most research showed that teaching experience influence the successful use of information and communication technology in classrooms Wong & Li (2008); Gorder (2008) reported that teacher experience is significantly correlated with the actual use of technology. In her study, she revealed that effective use of computer was related to technological comfort levels and the liberty to shape instruction to teacher-perceived student needs. Also, Baek et al (2008) claimed that experienced teachers are less ready to integrate information and communication technology into their teaching.

Similarly, in United States, the (U.S National Centre for Education Statistics, 2000) reported that teachers with less experience in teaching were more likely to integrate computers in their teaching than teachers with more experience in teaching. According to the report, teachers with up to three years teaching experience reported spending 48% of their time utilizing computers, teachers with teaching experience between 4 and 9 years, spend 45% of their time utilizing computers, teachers with experience between 10 and 19 years spend 47% of the time, and finally teachers with more than 20 years teaching experience utilize computers 33% of their time. The reason to this disparity may be that fresh teachers are more experienced in using the technology.

Lau & Sim (2008) also conducted a study on the extent of information and communication technology adoption among 250 secondary school teachers in Malaysia. Their findings revealed that older teachers frequently use computer technology in the classrooms more than the younger teachers. The major reason could be that the older teachers having rich experience in teaching, classroom management and also competent in the use of computers can easily integrate information and communication technology into their teaching. The result is in agreement with Russell et al (2003) who found that new teachers who were highly skilled with technology more than older teachers did not incorporate information and communication technology in their teaching. The researchers cited two reasons: new teachers focus could be on how to use information and communication technology instead of how to incorporate information and communication technology in their teaching. Secondly, new teachers could experience some challenges in their first few years of teaching and spend most of their time in familiarizing themselves with school's curriculum

and classroom management.   But in a survey of almost 3000 teachers, Russell et al (2007) argued that the quality of ICT integration was related to the years of teacher service. However, Granger et al (2002) conducted a qualitative survey on factors contributing to teachers' successful implementation of information and communication technology in Canada. They interviewed 60 respondents from 12 schools. The findings found no relationship between teachers' teaching experience and experience in the use of information and communication technology implying that teachers' information and communication technology skills and successful implementation is complex and not a clear predictor of information and communication technology integration.

However, Jacobs (1998) found that professors present more scientific papers at international conferences than associate professors, senior lecturers, and lecturers. But as viewed by Bottle (1994) in Ohiwerei (2016) research output of academics was not dependent on rank. Academics in the middle rank (senior lecturers and lecturer 1) work extra hard to generate and communicate knowledge that may help them get promoted to the position of professor in the shortest possible time. Professors in science and engineering faculties were found to produce more research (Okafor, 2008) while the junior rank (lecturer 2 and assistant lecturer) were said to be more amenable to information and communication technology. Given the gap created and the fact that senior, middle, and junior academics should use information and communication technology to generate and communicate knowledge, it is important to find out how their ranks influence the use of the technology.

Okore (2011) reported that middle and junior academics demonstrate greater use of information and communication technology for knowledge generation and communication. One possible explanation for this may be that majority of academics in the two cadres are youths who develop quicker information and communication technology confidence, and therefore demonstrate greater information and communication technology use. Since the findings of Jacob (1998); Okafor (2008) revealed that professors generate more knowledge than other academics, a more pro-active step has to be taken to improve the confidence of senior academics in the use of information and communication technology. Based on these facts training and retraining of senior academics in the use of information and communication technology is recommended so as to allow them operate on a level playing ground with the middle and junior academics. Further investigations should be carried out to find other factors, which this study did not look into, that are responsible for rank not to have any significant influence on information and communication technology use for scholarly communication.

Ejechi (2013) postulated that it is common to see young people and students patronising cybercafés to use internet facilities on campuses and in the cities of Nigeria. Elderly people including academics are rarely found in such places. It can be argued that the elders remain in their homes or offices to use information and communication technology, because of the availability of cell phones and lap top computers with internet facility.

However, this requires empirical substantiation given the observation that Nigerian universities are rated poorly in the web ranking of world universities; and this has been partly attributed to their poor state of information and communication technology. An empirical study of the extent of awareness and use of information and communication technology by elderly Nigerian university lecturers is important, because they provide academic leadership particularly in research. There is paucity of information on the use of information and communication technology by lecturers in Nigeria hence such a study may provide useful information for the formulation of policies aimed at boosting information and communication

technology applications. The study therefore, focused on the extent of the use of computer software and the internet by elderly lecturers' age in Nigerian universities.

