

## THE ROLE OF ICT IN UNIVERSITY OF NIGERIA NSUKKA

**OSAMOR EMMANUEL ONYEKACHUKWU.**

Faculty of Arts  
Department of Mass Communication  
University of Nigeria Nsukka, Enugu.  
onyekaemma6@gmail.com

---

### Abstract

*This study investigated the role of ICT in University of Nigeria Nsukka. The study generated 3 objectives which were turned to research question. The theories used are the connectivism and the global village theory for this study, the entire population was 33,644 and a sample size of 380 respondents was selected with the help of the Australian Calculator. The Accidental sampling technique was use to elicit data for the study. The questionnaire was used as the instrument for data collection, and frequency and basic percentages were used for data analysis. Within the framework of the study. The study reveal that there is a good knowledge of ICT in UNN. The finding also revealed that ICT plays an important role in the daily activities of staff/student. Base on this study the researcher concluded that this study has revealed a major challenge in the use of ICT in UNN. Some recommendations were made which includes; There should be wider and stronger network coverage in the entire UNN community and Practical courses on ICT should be made mandatory for student at all level.*

**Keywords: Role, ICT and UNN**

### Introduction

In order to increase productivity and ensure the long-term development of a country, higher education establishment is viewed as the foundation of human development. Chimombo (2005, EFA, 2010 and 2011). Because the potential of education to foster human capital and growth has not yet been fully realized, most higher education institutions lack adequate infrastructure, and those that do exist are in poor condition, deterring students from enrolling (DFID, 2010).

The advent of technology has brought about advance leaning as against the previous undeserved pattern of leaning to the people traditions, this is as a result of cultural or social reasons that made them unable to register into higher institution. Toro and Joshi (2012)

In general, teaching, learning, research, and personal growth began in 1948 with the founding of Nigeria's first educational institution and its library, the University of Ibadan. Since then, there have been numerous university libraries, just as there are universities all throughout the country. These libraries' primary purpose is to enable unrestricted access to information in light of the growing reliance on ICT. With the help

of ICT, modern libraries play a vital role in providing information needed by the users, this simply means that libraries need to apply the knowledge of ICT in their daily activities in the library considering the role it plays in retrieving and disseminating of information. Jude and Doris (2019).

Information communication technology (ICT) also means modern technology gadget used by students to support their educational pursuit and advance their achievement in pursuance of their academic goal. The majority of schools currently use a variety of ICT tools to organize, transmit, and preserve information. Computers, the internet, broadcasting technologies, and telephony are all included in this technology equipment (Nweke et al., 2013).

ICT has become an integral part for teaching, learning, interacting through such approach, this has also replaced chalkboard with interactive whiteboard, smartphones and other device for learning during class time. With the help of ICT, education has been made easy for literate and nonliterate because student can now learn from home without attending class and the nonliterate can be helped to learn new things online. When a teacher is digitally enlightened to use ICT, it promotes other higher learning skill that will also help student better prepared to deal with ongoing technological change in the society and workplace. UNESCO (2023).

The role of ICT cannot be undermined because in recent time, countries has developed in ICT usage either independently or as a group for national development in education and development of information in a country as a whole Scheuermann and Pederro (2009).

In a study by Odionye (2016) noted that achieving the aims of university with the aid of ICT is very important to the establishment of the university library. The emergence of information technology in the information age exchange has put librarians and office workers at the forefront of these activities they are faced with and this has brought new tools and techniques for acquiring and handling information. Hence, Nigeria government has acknowledged the need for the development and expansion of ICT center in the educational sector which has become the norm following the worldwide integration among countries. Aina (2010) opines that two decades of the last century, ICT became a norm and its emergence could be characterize to some inter-related factors such as social, economic and technological changes of the past decades which are now providing more education and training for all than before. According to Ashang (2018), some of the difficulties that limit the utilization of ICT centers include the following: Inadequate knowledge of designated unit directors with computer hardware and the necessary supplemental equipment; Lack of a computer literacy orientation or training program or low academic participation rate; faculty deans' aging populations and resistance to employing computers in educational administration; lack of familiarity among academics with the world wide web (www) environment and its use; Lack of access to personal computers in directors of

units/centers and deans of faculties' homes or offices; widespread academic perceptions that new ICT possibilities have no impact on increasing the quality of education; lack of funding for academic planning units/centers and faculties to prepare hardware and equip the classrooms, as well as a lack of staff attitudes, cooperative motives, and coordination needed to introduce ICT into a new environment.

