



# Information Communication Technologies, Academic Staff job Performance and Students' Academic Performance in Tertiary Institutions in Nigeria

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**Abstract:** The study assessed the impact of information communication technologies (ICT) on academic staff job performance and students' academic performance in tertiary institutions in Abuja, Nigeria. The study used the survey design. The population of this study consisted of all the lecturers in tertiary institutions in Abuja. 200 academic staff were selected from the three public tertiary institutions in FCT, Abuja for the study. The sample size of 200 was selected using simple random sampling technique. The instrument used for data collection was a closed-ended structured questionnaire which was made up of fifteen items. The instrument was validated by two experts in Department of Measurement and Evaluation, University of Abuja. The reliability of the instrument was ascertained using Cronbach Coefficient and a reliability index of 0.82. The statistical technique used by the researcher includes percentage and frequency count, mean and one way Analysis of Variance (ANOVA). The ANOVA was used to test the hypotheses at 0.05 level of significance and confidence level to know whether to accept or reject the null hypotheses. The study concluded that there was significant relationship between information communication technologies (ICT) and academic staff job performance and it is

also established that there was a significant relationship between information communication technologies (ICT) and students' academic performance in tertiary institutions in FCT, Abuja, Nigeria. Based on this result, the paper hereby recommended that the tertiary institutions manager should provide adequate information communication technologies (ICT) to all the tertiary institutions in Federal capital territory, FCT, Abuja, Nigeria.

**Keywords.** Information Communication Technologies, Academic Staff job Performance and Students' Academic Performance

## Introduction

Tertiary education, encompassing a diverse array of higher learning institutions, extends beyond universities to include various organizational structures. These institutions may be integrated

within a university setting or exist independently, such as universities and other tertiary learning institutions (Alemu, 2018). Ogunode, Edinoh & Okolie (2023) conceptualized tertiary education as a planned and organized educational system designed for the total development of man/woman and for the total transformation of the society through the utilization of teaching, research and provision of community service. The National Policy on Education (2013) defines tertiary education as the educational phase following Post Basic Education. It encompasses institutions like universities, Inter-University Centres (e.g., Nigeria French Language Village, Nigeria Arabic Language Village), Innovation Enterprise Institutions (IEIs), Colleges of Education, Monotechnics, Polytechnics, and specialized entities like Colleges of Agriculture, Schools of Health and Technology, and the National Teachers' Institutes (NTI). Serving as the ultimate stage of education, tertiary education plays a pivotal role in fostering the development of manpower for a country's social, economic, and technological progress. It is a well-organized educational sector dedicated to intensive teaching, research, and community service (Akin-Ibidiran, Ogunode & Ibidiran John, 2022).

Tertiary education encompasses stakeholders that are made up of students, academic staff, non-academic and researchers. Academic staff job performance is the total performance of teaching, researching and community services responsibilities an academic staff has carried out and still carrying out in the institutions where he or she work at a particular time. Academic staff job performance is the general record of tasks carried out by an academic staff to be compare to the assigned responsibilities and functions given to them (Ogunode & Ibrahim 2023).. Ogunode, et al (2023) defined Academic staff job performance as an assigned responsibilities and functions given to an academic staff to actualize the aims and objectives of the institutions and the decree execution or accomplishment. According to Andy, Emmanuel & Obabuike (2020), academic performance is a tool to helping the society in offering solution to problem with a view to enhancing societal well-being. In this research, academic staff performance is measured with productivity. Ziegler (2005) viewed academic performance with particularly effective action by a teaching staff which is consistently observed as a superior achievement in an education setting. Ogunode, ThankGod and Olatunde-Aiyedun (2022) stated that the academic staff job performance constitutes all activities and functions it is expected of an academic to execute within a specific time.

Ogunode & Josiah, (2023) defined academic performance of students as the total learning outcome of the students in the educational institutions which includes the knowledge, social and communication skills and ideas acquired and retained through their course of study. Ogunode & Inemesit (2023) viewed students' academic performance is the total sum of student's cognitive, affective and psychomotor achievement in the school. Many factors determine students' academic performance in school.