Ejechi (2013) concluded that the elderly and experienced Nigerian academics tend to be reluctant to use information and communication technology applications and this is a barrier to information and communication technology diffusion development, because they provide academic leadership.

However, several studies have been conducted on the issue of utilization of information and communication technology between old and young Lecturers particularly outside Nigeria, but no evidence study known to the researcher had been conducted on the status of utilization of information and communication technology between old and young Lecturers in Nigerian Universities in South-South geo-political zone of Nigeria and this is the gap the researcher wishes to cover.

Methodology

This chapter provides a description of the methods the researcher used in carrying out the study. For the purpose of clarity and orderly presentation, the following areas are described: research design, area of the study, population of the study, sample and sampling technique, instrument for data collection, validation of instrument, reliability of instrument, administration of instrument, method of data collection, and method of data analysis.

Research Design

This study utilized a descriptive survey research design. This is because it seeks the opinion and perceptions of the respondents. The aim of this type of design used for the study has earlier been recommended by (Asika, 1991; Ali, 2006; Uzoagulu, 1998). This type of design is useful in addressing and evaluating of questions about the effectiveness and impact of programmes. It emphasizes the use of comparative data as contents for interpreting findings. Survey design increases researchers confidence that observed outcomes are the result of a given programme or innovation instead of a function of extraneous variables or events.

This research was carried out in the south–south geo-political zone of Nigeria. This zone comprises Akwa-Ibom, Bayelsa, Rivers, Delta, Edo and Cross-River States. There are six (6) state universities and six (6) federal universities in this zone. Of this number, seven Universities offer Business Education as a programme.

In view of the fact that the population of this study is small, the researcher used all the 117 business education lecturers for the study. This is a manageable size hence the researcher was able to adequately reach all of them. Nwana (1993) in Uzoagulu (1998) stated that there is no fixed number and no fixed percentage is ideal, rather it is the circumstances of the situation that determines what number or what percentage of the population should be studied.

Instrument for Data Collection

The main instrument for collection of data is a questionnaire titled "Utilization of Information and Communication Technology in Business Education in Nigeria" (UICTBEN). It is a structured questionnaire which contained items designed to help in the level of utilization of information and communication technology. The questionnaire contained 100 items which elicited data on the level of utilization of information and communication technology in business education in Nigerian universities.

The instrument was developed by the researcher with the assistance of the other experts using literature on utilization of information and communication technology in business education in Nigerian universities.

The questionnaire consisted of two parts (part one and part two). Part one sought personal information such as type of university, sex, age, experience and qualification of the respondents. Part two comprised six sections (A-C). Section **A** has 33 items which sought information on Utilization of information and communication technology equipment based on age of Lecturers in teaching courses in Business Education Department. While section **B** has 33 items which sought information on Utilization of information and communication technology equipment baed on Experience of Lecturers in teaching courses in Business Education Department. And section **C** has 34 items which sought information on Utilization of information and communication technology equipment based on Qualification of Lecturers in teaching courses in Business Education Department.

The instrument was subjected to face and content validation by two experts. These experts were presented with the instrument, purpose of the study, research questions and hypotheses. They all offered their criticism on the face and content validation of the instrument by observing; suggesting and the necessary corrections were effected in the final instrument.

In an attempt to establish the reliability of the instrument, test-retest method was carried out using 15 Business Education Lecturers from the Department of Teacher Education, (Business Education Option), at the University of Nigeria, Nsukka and Adekunle Ajasin University, Akungba. The instrument was first administered on 15 Lecturers from Business Education. Two weeks later, the same test items were administered to the same 15 Business Education Lecturers. The first and second responses were correlated to obtain the reliability co-efficient. The result of the test-retest was correlated using the Pearson's product moment correlation co-efficient to obtain the reliability co-efficient of 0.77. According to Osuala (2001) the instrument is acceptable.

Method of Data Collection

The instrument was administered on 117 respondents by the researcher with the assistance of trained research assistants from the south-south geo-political zone of Nigeria. The researcher and the research assistants handed over the instruments to the respondents and allowed three months for the completion and return. This allowed the respondents enough time and opportunity to study and understand the questions before responding. The research assistants utilized for the administration of the instrument included lecturers of business education from different universities across the south-south geo-political zone of Nigeria, one each from the universities. They were adequately briefed on what is expected of them during the exercise. Though, some of the respondents completed the questionnaires and submitted on the spot while others submitted later after serious and constant persuasion within the period of three months yielded one hundred percent return. This was made possible due to the personal commitment and determination of the research assistants coupled with the fact that business education lecturers are highly skilled and good researchers that know the value of research questionnaires. The overall returned questionnaires constituted 117 representing 100 percent. After the collection of copies of the instruments from the respondents, they were checked one after the other to confirm whether they are properly completed, before they were subjected to analysis.

