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## Appraisal of the Influence of Technologies in Nigerian Tertiary Education Institutions

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By

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Since flag independence in 1960, successive Nigerian governments both civilian and military have stressed the importance of education, particularly tertiary education to true development of the country. Most of the political parties that have vied for power in the country had also made education one of its cardinal programmes in its manifesto. Regional and state governments were also not left behind in this respect. In fact, it was Awolowo's free education programme in the western region that endeared the late sage and politician, Chief Obafemi Awolowo to his Yoruba kinsmen more than other of his political activities and achievements.

But apart from the above commendable feat of the Awolowo administration in the then western region of Nigeria, nothing spectacular has been achieved in the education sector. The 1980s and 1990s in particular were trying periods for Nigerian tertiary education sector. The military dictators that held the reins of power, at best, showed only disdain for education in the country in general and tertiary education more so, thus further compounding problems for the already falling standards of education in the country.

The Universities in Nigeria were the worst hit. For instance, University of Nigeria, Nsukka particularly has been subjected to utter neglect since the end of the Nigerian civil war by succeeding military regimes that held sway in the country for long years. There were dilapidated infrastructural facilities in the universities, inadequate accommodation, near absence of well-equipped libraries and laboratories,

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funding was inadequate, information and communication technologies (ICTs) facilities were almost non-existent and staff strength was less than impressive. These developments had a telling effect on both the university and its products. Adenipekun [2008:1] agrees that:

*... steady infrastructural and academic progression came to a halt beginning from 1990 when funding of universities in Nigeria by government became grossly inadequate. Decadence set in and many of its egg heads fled to more sane environments. Like the situation in other public universities, infrastructural development came to a standstill. Staff morale waned. University image and performance nose-dived. ... Also, existing structures were in disrepair. Laboratories were poorly equipped and grossly inadequate for the much-needed practical work.*

These problems came to the peak some years back when the universities and other tertiary institutions of education were abysmally ranked in Africa and the whole world thus playing second fiddle to less-known such institutions in smaller and much poorer countries. This poor ranking was attributed mainly to the dearth of information and communication technologies (ICTs) facilities in the university resulting in poor visibility, scholarship, size and publicity of the tertiary institutions. This was just unacceptable to all the stakeholders of the education sector had to make frantic efforts to improve the fortunes of these institutions.

Hence, realizing the important roles information and communication technologies could play in re-positioning the institutions, the managements of the various tertiary institutions embarked on different ICTs acquisition programmers to meet the current trends in tertiary education in the world. University of Nigeria, in partnership with leading ICTs firms, embarked on one of the most ambitious and largest ICTs development in the annals of universities in the country. According to the Vice-chancellor of the university, Professor Bartho Okolo:

*The University management embarked on this ubiquitous wireless infrastructure project because of her vision of transforming teaching, learning, research and administration within the university system. This project, which is the widest wireless network owned by any university in Africa is facilitated by leading ICT firms notably Google Inc., MTN Nigeria, Hewlett Packard, Microsoft Corporation, Cisco Systems, Xirrus Inc., Wavion Inc., Business Connection of South Africa, First Bank Plc. and Zenith Bank Plc. (www.unn.edu.ng)*

### **Statement of Problem**

The dubious attention the government paid to tertiary education in Nigeria dealt serious blows to the University of Nigeria. Things went from bad to worse for the

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prestigious centre of academic excellence between 1990 and the year 2004 as the fortunes as well as the image of the school going down. Besides the case of poor funding that affected the whole universities in the country, ICTs facilities were almost non-existent. Consequent upon this, while the best university in Africa, the Cape Town University, South Africa was ranked 340th in the world and ranked 328; 368; 450 and 395 in size, visibility, rich files and scholarship respectively, the University of Nigeria was ranked 7170th in the world and 4055; 10,766; 5781 and 4305 respectively in size, visibility, rich files and scholarship. University of Nigeria also ranked 99th in Africa and 49th in sub-Saharan Africa and 10th in Nigeria

Not long after, the hitherto poor ranking of the university gave way to a better and more promising rating. Instead of being ranked 10th in Nigeria, it is now ranked third in the country. Second, the use of the different components of the ICTs mainly, the Internet became ubiquitous in the university. Research has become better and more frequent as access to information has been made common and easier. The question therefore, is: what roles have the deployment and employment of ICTs facilities in the University of Nigeria played in the rapid turn-around of the fortunes of the university? This study therefore, examines [a] the availability and use of information and communication technologies in the University of Nigeria; [b] the accessibility of the these facilities to both students and staff of the university; [c] the contribution of these facilities to the rapid improvement of the university's ranking and [d] the impediments to the use of ICTs facilities in the university.

