

## **Inadequacy of Information Communication Technology (S) in Public Universities in Nigeria: Causes, Effects and Way Forward**

*Ogunode Niyi Jacob*

*Ogunodejacob@gmail.com*

*Okwelogu Izunna Somadina*

*Is.okwelogu@unizik.edu.ng*

*Yahaya Danjuma, M*

*dajumayaaya@gmail.com*

### **ABSTRACT**

*Public universities in Nigeria are faced with many challenges. Inadequate information communication technology (s) have been identified as one of the major problem. This paper is aimed to examine the factors responsible for inadequate information communication technology (s) in the Nigerian public universities. To do this, we employed the used of primary and secondary data. The secondary data were sourced from print documents and online publication on ICT. With the help of the document reviewed inadequate funding, poor implementation of ICT policies, corruption, poor maintenance culture, poor forecasting, lack of data and high cost of ICT facilities were identified as the factors responsible for inadequate information communication technology(s) in the Nigerian public universities. The effects of inadequate information communication technology(s) in the Nigerian public universities include poor implementation of teaching programme, research programme, learning programme and slowing down of school administration. To solve these problems, the paper recommended that the government should increase the funding of public universities and ensure more funds are allocated for the development of ICT programme etc.*

**KEYWORDS:** *ICT, Tertiary Institutions, Problems, Public Universities, Shortage*

### **1.0 INTRODUCTION**

The Nigerian educational system is made up of the basic education (early child education, primary school education and junior secondary school education), Post-Basic Education and Career Development (PBECD) and the tertiary education (Ogunode, 2020). Tertiary Education is the education given after Post Basic Education in institutions such as Universities and Inter-University Centers such as the Nigeria French Language Village, Nigeria Arabic Language Village, National Institute of Nigerian Languages, institutions such as Innovation Enterprise Institutions (IEIs), and Colleges of Education, Monotechnics, Polytechnics, and other specialized institutions such as Colleges of Agriculture, Schools of Health and Technology and the National Teachers' Institutes (NTI) (Ogunode, Hammadu, Ahmed, & Ojo, 2021, NPE, 2013).

The goals of Tertiary Education shall be to: Contribute to national development through high-level manpower training; provide accessible and affordable quality learning opportunities in formal and informal education in response to the needs and interests of all Nigerians; 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; reduce skill shortages through the production of skilled

manpower relevant to the needs of the labour market; promote and encourage scholarship, entrepreneurship and community service; forge and cement national unity; and promote national and international understanding and interaction (Ogunode, Hammadu, Ahmed, & Ojo, 2021, NPE, 2013).

Ogunode, Okwelogu, Olatunde-Aiyedun, (2021) observed that the realization of the objectives of tertiary education hinges on the availability of human and material resources. One of the key materials resources is the information communication technology.

### **1.1. Objective of Research**

The objective of this research is to:

1. To find out if public universities in Nigeria have adequate ICT facilities
2. To find out the causes of inadequate of information communication technology(s) in public universities in Nigeria
3. To find out the effects of inadequate of information communication technology(s) in public universities in Nigeria
4. To come up with recommendation to address the problem of inadequate of information communication technology(s) in public universities in Nigeria.