Method of Data Analysis

The researcher used simple descriptive statistics to analyze the data gathered from the questionnaire. Mean and standard deviation were used to determine the degree of relevance of the items that relate to research questions 1, 2 and 3 in the questionnaire. Nominal values such as (4, 3, 2, and 1) were assigned to different options of the items for positively cued items and 1, 2, 3, 4, for negatively cued items. The standard deviation is commonly used as a measure to compare the spread in two or more sets of observations. For the purpose of this study therefore, the standard deviation was used to measure how close or far apart the values are from the mean. Such a measure of dispersion indicates how reliable the calculated mean are to this study. The mean of each item was interpreted in relation to the limits of the values assigned to the response categories of the instrument as follows:

The two directional null hypotheses Ho_1 Ho_2 Ho_3 formulated for the study were tested at 0.05 level of significance using ANOVA. The SPSS was utilized for the analysis.

Hypothesis One

The responses of business educators on the level of utilization of information and communication technology equipment for Business Education will not differ significantly among age.

Table 1

ANOVA Based on Age of Business Education Lecturers on Utilization of Information and Communication Technology Equipment for Teaching Courses in Business Education Departments

Variables Age	N	$\bar{x}$	SD	F	Df	p-Value	Dec.
32-37 Years	18	2.33	0.23				
38-43 Years	19	2.02	0.30				
44-49 Years	50	1.47	0.53				
50 Years and above	26	1.97	0.33	6.595	116	0.000	Accepted

P< .05

Table 1 shows Lecturers age mean ($\bar{x}$) ratings of utilization of information and communication technology equipment for teaching business education courses in which Lecturers between the ages of 32-37 shows mean ($\bar{x}$) of 2.33 with a SD of 0.23, those of 38-43 shows mean ($\bar{x}$) of 2.02 with SD of 0.30, those of 44-49 shows mean ($\bar{x}$) of 1.47 with SD of 1.47 and 50 years and above shows mean ($\bar{x}$) of 1.97 with SD of 0.33. The null hypothesis is accepted because the critical p-value is less than P< .05. Lecturers age differ significantly in the mean ($\bar{x}$) ratings of utilization of information and communication technology equipment for teaching business education courses. The younger Lecturers had a higher proportion of the utilization of information and communication technology equipment compared to the older Lecturers. This is also a confirmation of Okore (2011) which reported that middle and junior academics demonstrate greater use of information and communication technology for knowledge generation and communication. Also supporting this report Ejechi (2013) concluded that the elderly and experienced Nigerian academics tend to be reluctant to use information and communication technology applications and this is a barrier to information and communication technology diffusion development, because they provide academic leadership

Hypotheses Two

The responses of business educators on the level of utilization of information and communication technology equipment for Business Education will not differ significantly in their experience.

Table 2

ANOVA Based on Experience of Business Education Lecturers on Utilization of Information and Communication Technology Equipment for Teaching Courses in Business Education Departments

Variables Years of Experience	N	$\bar{x}$	SD	F	Df	p-Value	Dec.
1-5 Years	28	2.07	0.49				
6-10 Years	18	1.94	0.40				
11-15 Years	25	1.71	0.43				
16-20 Years	24	1.11	0.47				
21 Years and above	22	2.04	2.32	3.949	116	0.85	Accepted

P< .05

Table 2 shows utilization of ICT equipment for teaching business education courses based on the years of experience of Lecturers between 1-5 years mean ($\bar{x}$) shows 2.07 with a SD of 0.49, 6-10 years mean ($\bar{x}$) as 1.94 with SD of 0.40, 11-15 years mean ($\bar{x}$) as 1.71 with SD of 0.43, 16-20 years mean ($\bar{x}$) as 1.11 with SD of 0.47 and 21 years and above mean ($\bar{x}$) as 2.04 with SD of 2.32. The null hypothesis is accepted because the critical p-value is less than P< .05. This is because Lecturers with less years of experience has higher proportion of utilization of ICT equipment more than those Lecturers with long years of experience. This is in line with (U.S National Centre for Education Statistics, 2000) which reported that teachers with less experience in teaching were more likely to integrate computers in their teaching than teachers with more experience in teaching. According to the report, teachers with up to three years teaching experience reported spending 48% of their time utilizing computers, teachers with teaching experience between 4 and 9 years, spend 45% of their time utilizing computers, teachers with experience between 10 and 19 years spend 47% of the time, and finally teachers with more than 20 years teaching experience utilize computers 33% of their time. The reason to this disparity may be that fresh teachers are more experienced in using the technology.