However, Information and Communication Technology (ICT) offers support, effective management, easy operation, and administration in academic institutions and offices when used effectively. It was also observed that ICT can be used for student administration, according to Egoigwe, Ali, Chukwuemeka, Mamah, Madu, Nweke, and Okop (2020), who consulted a variety of resources for higher education institutions.

According to Thomas (2019), ICT at Njala University in Sierra Leone also serves the following purposes: combining data center services; implementing, managing, and sharing services for development; creating a more robust, efficient, and secure institution with a wide infrastructure; and enhancing and expanding ICT services to meet the expanding needs of the institution's departments, faculties, centers, and units.

Before the advent of ICT, work in Nigerian libraries was laborious, time-consuming, and did not allow for much flexibility. However, with the advent of ICT in Nigeria, especially at the higher educational level, there has been simultaneous access for many users at the same time, which helps to close the global information gap and create, accelerate the accomplishment in work force amongst staff, (Egoigwe, Ali, Chukwuemeka, Mamah, Madu, Nweke, and Okop, 2020).

### **STATEMENT OF PROBLEM**

Since the inception of ICT till date, it has been known for its constant transformation, its usage in schools, offices, interaction from country to country, at home to ease work load for human and even made communication reachable nationwide but in all of its strength, it is not without its shortcoming. It is an aberration to know that some staff/students still lack orientation, training/enlightenment of ICT usage to execute task in academic environment/place of work because they haven't embraced the knowledge that comes with ICT.

However, the act of embracing ICT resources to render adequate services is not unique to University of Nigeria, Nsukka alone, other institution also encountered different degrees of challenges in Nigerian. It is against this backdrop this study seeks to fill the gap through the under listed objectives.

### **OBJECTIVES OF THE STUDY**

The main purpose of the study was to examine the role of Information and Communication Technology (ICT) in University of Nigeria Nsukka. Specifically, the study sought to

- 1 Examine the level of knowledge of ICT available to students/staff of UNN
- 2 To find out the function of ICT amongst staff/student of UNN
- 3 To ascertain the challenges encountered most in using ICT in UNN

### RESEARCH QUESTIONS

- 1 What is the level of knowledge of ICT available to students/staff in UNN?
- 2 What is the function of ICT amongst staff/student in UNN?
- 3 What are the challenges encountered most in using ICT in UNN?

### LITERATURE REVIEW

#### Focus of Review

Previous studies have been carried out on related topics such as roles of ICT but there is no much documented evidence as regards role of ICT in University of Nigeria Nsukka therefore, various literature of scholars, researchers will be reviewed as it relates to the topic under study. The review is presented under various sub-headings which are in line with Ohaja's assertion that, "Literature review should be broken into sub-headings and presented in a logical order to enhance readability." (Ohaja, 2003), this includes;

- Conceptual Framework
- Overview of Information and Communication Technology
- Origin of ICT
- Roles of ICT on Education
- Empirical
- Theoretical Framework

#### Overview of ICT

The use of computers and telecommunications equipment to streamline the generation, collecting, processing, transmission, and storage of information is referred to as information and communications technology (ICT). This includes computing technologies such as servers, laptops, computers, and software programs in addition to the wired and wireless communication technologies that support telephones, the Internet, the Internet of Things (IoT), and the metaverse. ICT strives to improve M2M (machine-to-machine) and human-to-human (H2H) communication efficiency to support simpler and more effective production.

It is no longer possible to minimize the value of ICT because it has become the backbone of contemporary civilization, enabling constant innovation, boosting

productivity, and promoting worldwide connectivity.

