



# Influence of Information Communication Technologies on University Administration in Nigeria

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**Abstract:** This study investigate the influence of information communication technologies on university administration in Nigeria using three public higher institutions as a case study. The study adopted descriptive survey method for the study. The population of the study consists of three hundred staff of public federal higher institutions in North east geo political zone Nigeria. Questionnaire was used to collect data for the study. Sampling technique was adopted and stratified simple random technique. Staff status formed the basis of stratification while the lottery method constituted the basis of randomization. The research data were analyzed using percentage, mean and standard deviation and chi-square statistic. Result obtained showed there was significant relationship between information communication technologies and university administration. Information communication technologies influences teaching, research and community services programme of the universities positively. The result also revealed that inadequate fund, inadequate ICT infrastructural facilities, unstable power, unstable internet services, poor implementation of ICT policies, shortage of ICT staff, poor ICT literacy of staff were identified as problems hindering ICT usage in the universities in Nigeria. Based on this findings, the study recommended that the government should fund the public universities adequately to enable them acquire necessary ICT facilities needed for the administration of the universities.

**Keywords:** Education; ICTs; Learning; Teaching; University Administration.

*Date of Submission: 5-4-2022 Date of Acceptance: 7-5-2022*

## Introduction

University administration refers to the application of the universities' resources to implement the programme of the universities with the aims of realizing the objectives of the universities. University administration is the mobilization and arrangement of both human and materials resources for the achievement of the university's goals. University administration is the effective use of the resources of the university to implement the teaching programme, research programme and the community service programme of the universities (Ogunode, 2020). Adewale & Taiye (2018) viewed University administration as the scientific approach to the management of human and material resources to achieve the goals and objectives of the university. University administration is the deployment of the universities' resources to accomplish the universities' programme. The objectives of university administration according to Ogunode, (2020) include: to implement the programme of the universities as defined; to allocate resources for the implementation of the universities programme; to ensure implementation of teaching programme, to ensure implementation of research programme; to ensure delivery of quality community services

programme, to ensure effective staff development, to ensure effective student administration, to ensure smooth implementation of academic calendar and to ensure quality education.

Information communication technologies are some of the resources to deploy for the implementation of universities programme. Maki (2008) opined that the usage of information and communication technologies is crucial to university administration. The 1990s witnessed advances in information and communication technologies (ICTs), particularly with the Internet expanding into the public domain (Akpan-Obong & Alozie, 2016). The usage of ICTs, in the university system, involves harnessing of technology for better planning, setting standards, effecting change and monitoring results of the core functions of universities such that the integration of ICTs in higher education is inevitable (UNESCO, 2009).

Adebayo (2013), defined information and communication technologies (ICTs) as those technologies that supports activities involving the creation, storage, manipulation, communication of information using microelectronic and telecommunications tools such as laptops, computers, computer networks, Internet digital printers and mobile technology that are used by the administrator to record, store, process, retrieve and transmit information (Kokt & Koelane, 2013). Shobowale, (2019) Information and communication technology is a process of giving and getting information through the use of technologies like computers, internets, mobile phones and other communication networks. It includes all the technologies that help in disseminating and using information by individuals and institutions. Wale and Temitope (2019) viewed Information and communication technology as a term used in describing a process of giving and getting information through the use of technologies like computers, internets, mobile phones and other communication networks. It includes all the technologies that help in disseminating and using information by individuals and institutions.

Ogunode & Adamu, Ajape (2021) submitted that Information and Communication Technology(s) is one of the major resources adopted by the universities across the world for delivering teaching and conducting researches. The academic and non-academic staff use information and communication technology (s) for providing academic service and administrative functions.

Ogunode, Babayo, Jegede & Abubakar (2021) observed that the non-academic staff of the universities uses ICT mostly to carry out official works. ICT is used in the security unit to collect data, and print school identity cards. ICT is used in the offices for administrative purposes that include typing documents, sending and receiving emails, and preparation of reports. In establishment and Registry, laptop, computer system others ICT facilities are used for storage of staff data-based, sending of memory, transferring of staff information and data from office to office. ICT facilities are used in the office of the Registrar for the printing of appointment letters, termination of appointment, typing of official documents, and storage of data in the office.