Olatunde-Aiyedun, Eyiolorunse-Aiyedun & Ogunode (2021) observed that teachers and students needs to deploy information and communication technologies to aid their job performance and academic work. Abara, Ogunode, Olatunde-Aiyedun (2022) noted that lecturers or teachers needs instructional materials to be able to carry our out his/her job effectively. The amount of human and materials resources available to the teachers helps to some extent to determine his/her performance in the classrooms. ICT is one of the instructional aid available for the teachers in this 21st century for the implementation of the school curriculum. The functions of the teachers which include, lesson note writing, lesson presentation in class, marking of notes, giving of assignments, assessing the achievement of the students, compilation of report sheet and setting of examination questions. ICT can make lesson note writing, lesson presentation in class, marking of notes, giving of assignments,

assessing students' achievement, compilation of report sheet and setting of examination questions fast and simple.

The students or learners are learning groups of people that needs instruction from an organized system. ICT resources is one of the learning aid the students' needs to improve their performance in the school. ICT makes students learn faster. It provides the students with flexible learning plans and distance learning. ICT enables learners to work and learn and provide more opportunities for interaction and personal development (Abara, et al 2022).

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. Obanya (2009), ICT is a broad term that has to do with the harnessing of process, the methods and the product of electronic communication related technologies and other related resources in today's' knowledge driven society, for enhancing the productivity, the spread and efficiency of set programme activities geared towards the achievement of clearly defined goals. According to Timiyu (2003), Information and Communication Technology (ICT) includes electronic technologies for creating, acquiring, storing, processing, communicating and using information. Timiyu classified ICT along two broad dimensions: the content-conduit facet and the service product dimension. Content-oriented ICT consist of the digital creation and publishing of information or content (e.g. database products, electronic books, and websites). Conduit- oriented ICT offers the guide or media for storing and transmitting of this information (e.g. telephone network). The product-oriented approach, on the other hand, embraces all physical objects or equipment used for information processing or transmissions like computers, cellular phones, and TV transmitters.

There are many investigation on ICT as it relate to tertiary institutions management. For instance, Nworgu, (2006) assessed the indispensability of ICT in educational research and Olorundare, (2006) looked at utilization of information and communication technology in curriculum development, implementation and evaluation. Oduwaye (1998) find out influence of role conflict on administrative effectiveness in Nigerian Universities and Nwokedi, & Sani (2009) examined use of search engines for academic activities by the academic staff members of the faculty of natural science, university of Jos. Victor & Faga (2015) investigated utilisation of Computer Technology for Academic Work by Lecturers of University Of Jos – Nigeria Achibong, Ogbeji & Obildem, (2010) assessed ICT Competence among academic staff in Universities in Cross River State, Nigeria. Aina (2014) examined awareness, accessibility and use of electronic databases among academic staff of Babcock University Business School. The present study is aimed to investigate the impact of information communication technologies, academic staff job performance and students' academic performance in tertiary institutions in FCT, Abuja, Nigeria.

### **Purpose of the Study**

The purpose of this study is to investigate the impact of information communication technologies, academic staff job performance and students' academic performance in tertiary institutions in Abuja, Nigeria. The specific objective include;

1. To find out the impact of information communication technologies (ICT) on academic staff job performance in FCT tertiary institutions;
2. To find out the impact of information communication technologies (ICT) on students' academic performance

### Research Questions and Hypothesis

1. What is the impact of information communication technologies (ICT) on academic staff job performance in FCT tertiary institutions in FCT tertiary institutions?;
2. What is the impact of information communication technologies (ICT) on students' academic performance in FCT tertiary institutions?