### **Origin of ICT**

The 19th century brought about ICT with the advancement of telegraph and telephone, these two inventions significantly changed the way people worked, communicate and interacted socially thereby making communication possible from person to person at different location in real or near-real time. Radio and television ushered the idea of mass communication in the middle of the 20th century, by the end of the century, the internet had become a mainstream medium for communication, business and entertainment. Its relevance continued to grow with speed in the following years, transforming the way people work and digitally transforming the way people communicate. The following are the dates with technological advancement;

#### **Year      Technological Advancement**

1837	Morse code and telegraph
1876	Telephone
1895	Wireless telegraphy
1927	Television
1947	Transistor
1951	UNIVAC I (First commercial computer)
1969	ARPANET (Foundation of the Internet)
1971	First email
1990	World Wide Web
1991	GSM (Global System for Mobile communication)
1994	Netscape Navigator (Widely-used web browser)
1998	Google
2001	Commercial 3G networks
2004	Facebook
2007	iPhone
2008	Bitcoin (First blockchain-based cryptocurrency)
2010	4G networks

- 2016 AlphaGo (AI system defeating world champion Go player)
- 2020 5G networks
- 2023 Zoom (350 million daily meeting attendees)

Presently, with the help of ICT, broadband internet and smartphones has made it easier than ever for people to gain access, share and consume information with ICT experts promising even more exciting developments in the nearest future. In view, 6G networks will provide faster and more reliable connectivity, generating AI systems like ChatGPT which will change the way people create, acquire information and emerging technologies like quantum computing and Web3 will also inspire a wide variety of new ICT tools and applications.

### **The Role of ICT on Education**

The importance of ICT cannot be undermined even in the educational sector, according to Schemas (2023) constructivism theory, it states that construction of knowledge by learners is achieved not just receiving information passively. People experience the world, establish their own representation and instill new information into their pre-existing knowledge, when this is employed in the right educational condition, with the knowledge of ICT, student can construct the required skill needed to excel in their different areas of study by facilitating delivery and also enhances their learning process. According to Nwosu and Ogbomo (2011) and Pyla (2012) notes that, it enhances the efficiency of educational administration, reduce cost, covers large areas, improves policy formulation and execution of task.

Sanieifar (2013), posits that, it fastens the systematic and accurately retrieval of data related to students and staffs as well as general record. For students, such data includes personal file, assessment, academic records, placement participation etc could be achieved through ICT.

Local area network (LAN) is an importance aspect of ICT networks, infrastructure for virtual libraries and other virtual structure in accelerating the globalization of library services, subsequent transformation of library practices in Nigeria Universities has gained significant recognition. With the help of ICT, globalization has been made possible which has brought a significant change in University libraries, including UNN. This was confirmed in Aina, Adigun, and Ogundipe (2010) study that there has been dramatic adoption of ICTs in Nigerian libraries, offices and this has led to globalization of library services in the country.

### **Empirical**

The following are some of the related studies carried out on this Subject matter which are also in line with the objectives of the study;

The Use of ICT in The Teaching and Learning of Oral English in UNN Education Zone, a

research by Abonyi (2018), revealed that the school has minimal ICT resources available. The study's participants concur that using ICT to learn is advantageous, however the majority of teachers and students don't use them since they lack the necessary ICT abilities. In general, it was found that obstacles to the efficient use of ICT in the classroom included a lack of knowledge of the technology, a lack of computers for a sizable hall, frequent power outages, a lack of trained staff to handle ICT instructional materials, a lack of personal computers and access to internet resources.

In accordance with objective (2), the ICT Unit of UNN (2023) states that it is generally responsible for the deployment of infrastructure related to ICT and provide ICT services for efficient administration, teaching, research, and learning of the University as a whole. This is possible with the help of the Information & Communication Technology Unit (ICTU), giving the University the opportunity to invest in the strategic use of IT, direct IT resources to the best and highest uses in support of the University of Nigeria, and raise the bar for IT service in a way that is exceptional.