Ogunode & Adamu, Ajape (2021) observed for the academic staff, Information and Communication Technologies is use for preparation of lesson plan, preparation of note, e-marking, e-evaluation, e-supervision and e-feedback. The lecturers in tertiary institutions use ICT for teaching and research with additional administrative assignments. ICT adoption has the potentials of lessening the administrative duties. In teaching and learning in a university system, information and communication technologies offer many opportunities in the higher educational system (Kpolovie, 2010a; 2016). Integrating of ICTs into this process enhances the overall admission activities of universities by making it more accessible to many (Kwaku&Obeng, 2004). Adeyemi & Mary (2013) observed that the Information and Communications Technology (ICT) is the technology that has brought excitement to teaching, learning and research. It has become a major educational technology. In its simplest form, it can be used to prepare and reproduce handouts or make presentations of learning materials as slides in lecture rooms. At a higher level, ICT could be used in such instructional modes as e-learning. ICT platforms serve as the powerful tool for extending educational opportunities, provide remote learning resources and offer a steadily expanding range of new services that have major economic consequences for the standardisation of information in

universities (Nwafor, 2005). ICTs help in providing a good communication system in the university system by providing timely information to all concerned (Magni, 2009) such that the integration of ICTs into general administration has brought about increased efficiency and optimal resource utilisation (Hasan et al, 2007).

There are many investigations on ICT and higher education. For instance, Adewale & Taiye did a study and discovered that the challenges facing the use of ICTs in the universities include high cost of ICTs, low computer-literacy among university staff and students, epileptic power supply, absence of ICT policies and poor political-will to implement such policies, where they exist. The paper concludes that the prospects are bright and that more universities would embrace the use of ICTs in their operations when the identified challenges are tackled. Ogunode & Adamu, Ajape (2021) did a study and found out that 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 are the challenges preventing academic staff from using ICT(s) for teaching in the Nigerian public universities. Ogunode, Abubakar, Abashi., Longdet (2021) did a study that investigated the challenges preventing the Academic planning Officers from using ICT in their offices. The 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, Hammadu, Ahmed, & Ojo, (2021) discovered that inadequate funding of ICT, inadequate ICT facilities, 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. Kpolovie, & Awusaku, (2016) did a study on ICT Adoption Attitude of Lecturers and discovered that gender and area of specialization have no significant difference in the attitude of lecturers' towards ICT adoption in teaching and research. On years of experience, moderately and less experienced lecturers are more competent in the use of ICTs than their highly experienced counterparts. ICT facilities are significantly more accessible the Federal university (University of Port Harcourt) than the State university (Rivers State University of Science and Technology). Victor & Faga (2015) conducted a study which is on the utilization of computer technology for academic work has assessed the computer literacy skills possessed by academic staff members of University of Jos (UNIJOS). The findings revealed that lecturers have average level of computer literacy skills and use it only for typing/printing of lecture notes, computing of students' results, surfing the Internet for information and sending e-mails. However, inadequate funds, inadequate power supply, lack of government sponsorship, time constraints, irregular organization of IT programmes, inadequate Internet cafes, too much work load for academic staff and inadequate computer training centres were discovered to be militating factors. There is a research gap on influence of ICT on university administration focusing on universities programme. This study is aimed to fill the gap by investigating the influence of information communication technologies on university administration in Nigeria.

The purpose of this study is to investigate the influence of information communication technologies on university administration in Nigeria. Specific objectives are to:

1. To find out the influence of influence of information communication technologies on university administration
2. To determine influence of information communication technologies on university programme
3. To identify problems hindering influence of information communication technologies usage for university administration in Nigeria.

## **Research Questions**

1. What is the influence of information communication technologies on university administration?
2. What is influence of information communication technologies on university programme?
3. What is problems hindering influence of information communication technologies usage for university administration in Nigeria?