## **2.0 Conceptual Framework**

### **2.1 Concept of Information Communication Technology(s)**

There are many definitions of information and communication technology (ICT) given by different authors. United Nation Educational Scientific and Cultural Organization (UNESCO, 2005) defines information and communication technology (ICT) as the combination of all the computers, telecommunication and media technologies. They are also electronic technologies used for accessing, processing, gathering, manipulating and presenting or communicating information in the education system while Uwabueze & Ozioko (2011), sees information and communication technology as a set of tools that help a person work with information and perform tasks related to the information process. World Bank (2007) defined that Information Communication Technology (ICT) as the use of hardware, software, networks, and media for the collection, storage, processing, transmission, and presentation of information (voice, data, text, images, etc) as well as related services. Chrisita and Shoko (2010) defined information and communication technology (ICT) in a library context to mean the application of various technologies such as a computer, retro-graphics, audio-visuals, and other electronic devices for storage, reproduction, and dissemination of information in a library environment. The place of Information Communication Technology (ICT) in the school administration cannot be underestimated. Information Communication Technology (ICT) are essential for the realization of the educational institutions objective and programme. Murray (2011) pointed out that ICT is an extended term for information technology (IT) that include the integration of telecommunication devices such as telephone line, wireless signals, computer hardware and software which encompasses storage device and audiovisual systems that ensure access, storage and dissemination of information. Gurari (2009) observed that ICT is combination of computer hardware, software and telecommunication devices such as telephone system, modem, router, optic cables, satellite communication system etc. Rouse (2017) on the other hand opines that ICT is the information infrastructure and component that enable modern computing.

Information Communication Technology (ICT) is applicable to all the aspects of education. Information and communication technology (ICT) aid in the actualization of school programme.

Information and communication technology (ICT) provide many opportunities to the students to simplify their learning. According to Ogunode, Okwelogu, Olatunde-Aiyedun, (2021) Information and Communication Technology (ICT) is used by all human resource in the educational institutions. The students used information and Communication Technology (ICT) to support their learning

programme. Information and Communication Technology (ICT) helps students to carry out research, writes examination, check their result, submit assignments, register their courses online. The academic staff use information and Communication Technology (ICT) for e-teaching, preparation of lecture notes, e-assignment for students, e-examination, e-lecture note and carry out personal research. Lecturers also used information and Communication Technology (ICT) for e-conference meeting. The non-academic staff used information and Communication Technology (ICT) to carry out non-academic service like storage of students and staff information, sending and receiving memo, student payment etc. Patrick and Brenda (2018) concludes that ICT is not just the bloom of the education system, but also the primary and secondary options required to improve effective and meaningful interaction between teachers and students of secondary schools. It has the power to make students enjoy things that they would normally find time-consuming and difficult because it involves practical teaching and student-centered and not teachers talking and writing on the chalkboard and student copying from the chalkboard into their notebook without engaging in practical teaching which makes learning boring. Ogunode, Hammadu, Ahmed, & Ojo, (2021) submitted that ICT is applicable to all field in education and ICT support both the students, teachers and nonteaching staff to deliver their services very fast. Ogunode, et'al (2021a) and Joshi and Chugh (2009) observed that stated that information and communication technology has immense potential to motivate and engage students in learning. Innovations in technology can be used in enhancing existing teaching and learning tools in the classroom in order to facilitate the development of computer-related competencies in business education. Technology allow students to have control over their learning environment and to act as self-directed learning's promoting more active learning.

The teachers also use ICT to support the implementation of teaching programme in their respective schools. Abimbade (1997) outlined some potentials of computer in instruction as follows:

1. Computer helps students to learn at their own pace.
2. It produces significant time saving over conventional class room instruction.
3. It allows students control over the rate and sequence of their learning.
4. It gives appropriate feedback.
5. It promotes individualized instruction through personalized responses to learners' action to yield a high rate of reinforcement.
6. It provides a more positive affective climate especially for slower learners.
7. It provides appropriate record-keeping and thereby monitors students' progress.
8. It puts more information in the hands of teachers.
9. Novelty of working with a computer raised students' motivation.
10. It provides reliable instruction from learner at any time of the day and location .
11. It provides direct instruction to learners.
12. It provides instruction at comparable expenses to other media. Nnamdi (2008) states the relevance of the computer technology to academic work to include: Computer aided teaching; Audio – visual learning software and compact disk; Automation; Multimedia and hypermedia; Computerized grade books; Database management system; Simulation etc.

Information and Communication Technology (ICT) is vital to the development of school administration. Information and Communication Technology (ICT) have provide the opportunities for educational institutions to store and manage their data with easy. Information and

Communication Technology (ICT) have aid the school administrative function by moving manual documentation to digital documentation.