This study is also supported by Niederhauser and Stoddart (2001), which stated that though some research reported that teachers' experience in teaching did not influence their use of computer technology in teaching. Baek et al (2008) claimed that experienced teachers are less ready to integrate information and communication technology into their teaching.

Hypotheses Three

The responses of business educators on the level utilization of information and communication technology facilities used for teaching Business Education courses will not differ significantly based on their qualification.

Table 3

ANOVA Based on Qualification of Business Education Lecturers on Utilization of Information and Communication Technology Equipment for Teaching Courses in Business Education Departments

Variables							
Qualification	N	$\bar{x}$	SD	F	Df	p-Value	Dec.
B.Sc/B.Ed	8	1.43	0.45				
M.Sc/M.Ed	66	1.95	0.46				
Ph.D	43	1.91	0.41	5.021	116	0.008	Accepted

P< .05

Table 3: Utilization of information and communication technology equipment for teaching business education courses among Lecturers with B.Sc./B.Ed holders, shows mean ($\bar{x}$) score of 1.43 with SD of 0.45, M.Sc./M.Ed. holders shows mean ($\bar{x}$) of 1.95 with SD of 0.46 and Ph.D holders shows mean ($\bar{x}$) of 1.91 with SD of 0.41. The null hypothesis was accepted because the calculated p-value is less than P< .05. Lecturers qualification differ significantly in the mean ($\bar{x}$) ratings of utilization of information and communication technology equipment for teaching business education courses. Lecturers with lower qualification had a higher proportion of the utilization of information and communication technology equipment more than those with higher qualification. This is in line with this report as Jacob (1998) and Okafor (2008) revealed that professors generate more knowledge than other academics; a more pro-active step has to be taken to improve the confidence of senior academics in the use of information and communication technology. Based on these facts training and retraining of senior academics in the use of information and communication technology is recommended so as to allow them operate on a level playing ground with the middle and junior academics.

Summary of Findings
Results presented in this chapter revealed the following
1. Lecturers age differ significantly in the mean ($\bar{x}$) ratings of utilization of information and communication technology equipment for teaching business education courses. The younger Lecturers had a higher proportion of the utilization of information and communication technology equipment compared to the older Lecturers.
2. The null hypothesis is rejected because the critical p-value is low than the calculated p-value. This is because lecturers years of experience differ significantly in their mean ($\bar{x}$) ratings of utilization of information and communication technology equipment for teaching business education courses.
3. Lecturers qualification differ significantly in the mean ($\bar{x}$) ratings of utilization of information and communication technology equipment for teaching business education courses. Lecturers with lower qualification had a higher proportion of the utilization of information and communication technology equipment than those with higher qualification.

Summary/Conclusion
    In the light of the findings of this study, the following conclusions were drawn:
The Younger Lecturers and Older Lecturers differ significantly in the mean of utilization of information and communication technology equipment for teaching Business Education

courses. The Younger Lecturers had a higher proportion of the information and communication technology equipment knowledge than the Older Lecturers.

The Experience of Lecturers differs significantly in the mean ratings of utilization of information and communication technology equipment for teaching Business Education courses. The Low Experienced Lecturers had a higher proportion of the utilization of information and communication technology equipment compared to the Highly Experienced Lecturers. There is significant difference in the mean ratings of utilization of ICT equipment for teaching Business Education courses.

Qualification of Lecturers differs significantly in their mean ratings of utilization of ICT equipment for teaching Business Education courses.

Finally, the younger lecturers had a higher proportion of utilization of information and communication technology equipment compared to the older Lecturers in the teaching of courses in Business Education Department.

Recommendations

In the light of the above findings and conclusion of the study, the following the authors therefore recommended as follows:

1. Governments and university authorities should provide funds for the full integration of information and communication technology into Nigerian educational system. Lecturers of business education should be sponsored on regular information and communication technology up-dating programme.
2. University authorities should collaborate in online teaching and learning with others faculty and students from around the world.
3. University authorities should provide incentives to encourage the older Lecturers to encourage them in information and communication technology training.
4. Government and university authorities should provide electricity as well as solar generating sets for all the universities.
5. Government and university authorities should connect all the universities, faculties as well as departments to information and communication technology nationwide.
6. The government should assist by reducing the high cost of information and communication technology hardware in Nigeria.

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