## **Research hypothesis**

H0: There is no significant relationship between influence of information communication technologies and university administration

## **Theoretical Framework**

The theoretical framework is hinged on the General System Theory that was developed by David Easton in 1953. The theory was adapted from the natural sciences, especially Biology in the works of Ludwig Von Bertallanty (Adewale & Taiye; Olaniyi, 2001; Ray, 2011). It found its way into the social sciences through anthropology and sociology (Adewale & Taiye ; Olaniyi, 2001; Johari, 2013). This system views an administrative system as a sub-system of the society. It looks at various parts of an administrative system and examines the inter-linkages among the various parts according to Adewale & Taiye and it analyses the dynamic interactions between the administrative system and its external environment. Easton (1967) as cited by Adewale & Taiye (2018) observes that a system, just like the information, communication technologies (ICTs), is made up of a combination of elements: inputs, outputs, environment, conversion process and feedback. Adewale & Taiye (2018) and Koontz et al (1980), agreed that almost all life is a system; that is the human body, family, educational institutions, bank, government and a house are all systems and each of them has interrelated parts which work together to form a complex unity. Adewale & Taiye and Katz and Khan (1982) concluded that all social systems are contrived systems in the sense that they are made by human beings and are imperfect systems such as the university that should be seen as a total system which has interrelated parts with a single goal. Adewale & Taiye opined that for every department in the university may have its own sub-goals but these sub-goals of the various departments tend towards the achievement of the central goals of the entire organisations and invariably, if there is a fault in one subsystem or department, it would affect the whole system. Therefore, the sum total of the performance of the subunits or departments affects the overall performance of the whole set-up. The systems approach helps in the identification and solution of specific organisational problems (Adewale & Taiye; Yalokwu, 2006). A major drawback of the theory is that it is “too broad a framework for political analysis to take note of the complete psychological aspects of interaction function” (Adewale & Taiye; Young cited in Johari: 2013). Hence, it may not be able to answer question that relate to scope, depth and weight of power as the concept is being used (Adewale & Taiye; Johari, 2013). The university system is like the general system whereby various component parts are working harmoniously to keep the system in stability and optimal performance (Koontz et al, 1980). In this context, ICTs serve as the platform to connect the facets of university structures for the delivery of the teaching, research and community service mandates while any disruption in ICTs operations would bring about a setback to the ability of universities to achieve their goals, objectives and mandates (Adewale & Taiye).

## **Methodology**

The study adopted descriptive survey method for the study. Questionnaire was used for data collection in the study. The Questionnaire was Tagged; ‘ ICT for University Administration in Nigeria Questionnaire.’ The research instrument was divided into two sections, the first tends to obtain the respondent bio-data while the second part contains the items regarding the constructs of the subject matter and this was based on a four-point Likert scale ( 4-Strongly Agreed, 3- Agree, 2-Strongly Disagree, 1-Disagree) that best describes the extent to which the respondents agree with each items in the questionnaire. The questionnaire was validated by two lecturers from University

of Abuja department of educational administration. Three research questions and one hypothesis were developed for the study. The population consists of staff of public universities in north central geo political zone of Nigeria. The staffs in each of the three institutions were stratified into academic and non-academic staff respectively. Within each group, the simple random sampling (lottery) method was used to select fifth respondents on the basis of proportional representation. The process was as follows: the sampling frame of each organization was obtained from the relevant authorities. On the basis of the sampling frame, stratification of the workers was done. Next, numbers were assigned to employees within each stratum, thereafter, identical pieces of paper, were cut to size and numbers were written on them from 1 – N<sub>1</sub>, where N<sub>1</sub> is the number of employees per stratum. Subsequently, the papers were folded and put in a bag. Thereafter, N<sub>1</sub> of them were selected at random without replacement; where N<sub>1</sub> represents the sample size per stratum. The names corresponding to the numbers selected automatically became the sampled respondents. The procedure was repeated in all the strata in the three institutions. A sample size of fifth was used for each institution, bringing the total number of respondents in the sample to 150.

The questionnaire was administered through a research assistant to the respective respondents in their institutions. The questionnaire was collected back after two weeks of distributing to the respondents. The research data were analyzed using percentage, mean and standard deviation and chi-square statistic.