Generally, Organization for Economic Co-operation and Development (2005) and Gbenga (2006) submitted information and communication technology can work in a number of general ways:

- It can be used to help in school administration.
- It can be used to train students in skills which they will need in further education and as an ongoing learning process throughout the rest of their lives and for their future jobs, e.g. word processing, email communications etc.
- It can provide access to information and communication outside the classroom e.g. via the Internet.
- It can be used to support teacher development via external networks.
- It can support and potentially transform the learning and teaching process.
- Ict has a number of features which it particularly suitable for tertiary education:
- It combines and integrates a full range of media essential for effective learning. The ICTY uses sounds, vision, text and numeric data.
- It provides lecturers with new opportunities and in particular, distance learning and involvement in the real-world.
- There is an opportunity to increase the interest and involvement of students by the one to one relationship provided by the student and computer.
- It provides students with op-opportunity with an opportunity to work and learn on their own.

### 3.0 Review of Literature

#### 3.1 Public Universities and availability of Information Communication Technology(s)

Do public universities in Nigeria have adequate ICT facilities?.Public universities in Nigeria are faced with many challenges (Ogunode, 2020). Inadequate information communication technology facilities have been identified as one of the major problem hindering the development of public universities in Nigeria. Many researchers have conducted a research on ICT availability in public universities in Nigeria. For instance, Alojaiman, (2013) conclude in his study that another challenge militating against the deployment of ICT in Nigerian Tertiary institutions is the lack of facilities.

Ogunode, Abubakar, Abashi, Ireogbu&Longdet (2021) did a research andthe result collected and analyze revealed inadequate ICT facilities, unstable power supply, unstable internet service, high cost of ICT facilities, poor computer Literacy among academic planning officers, poor implementation of ICT policies in the universities, poor maintenance culture among the academic planning officers, lack of technical support for repairs and maintenance of ICT facilities by universities technicians and poor ICT capacity development programme for Academic planning officers are the challenges preventing effective utilization of ICT by academic planning officers in federal university Wukari, Nigeria.

Ogunode, Garba, &Ajape (2021b) identified: inadequate funding of ICT programme, inadequate ICT facilities, poor internet services, unstable electricity, high cost of ICT facilities, poor implementation of ICT educational policies, poor ICT literacy of academic staff and institutional corruption as the challenges preventing academic staff from using ICT(s) for teaching in the Nigerian public universities.

Ogunode, Hammadu, Ahmed, & Ojo, (2021a) concluded in their paper that inadequate ICT facilities, inadequate funding of ICT, poor implementation of ICT policies, high cost of ICT, unstable electricity, unstable internet service and student poor ICT literacy were identified as challenges preventing students of public tertiary institutions in Nigeria from using ICT for their learning programme.

Some of the problems preventing the non-academic staff from using ICT effectively in carrying out their functions in the universities include; inadequate ICT facilities, the poor ICT literacy level of non-academic staff, unstable power supply, unstable internet service, institutional corruption, high cost of ICT facilities, and poor maintenance culture.

Ogunode, Okwelogu, Olatunde-Aiyedun, (2021) submitted that inadequate ICT facilities in many public higher institutions in Nigeria also prevented many higher institutions from deploying ICT for implementation of teaching, researching and other academic services in Nigeria. Many public higher institutions in the country do not have adequate ICT to support e-learning and e-teaching and e-researching.

Umar & Rosnaini (2018) asserted that this is evident when compared to other tertiary institutions of the developed world, that Nigeria tertiary institutions lack basic office gadgets and technologies like computer, printers, faxing machines, photocopiers, binders, and projectors not even to talk of internet in most of the institutions particularly Colleges of Education. The dearth of these rudimentary facilities contributes to the challenges facing placement of ICT in Nigeria tertiary institutions, as no institutions can function effectively in this modern trend of ICT without these facilities.