In a related study by Richard Ojinnakaeze and Edna (2019) in line with objective (3) of this study, Titled "*Computer-Based Test (Cbt), Innovative Assessment of Learning: Prospects and Constraints among Undergraduates in University of Nigeria, Nsukka*". Findings revealed that examination malpractice is reduced when it is CBT with the help of ICT and it guarantees secured data storage, in spite of this, The University of Nigeria Nsukka still faces a threat from students' computer illiteracy, poor power supply, weak network connection, computer illiteracy when adopting CBT. Furthermore, ICT has numerous benefits but many constraints prevent its effectiveness within the university especially when using it for examinations.

ICT plays numerous roles in all aspect of human society such as socially, medically, economically, and even educationally. The integration of ICT into the educational field has significantly altered how different countries approach education. ICT is therefore viewed as a change agent in the field of education. ICT resources, according to Ajinaja (2017), carry out a variety of tasks in the educational system, including enrolling and managing pupils. Azor, (2017) said, it also serves as help for teaching and learning in different areas. Joshua, (2018) asserts that it hastens assessment of learning when it is Computer Based Test (CBT).

Technology, according to Adegbiya, Fakomogbon, and Daramola (2012), has emerged as the only trustworthy medium that has enabled successful, effective, and internationally based education for all countries, with a greater emphasis on its function in computer-based evaluation.

### **Theoretical Framework**

The global village hypothesis was advanced by Canadian-born Marshall McLuhan in his books "the Gutenberg Galaxy: The Making of typographic Man" in 1962 and "Understanding Media" in 1964, and it served as the foundation for this study.

Electronic technology and the instantaneous flow of information from every direction to every location at once, according to McLuhan, have shrunk the world into a village. The theory is found to be applicable in this study because ICTs have transformed the world, particularly higher education programs, into a global village. As a result, students and staff who are all users of the library are now using the university ICT facilities to access online journals, as well as sending and receiving e-mail within and outside the nation, and find references. The usage of the Internet has transformed how businesses, libraries, schools, and individuals may access information. The walls between home and school have also been broken down by technology, and many colleges now use audiovisual equipment to send educational materials over large distances. More traditional modes of academic interchange between colleges around the world have been supplanted by these new kinds of globalization.

George Siemens and Stephen Downes, two theorists, initially presented the connectivism idea in 2005. The year after Siemens' Connectivism: Learning is a Network Creation, which was posted online in 2004, Downe's introduction to connective knowledge was released. These articles discuss the crucial role that technology plays in the process of learning and how the access of students to information had been sped up during the digital age. A relatively new notion called the connectivism leaning hypothesis stipulates the effective combination of ideas, theories, and general knowledge. It acknowledged technology to play a significant role in the learning process and that the freedom to choose how we will learn is to remain connected at all time. In line with this theory, it simply means that ICT helps it users that is, staff/students to learn, combine their thoughts and acquire relevant information that will be use in a profitable manner.

### **Methodology**

**Design:** This study employed the Analytical survey design to describe and explain the Role of ICT in the University of Nigeria, Nsukka. This type of survey seeks to find out the reason why people behave the way they do, it seeks to determine whether there is causal relationship between certain kinds of behavior, various societal and demographic characteristics of people Ezekiel, Mohammed, Daniel and Ruth (2017). It makes use of questionnaire or interview to discover characteristic of a phenomenon and this simply means that, there should be a reason why people use or don't make use of ICT. The researcher carried out this study in University of Nigeria Nsukka in Enugu State.

**Population of the study:** The total study population was made up of the entire students and staff of UNN. According to ICT innovative center UNN (2023), the total number of students is 24,458 and according to Registrar Department, Personnel Unit UNN, the total number of staff (academic and non-academic) is 9,186. In total the entire population of this study is **33,644**. A population describes the entire members of any definitive set of people, events or subjects.



**Sampling and Sampling Technique:** With the help of the Australian Bureau of Statistics, a sample size of 380 was gotten. The Accidental sampling technique was used meaning that, the researcher finds a place that is convenient for him and stays there to distribute his questionnaire to the respondents concerned. This implies that any available member from the population at a given point in time is selected until the anticipated number is attained.