### Result Analysis

H<sub>0</sub>: There is no significant relationship between influence of information communication technologies and university administration

1. What is the influence of information communication technologies on university administration?

**Table one on influence of information communication technologies and university administration**

N	X	SD	r-cal	t-table	Decision
150	136.02	18.4			
150	112.21	11.5	0.657	0.195	Significant

Result collected from table one revealed that the r calculated is 0.657 and is greater than the t calculated of value 0.195. This showed that there is no significant relationship between influence of information communication technologies and university administration. This means that the majorities of the respondents agreed that there is no significant relationship between influence of information communication technologies and university administration

### Table Two

**Research Two:** What is influence of information communication technologies on university programme?

No.	ICT influences	X	SD	Decision
1	Teaching	3.1	1.9	Agree
2	Research Programme	2.6	1.6	Agree
3	Community Service Programme	2.9	1.8	Agree
	<b>Grand Mean</b>	3.2		

Result from research question two on table two indicated that item 1 to 3 obtained had the following mean scores 3.1, 2.6, and 2.9 with a cumulative score of 3.2. This means that the respondents agreed that information communication technologies influence teaching, research and community services programmes of universities positively.



**Research Three.** What is problems hindering influence of information communication technologies usage for university administration in Nigeria?

**Table three: Challenges preventing the use of ICT**

S/N	Item Description	$\bar{x}$	SD	Decision
1	Inadequate of funds	2.9	1.8	Agree
2	Shortage of ICT facilities	2.6	1.9	Agree
3	Corruption	2.8	1.9	Agree
4	Unstable power supply	2.7	1.8	Agree
5	Unstable internet services	2.6	1.6	Agree
6	Poor implementation of ICT policies	2.7	1.7	Agree
7	Shortage of ICT staff	2.8	1.8	Agree
8	Poor ICT literacy of staff	2.9	1.9	Agree
<b>Grand Mean</b>		<b>3.0</b>	<b>1.8</b>	<b>Agree</b>

Result from research question two on table two indicated that item 1 to 8 obtained had the following mean scores 2.9, 2.6, 2.8, 2.7, 2.6, 2.7, 2.8 and 2.9 with a cumulative score of 3.0. This mean that inadequate fund, inadequate ICT infrastructural facilities, corruption, unstable power, unstable internet services, poor implementation of ICT policies, shortage of ICT staff and poor ICT literacy of staff are the problems hindering effective ICT usage for universities administration in Nigeria.

### Discussion

The objective of this study was to investigate the influence of information communication technologies on university administration in Nigeria. This result collected showed that there was significant relationship between information communication technologies and university administration. Information communication technologies influences teaching, research and community services programme of the universities positively. The result also revealed that inadequate fund, inadequate ICT infrastructural facilities, corruption, unstable power, unstable internet services, poor implementation of ICT policies, shortage of ICT staff and poor ICT literacy of staff were identified as problems hindering effective ICT usage for universities administration in Nigeria. This result collaborates with the findings of Dada, Ishaya, Ogunode (2021) and who concluded that ICT aid university administration. This result also supported the findings of Dada, Olowonefa & Ogunode (2022) and Ogunode & Adamu, Ajape who identified unstable power, unstable internet services, poor computer knowledge, high cost of ICT facilities, poor implementation of ICT policies and corruption as factors preventing usage of ICT by educationist.

### Recommendation

The study recommends the following:

1. The government should provide adequate ICT facilities in all public universities. This provision will encourage universities community to use of ICTs for academic works.
2. The government and school administrators should design programme to solve the problem of of staff with poor ICT knowledge. Computer literacy should be promoted among lecturers and teachers, to increase the quality of teachers and learning in the universities. Trainings through workshops, seminars and lectures can be organised from time-to-time, in order to enhance their skills on ICTs usage and keep them abreast of new innovations and development.
3. The government should provide adequate fund to all the universities to enable them surmount the challenge of high costs of ICTs facing them. Better funding will enhance the provision of ICT facilities in the universities.

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