Abubakar (2016) cited Idoko and Ademu (2010) who discovered that availability of ICT is often one of the most critical impediments to technology acceptance and integration in teaching and learning. They demonstrated that there is a persistent necessity for more ICT facilities if a nation is to effectively incorporate ICT into its public collages.

Odera (2012) reported in her research five problems confronting the implementation of ICT in Education thus: non-availability of computers or inadequate supply of computers in most of the secondary schools; lack of proper teacher training to help them integrate computers into teaching and learning; lack of time to incorporate computers into the subject being taught; inadequate or lack of physical facilities to enable schools to introduce computer education and lack of relevant software.

This submission is confirmed by Ogunode (2021) who submitted that many tertiary institutions in Nigeria do not have ICT facilities to implement teaching programme and many academic staff and students do not have access to function ICT facilities to support their academic activities and learning.

### **3.2 Factors Responsible for Shortage of Information Communication Technology(s) in Public Universities in Nigeria**

There are many causes of inadequate information communication technology facilities in the Nigerian public universities. Some of the factors include; inadequate funding, poor implementation of ICT policies, corruption, poor maintenance culture, poor forecasting, lack of data and high cost of ICT facilities.

#### **1. Inadequate Funding**

Funding is key to the realization of universities objectives and programme. Adequate funding is needed for the smooth administration of the universities. Adequate funding will enable universities acquire all the human and materials resources needed for the implementation of teaching programme,

research programme and community service programme. It is unfortunate that funding of public universities in Nigeria is not adequate and this is affecting the development of the universities. Inadequate funding of ICT programme in the public universities is among the factor responsible for shortage of information communication technology facilities. Ogunode, Hammadu, Ahmed, & Ojo, (2021a) that many public tertiary institutions in Nigeria are underfunded. School administrators are not having access to adequate funds for the implementation of school programme. Many ICT facilities are not available in the institutions due to poor funding. Ogunode (2021) disclosed that inadequate funding is a major problem facing the administration of public higher institutions in Nigeria. He went further to said the inability of the government to implement the UNESCO 20% recommendation for educational budget annually is among the factors responsible for the underdevelopment of Nigerian higher institutions. Ogunode & Onyekachi, (2021) concludes that Nigerian government is not implementing the UNESCO 26% annual budget for education and the problems affecting educational financing in Nigeria include; Short fall in national revenue, compete from other sector, corruption, insecurity, natural disaster and lack of political will to implement UNESCO recommendation on education and the effects of underfunding education in Nigeria include inadequate infrastructural facilities, inadequate professional teachers, shortage of instructional materials, poor quality of education, poor capacity development, poor supervision and strike actions. The poor funding of education in Nigeria is affecting the implementation of National policy on Gender in Basic Education in Nigeria

## **2. Poor Implementation of ICT Policies**

Poor implementation of ICT policies in the Nigerian public universities is also responsible for the shortage of information communication technology facilities. There are many policies formulated the government for the development of ICT programme in the universities. For instance, the national policies on ICT 2019 stated that government shall deploy ICT facilities in all educational institutions across the country. Ogunode, et'al (2021) cited Okhiria (2007) who submitted that National Universities Commission (NUC) in Nigeria have prescribed that there should be at least one computer to every four students and one PC to every two lecturers below the grade of lecturer I, one PC per senior lecturer and one notebook per reader/ professor. NUC has gone further to establish e-learning platforms fitted with twenty smart boards in twelve Federal universities for the promotion of the use of ICT in teaching and learning. Majority of the Nigerian universities have not achieved this recommended system ratio for their faculties, though some have made giant or notable strides in campus wide area networking and e-learning course deliveries. The poor implementation of these ICT policies is among the factor prevent Nigerian tertiary institutions students not having access to adequate ICT facilities to support their learning programme. Ogunode, Garba, & Ajape (2021b) observed that poor implementation of ICT policies in the public universities in Nigeria is another factor preventing the academic staff from using ICT to carry out their functions of teaching, researching and providing community services. In order to take the Nigerian educational institutions to the next level where ICT will be used for teaching and learning, the Nigerian government developed and formulated many ICT policies for all the educational institutions. Agencies were created for the development of ICT software for the various educational institutions. It is amazing that as good as these ICT policies are; the implementation was not done due to many reasons which include; political instability, unstable educational policies, institutional corruptions and inadequate funding. The poor implementation of the ICT policies for the higher institutions in the country is another challenge preventing effective utilization of ICT facilities by the academic staff.