**Instrument of Data Collection:** A questionnaire was utilized in the study's data collection; it was well constructed by the researcher to obtain primary data. The response format was a four Likert scale which are; Strongly Agreed (SA), Agreed (A), Disagree (D) and Strongly Disagree (SD).

**Data Collection and Analysis:** The data collected in this study was presented and analyzed using quantitative and qualitative (which is largely descriptive) methods. The quantitative method made use of simple percentages, tables and frequencies in order to ensure that the data are correct as well as demonstrate the results distribution of the findings while the qualitative method was utilized in interpreting the figures to better understand the findings.

The research questions in this study were analyzed and treated one after the order to ensure clarity of data presentation. The percentage formula used is shown below.

Where;

$n$

$n \times 100$

1

$n$  = Number of respondents (frequency)

$n$  = Total number of respondents

100% = Percentage

In using the above formula, the number in a particular unit was divided by the total number in the frequency then multiplied by one hundred in order to get the total percentage in a given item or question percentage.

## Results

Out of the 380 copies of questionnaire that were distributed to staff and students, 350 copies were filled and returned. This represent 95% return rate.

**Table 1 Research Question 1:** What is the level of knowledge of ICT available to staff/students in UNN?

Response rate on do you know what is ICT

Response	Frequency	Percentage%
Strongly Agreed	340	97
Strongly Disagreed	-	-
Invalid	10	3
Total	350	100%

Responses from the above table showed that 340 (97%) respondents knows what ICT is.

**Table 2 Research Question 2:** What is the function of ICT amongst staff/student in UNN?

Response rate of function of ICT in UNN

Response	Frequency	Percentage
For information, documentation and sourcing materials.	180	51
For catching fun	150	43
I don't know	20	6
Total	350	100

From the table above, it reveals that 180 (51%) of respondents strongly agree that ICT is very important

**Table 3 Research Question 3:** What are the challenges encountered in using ICT in UNN?

What hinders the free flow of using ICT center in UNN

Response	Frequency	Percentage%
Strong Network	226	64
Power failure and attitude of staff.	100	29
Invalid	24	7
Total	350	100

Table 3 above shows that 226 (64%) of respondents are of the opinion that strong network is a major challenge in using the ICT center.

### Discussion of Findings

Having presented the data generated, the findings were discussed in accordance with the research questions of the study.

The first research question sought to examine the level of knowledge of ICT available to students/staff in UNN. Response to this research question revealed that staff/student as the respondents of the study, knows what ICT is all about and this was further illustrated as 340 of (97%) serves as the majority of the study.

The second research question was to find out the function of ICT amongst staff/student in UNN. Their response showed that 180 (51%) majority of respondents strongly agree that ICT is very important in their day to day activities.

Finally, the third research question ascertain the challenges encountered in using ICT in UNN? The response to research question three shows that respondents of 226 (64%) are of the opinion that strong network is a major challenge in using the ICT center. In all, it can be deduced that majority of respondent has good knowledge of ICT and its role cannot be down play.

### **Conclusion/Recommendations**

Going through the result of the study, it shows that there are a good number of people that know what ICT is all about, know the roles it plays in our daily living but it is not without its challenges. The contribution of this research has opened a major challenge in utilizing ICT in UNN. Therefore, the researcher recommends the following the findings of this study:

- There should be wider and stronger network coverage in the entire UNN
- Practical courses on ICT should be made mandatory for all student at all level
- Equal value for money paid by staff and student should be given to them when using the ICT.
- There should be more ICT center in a big institution as UNN and there should be easy access for staff and students without rigid protocol to scare them away.