### Research Hypotheses

**H<sub>1</sub>.** There is no significant relationship between information communication technologies (ICT) and academic staff job performance in FCT tertiary institutions

**H<sub>2</sub>.** There is no significant relationship information communication technologies (ICT) and students' academic performance in FCT tertiary institutions

### Methodology

This study which used the survey design was carried out in Federal Capital Territory, Abuja, Nigeria. The population of this study consisted of all the lecturers in tertiary institutions in Abuja. 200 academic staff were selected from the tree public tertiary institutions in FCT, Abuja for the study. The sample was selected using simple random sampling technique. The instrument used for data collection was a closed-ended structured questionnaire which was made up of fifteen items. The instrument had two major sections (A and B). While section A elicited information on the bio data of the respondents, section B sought answers on the three research questions. The instrument was validated by two experts in Department of Measurement and Evaluation, University of Abuja. The reliability of the instrument was ascertained using Cronbach Coefficient and a reliability index of 0.82. The statistical technique used by the researcher includes percentage and frequency count, mean and one way Analysis of Variance (ANOVA). The choice of percentage method is for easy tabulation and clarity in analyzing the information collected, likewise is that of mean. The ANOVA was used to test the hypotheses at 0.05 level of significance and confidence level to know whether to accept or reject the null hypotheses.

### Data Analysis

**Table 1.1 Analysis of variance summary on the Impact of Information Communication Technologies (ICT) and Academic Staff job Performance**

Variable	Sum of Square	Df	Mean Square	F	Prob.	F-critical
Information Communication Technologies (ICT)	257.11	2	119.037	5.302	.000	2.01
Academic Staff performance	2903.24	202	15.867			
<b>Total</b>	<b>4260.35</b>	<b>204</b>				

Table 1.1 indicated the calculated f-ratio of 5.302 is greater than critical f-ratio of 2.01 while the p-value of 0.000 is less than level of significance of 0.05 at 3 df 246. This means that there is significant relationship between information communication technologies (ICT) and academic staff job performance in FCT tertiary institutions Therefore, the null hypothesis is rejected

### Analysis of variance summary on the Impact of Information Communication Technologies (ICT) and Students Academic Performance

Variable	Sum of Square	Df	Mean Square	F	Prob.	F-critical
Information Communication Technologies (ICT)	257.11	2	119.037	4.412	.000	1.01
Students academic performance	2903.24	202	15.867			
Total	4260.35	204				

Table 1.2 revealed the calculated f-ratio of 4.412 is greater than critical f-ratio of 1.01 while the p-value of 0.000 is less than level of significance of 0.05 at 2 df 204. This means that there is significant relationship between information communication technologies (ICT) and students academic performance academic in FCT tertiary institutions Therefore, the null hypothesis is rejected

#### Findings / Results

The result collected revealed that there is significant relationship between information communication technologies (ICT) and academic staff job performance and there is also a significant relationship between information communication technologies (ICT) and students' academic performance in tertiary institutions in FCT, Abuja, Nigeria. This result is in line with the finding of Ohiwerei, Azih, & Okoli, (2013); Idowu, & Esere, (2013); Ogunode, Adamu & Ajape (2022); Ogunode, Abubakar, Abashi, Ireogbu, Longdet (2021); Ogunode, Babayo, Jegede & Abubakar (2021) that discovered that information communication technologies (ICT) assisted lecturers and students of universities to perform their work and aided academic performance of students.

Adavbiele (2016) and Cheung and Huang (2005) pointed out that the use of ICT as an effective teaching tool in university education as many university teachers now publish their course materials via the internet. Ogunode, Adamu & Ajape (2022), 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). Victor and Faga (2015) and Nwokede and Sani (2009) submitted that ICT enables the researcher to have a discussion group with other researchers in his chosen area of study. Once a group is formed, all that the researcher needs to do is to post plea for ideas on his or her research topic on a "notice board" on the website.

## Conclusion and Recommendations

The study assessed the impact of information communication technologies (ICT) on academic staff job performance and students' academic performance in tertiary institutions in Abuja, Nigeria. The specific objective include; to find out the impact of information communication technologies (ICT) on academic staff job performance; and to find out the impact of information communication technologies (ICT) on students' academic performance. The study concluded that there was significant relationship between information communication technologies (ICT) and academic staff job performance and it is also established that there was a significant relationship between information communication technologies (ICT) and students' academic performance in tertiary institutions in FCT, Abuja, Nigeria. Based on this result, the paper hereby recommended that the tertiary institutions manager should provide adequate information communication technologies (ICT) to all the tertiary institutions in FCT, Abuja,

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