## **3. Corruption**

Corruption in the university system across the country is also responsible for inadequate information communication technology (s) in the public universities. Ogunode, Babayo, Jegede, & Abubakar,

(2021b) submitted that corruption has penetrated educational institutions including universities. Funds released for the administration and management of higher institutions that will ensure ICT facilities are adequately provided for all departments and offices end up in been diverted by some officials in the higher institutions. Also, many ICT facilities given for departmental and office uses ended up been diverted to private house for personal use by some officials within the institutions. Punch (2020) observed that much of the little funds that go into the system are stolen. In the course of the face-off, the government claimed “the fraud in the universities is amazing and you will be shocked. ICPC did a system check recently, and it was so shocking. In fact, the worst two organizations they mentioned are the Teaching Hospitals and our universities.” In 2018, the Socio-Economic Rights and Accountability Project claimed that there were allegations of corruption in several federal universities relating to the unfair allocation of grades; contract inflation; truncation of staff’s salary on the payroll; employment of unqualified staff; certificate scandal; examination malpractice; sexual harassment; and issuance of results for expelled students to graduate. ICT facilities diversion in the educational institutions especially the ICT facilities is hampering the development of ICT in many educational institutions across the country. Research has it that many ICT facilities supply to some educational institutions especially the Universities have been carried away by both academic and non-academic staff working in the institutions and this is affecting the usage of ICT in the respective institutions.

#### **4. Poor Maintenance Culture**

Poor maintenance culture of public universities administrators, teaching, non-teaching staff and students to ICT facilities under their care is responsible for inadequate information communication technologies in the universities. The attitude of academic and non-academic staff and students in handling the school ICT facilities is poor. Many students use the ICT facilities anyone. Many of these ICT facilities are damaged and spoiled by official using them because they are not properly handled. Ogunode,et’al (2021) opines that another factor responsible for the poor application of ICT for carrying out responsibilities by the Non-academic staff in the Nigerian universities is the negative attitude of staff towards the ICT facilities in the various offices. The ICT facilities are misused and not properly taking care of by the staff resulting in quick damage or worn out. Some non-academic staff does not have good maintenance culture and this is affecting the effectiveness and efficiency of the ICT facilities. Ogunode,et’al (2021) and Scrimshaw, (2004) acknowledged that the inaccessibility of ICT resources is not only due to the non-availability of the hardware and software or other ICT materials within an institution but a result of the poor organization of resources, poor quality hardware, inappropriate software, or lack of personal access by lecturers. The effectiveness of using ICT requires not only the availability of equipment but also their proper maintenance including other accessories such as scanners, multimedia projectors, computers, printers, and scanners (Ogunode,et’al, 2021, Khan, Hossain, Hasan, & Clement, 2012).

#### **5. Poor Forecasting**

Planning is key to the development of universities. Effective planning of universities lead to total transformation and realization of the university objective. University planning covers all aspects of the universities. Akpan (undated) observed that the educational planners in Nigeria sometimes underestimate the cost of education as a result of poor forecasting of students’ enrolment. For example the cost of UPE scheme in Eastern Nigeria in 1957 was greatly underestimated. This gave rise to poor implementation of the scheme. The number of pupils enrolled in the scheme was greater than the estimated figure. There were no classrooms for pupils to learn and the new schools established were not enough to accommodate the increase in pupils’ enrolment. The government needed more funds for administration of the programme. All these happened because of poor prediction by educational planners.