### **Reference**

- Abonyi, Ernest Uwakwe (2018) The Use of ICT in The Teaching and Learning of Oral English in UNN Education Zone Vol.9(4). Pp 248 – 253.
- Adegbija, M. V., Fakomogbon, M. A., Daramola, F. O. (2012). The new technologies and the conduct of e-examinations: A case study of national open university of Nigeria. *British Journal of Science*, 3(1), 59-66.
- Aina, A.J, Adigun, J.O and Ogundipe, T. C. (2010). Information and communication Technology Resource support Availability, utilization, and proficiency skill among University Libraries: The Lagos State University Experience. *Asian Journal of Information and technology*
- Ajinaja, M. (2017). The design and implementation of a computer-based testing system using component-based software engineering. *International Journal of Computer Science and Technology, IJCST*, 8, (1), 58-65.
- Ashang, M.U., 2018. Causes of low level of ICT application in university education in Nigeria. University of Calabar, Calabar.
- Azor, R. O. (2017). Effect of audio-visual documentaries on secondary school students' achievement and interest in history in Nsukka local government education

area, Enugu state (Unpublished bachelor degree project). University of Nigeria, Nsukka.

Chimombo, J.P.G. (2005) Issues in basic education in developing countries: An exploration of policy options for improved delivery: *Journal of International Cooperation* 8(1) 129-152

DFID, (2010) **Learning for all: DFID's education strategy for 2010-2015**, UKaid from the Department for International Development.

EFA, (2010) **Global monitoring report reaching the marginalized**: UNESCO publishing

Egoigwe Sochima Vincent, Ali Adizetu Aneru, Chukwuemeka Joseph Chukwu, Mamah Nnedinkpa Valeria, Madu Chioma Vivian, Nweke Prince Onyemaechi and Okop Ekaette Okon (2020). The Role of Information and Communication Technology (ICT) in Academic Planning Unit in Federal Universities in South-East Nigeria. Article in *Journal of Applied Sciences* · June 2020 DOI: 10.36478/jeasci.2020.1985.1993

Ezekiel, S.Asemah, Mohammed, Gujbawu, Daniel O. Ekhareafu and Ruth A. Okpanachi (2017): *Research Methodology and Procedures in Mass Communication*. Second edition, Matkol press, Jos, Plateau State, Nigeria.

Information and Communication Technology (ICT) Innovative Center University of Nigeria Nsukka (2023). Total number of students in UNN.

Joshua, M. T. (2018). Research and innovations in education: An overview. In M. T. Joshua (Ed.), *Research and innovations in Nigerian education: Nigerian academy of education year book 10* (pp.1-17). Nigeria: Nigerian Academy of Education.

Margaret Rouse (27 June, 2023): Information and Communication Technology (ICT) Retrieve from <https://www.techopedia.com/definition/24152/information-and-communications-technology-ict>

Nweke, P.O., O.N. Nwakaire and A.I. Omale, 2013. The role of Information Communication Technology (ICT) in the teaching and learning process in higher institutions of Nigerian educational system. *Intl. J. Stud. Human.*, 9: 140-148.

Nwosu, O. and Ogbomo, E.F. (2011) ICT in Education: A catalyst for Effective Use of Information, *PNLA Quarterly publication of the Pacific Northwest Library Association* Vol. 75(4) Retrieved on 05/06/2013 from <http://www.pnla.org>

Odionye, Chinwe Mirian (2016) Uses and Applications of ICTs in Nigerian University Libraries: The Case of UNN Research Journal of Mass Communication and Information Technology Vol. 2 No.4 2016 ISSN: 2545-529X  
www.iiardpub.org

Ohaja, E.U. (2003). Mass communication research and project reporting writing. Lagos John Letterman.

Pyla, A. (2012) ICT as a change Agent for Higher Education and Society: *International Conference on EGovernance & Cloud Computing Service, Proceedings published by International Journal of Computer Application (IJCA)* PP. 25-30

Richard Ojinnakaeze Azor and Edna N. Ogwu (2019) Titled Computer-Based Test (Cbt), Innovative Assessment of Learning: Prospects and Constraints Among Undergraduates in University of Nigeria, Nsukka

Sanieifar, E. (2013) The Paramount Role of ICT in Education: A Focus on ART Instruction, *International Journal of Science and Applied Information Technology (IJSAIT)*, Vol 2(2) pp.7-10

Schemas (2023) Constructivism theory. University at Buffalo, the State University of New York. Office of the Curriculum, Assessment and Teaching Transformation 5 North Hall, North Campus 716-645-7700