## 6. Lack of Data

Another factor responsible for the shortage of information communication technologies in Nigerian public universities is the lack of accurate data to effectively plan the university system. Inadequate data is one of the major problem facing Nigerian educational sectors. Data generation and distribution is poor. Dominic, Segun&Jide (2016) submitted that the success of any system of education is hinged on proper planning through the use of data. The need for data based policy making in national educational sector is more now than before particularly with the current revolution in information and communications technology which has made the world to become a global village. The inconsistencies observed in most educational sector decisions might make one infer that these decisions were based on incomplete information, intuition or rule of the thumb. Education data, like other social data, facilitates planning and constitute invaluable inputs for computing important social indicators which are used to monitor trends in the quality leading to improvement in policy decisions of the sector and better impact. Ogunode (2021) opines that data is very important to the realization of goals and programme of higher institutions. Data is needed to plan the higher institutions. The Executive Secretary of National Universities Commission said that for the Nigerian University System (NUS) to be respected globally, it must live above board by managing an effective and reliable information system that would guarantee accurate, reliable and timely data that could be used in advising government on issues of national planning. He observed that without accurate data, effective and strategic planning would not only be difficult for the university but also for the government. He said that as Ivory Towers, Universities were expected to have adequate and reliable information across all variables such as total number of students enrolment; total number of students by programme; faculty; gender; age; mode of entry into the university; Local Government of origin; State of origin; nationality; geo-political zone; distribution in term of PhD, Masters, PGD programmes and students (NUC,2016). It is unfortunate that data on higher education in Nigeria are not timely generated and made available. Dominic, Segun&Jide (2016) observed that timely and reliable data are fundamental to planning and management in education especially in monitoring educational developments. The head of National Commission Universities (NUC) observed at the universities, the National Commission Universities (NUC) Boss, He said, "I was totally disturbed that we could not lay our hand on a verifiable statistics that would help us with our plans for our universities. That made me to spend my first year as NUC boss studying some obvious inaccurate statistics being brandished in different quarters regarding the current situation in our Nigerian universities (NUC, 2018). Ogunode (2021) identified inadequate funding, inadequate working materials, shortage of professional data experts, poor capacity development of data managers and inadequate infrastructural facilities as the problems preventing effective data collection and dissemination in the Nigerian higher institutions.

## 7. High Cost of Information Communication Technology (ICT)

High cost of ICT facilities is another causes of shortage of information communication technology (s) in Nigerian public universities. Ogunode, et'al (2021c) submitted that High cost of acquiring ICT facilities is another problem preventing the effective use of ICT facilities for lecturing by academic staff in the Nigerian public universities. Modern ICT facilities that are designed purposely for delivering of teaching, researching and learning are very expensive. The high cost of these facilities is preventing the school administrators and many academic staff from using ICT to carry out academic activities in the universities. Many academic staff with poor salaries and poor motivation packages cannot afford to buy ICT facilities that will aid them to deliver teaching online, prepare their notes, give assignment online and carry out research online.



#### **4.0 Effects of inadequate Information Communication Technology in Public Universities**

There are many effects of inadequate Information Communication Technology in Public Universities in Nigeria. Some of the effects is that it will lead to poor implementation of teaching programme, research programme, learning programme and slow down school administration.

##### **4.1 Poor Implementation Teaching Programme**

The effects of inadequate information communication technology facilities in public universities is that is leading to poor adoption of ICT for teaching programme. Many academic staff due to inadequate ICT in lecture halls cannot use ICT for deliver their lectures, prepares their note, send online assignment and marks assignment online. Ogunode, et'al (2021c) observed that the problem of inadequate ICT facilities in many public universities in Nigeria and lack of personal or official laptops for academic staff is another fundamental problem hindering the academic staff from using ICT for lecturing in the lecture halls. ICT facilities include PCs, web, CD-ROMs, intelligent video plate guideline, Computer Assisted Instruction, Computer Based Instruction, Computer Based Learning, e-learning, and others for educational modules conveyance have been observed to be extremely viable in instruction and learning. No any meaningful online teaching that can be done without adequate availabilities of the various ICT facilities on ground. Okwudishu (2005) discovered that unavailability of some ICT components in the schools hampered teachers' use of ICTs.

##### **4.2 Poor Implementation Learning Programme**

Many students in Nigerian public universities cannot effectively use ICT facilities to support their learning because the universities lack adequate ICT infrastructural facilities. Ogunode, et'al(2021a) submitted that the problem of inadequate ICT facilities in many public tertiary institutions across the country is hindering the students from using ICT to carry out their academic work in the various institutions. Adeyemi and Mary (2013) acknowledged that Nigeria lacks the necessary infrastructural facilities to benefit from ICT. Again, most of the ICT infrastructures such as internet, telefax, e-mail are dependent on NITEL (Nigerian Telecommunications Limited), NIPOST (Nigerian Postal Agency) and PHCN (Power Holding Corporation of Nigeria) services. These services are epileptic in delivery and attract unbearably high bills.

##### **4.3 Slow Down School Administration**

The inadequate informational communication technology facilities in the public universities in Nigeria is slowing down administrative work of the administrative staff. Ogunode,et'al (2021b) opines that ICT facilities which include a computer system, laptops, printers, photocopy machines, are essential to smooth running of the administration and management of services in the offices. Offices in many universities where the Non-academic staff is occupying to provide non-academic services should have the ICT facilities adequately to enable them to discharge their responsibilities fast and without any hitch. It is unfortunate that many offices and departments in the universities across the country do not have adequate ICT facilities for the administrative staff and other staff that need the ICT facilities to carry out their official duties. Livinus, (2013) did a study and discovered that the academic staff ranked the inability of their college to provide them with the computer as their major constraint. The non-academic staff also ranked that as their major constraint in utilizing computers. Adeosun, (2010) carried out a study that showed that lack of ICT resources and poor infrastructure prevents full implementation of ICT in Nigerian tertiary institutions. Ogunode, et'al (2021b) concluded that many offices and departments in the universities in Nigeria do not have an adequate computer system and laptops enough for the Non-academic staff to work. Some Non-academic staff has to wait for others to finish using the computer before they can use it for office work.

## 5.0 Way Forward

To address the problems identified, the following have been recommended:

**A) Adequate Funding of Public Universities:** Adequate funding is necessary for university education in general and the development of ICT in particular. To this end, the government should increase funding for the entire university system to allow the school administrators to have more funds to acquire ICT facilities for office uses.

**B) Subsidize the Cost of ICT facilities:** The government should subsidize ICT facilities for students to enable students to buy their personal systems and use it for their learning.

**C) Implement the ICT Policies on Education:** The national policy on information and communication technology in all tertiary institutions should be well implemented beyond mere policy statement.

**D) Track ICT Facilities:** The school administrators should track all the ICT facilities to prevent diversion of the facilities for personal use by the staff in the system. This will help to curtail corruption in the system.

**E) Imbibe Good Maintenance Culture:** The school management should organize seminars and workshops on staff maintenance culture. This will help to guide staff in the universities from spoiling or damaging ICT facilities in the institutions.

**F) Generation of Accurate Data:** The government should ensure data are generated constantly in the country to make planning easy for educational planner.

## Conclusion

It has been established that Public universities in Nigeria are faced with many challenges. Inadequate information communication technology (s) have been identified as one of the major problems facing public universities in Nigeria. The paper identified inadequate funding, poor implementation of ICT policies, corruption, poor maintenance culture, poor forecasting, lack of data and high cost of ICT facilities were identified as the factors responsible for inadequate information communication technology(s) in the Nigerian public universities. The paper also identified poor implementation of teaching programme, research programme, learning programme and slowing down of school administration as the effects of inadequate information communication technology(s) in the Nigerian public universities. To address these problems, the paper recommended that the government should increase the funding of public universities and ensure more funds are allocated for the development of ICT programme etc.

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