### **Research Questions**

In order to realize the objectives of this study, the following research questions were raised:

1. What is the level of availability ICTs in the University of Nigeria?
2. To what extent do staff and students of the University of Nigeria use ICTs facilities in their programmes?
3. Has the development and use of ICTs facilities contributed in improving the ranking of the university in the country?
4. What are the impediments to the use of ICTs facilities in the University of Nigeria?

### **Literature Review**

The famous Physicist, Isaac Newton, once said: "If I have ever seen further, it is by standing on the shoulders of my predecessors."

The University of Nigeria, (the very first indigenous university in the country) the area of study was from the very beginning packaged to a world-class university. Though the University College, Ibadan was started in 1948, University of Nigeria, Nsukka, [established in 1960] became the first indigenous model attuned to the peculiar

needs of the country. It quickly set the model for future development of universities all over the country.

The university succeeded to a reasonable extent in achieving the objectives set by its founding fathers by introducing new courses of study and producing graduates in different courses that were hitherto left for universities overseas. It has also produced internationally-acclaimed scholars who have made their marks in different fields both nationally and internationally. Such was the success of the university that most people (especially its students and graduates) market the university in stickers and such other outlets with such fond claims like: *'there are only two universities in Nigeria: University of Nigeria and others; A UNN graduate is ahead of you, naturally.*

The aim of the founding fathers of the university was that it would serve the following broad purposes as enumerated by Onah (2001:4):

1. The university as an institution, as it once emerged in Europe during the medieval ages, to train civil servants, professionals (law and medicine) as well as recruits for the priesthood;
2. The university as a depository and/or ivory tower for knowledge and wisdom as was once the famous Library University in Alexandria, Egypt;
3. The university as generator of new knowledge, an institution for scholarly research, as was the case with the university conceived by Wilhelm Von Humboldt at the beginning of the 19th century;
4. The university playing the role of 'public utility' as envisaged for the so-called land grant colleges established in the United States by Morrill Act of 1862;
5. The university serving as a fortress for freedom of speech and criticisms of the established government, thereby serving political democracy. The overthrow of repressive regimes often originated from universities..."

The University of Nigeria has recorded phenomenal growth and made giant steps in various spheres of the Nigerian nation. From the initial intake of 220 candidates in 1960, its admission figures currently stand at about 7,000 per annum and a total student's population of about 28,361. The academic staff strength has also grown from 100 in 1960 to over 1,700. Similarly, the number of departments has grown from six in 1960 to 106 [in addition to five sub-departments], all contained within 16 faculties presently in contrast to the two faculties that existed at inception. In addition, there are 10 semi-autonomous institutions and research centres, a school of postgraduate studies. UNN has four other campuses. The Enugu campus is located in

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Enugu the capital city of Enugu state and houses the faculties of Business Administration, Law and Environmental Studies. The faculties of Medicine, Dentistry and Health Sciences and Technology are located at the third campus at Ituku Ozalla. The fourth campus dedicated to the study of Nigerian languages is located at Aba, Abia state (The Nation, 29/10/2010:48).

Consequently the university is identified by the following carefully thought-out motto, mission statement, vision and core values: The motto is 'To Restore the Dignity of Man while the vision is to create a functional, globally competitive and research-focused university of Nigeria which is not just an Ivory Tower but responsive to the needs of society while delivering world class education and knowledge. The mission is to place the University of Nigeria in the forefront of research and development, innovation, knowledge transfer and human resource development in the global academic terrain, while promoting the core values which will ensure the restoration of the dignity of man. The core values are integrity, accountability and transparency. It further states that the interest of the university will be placed above self and all other considerations. Our decisions will be guided by a deep sense of honesty, truth, equity and justice. The highest standard of ethical and moral values will be exhibited and encouraged. All actions will be in compliance with the rules of the university and the laws of the country.

At the onset, the university introduced courses in engineering, medicine, law, social sciences, journalism, music, fine arts including the mother of all the courses, General Studies, which enabled students learn a bit of both physical and social sciences irrespective of your course of study. The aim of this hybrid of English and American university systems was to make a UNN graduate a well-rounded man academically.

These generated criticisms. The critics argued that UNN was going to produce half-baked students with all the science courses they offer without adequate manpower unlike Ibadan that was only offering courses in Humanities. Students from western parts of the country were dissuaded from going to Nsukka. But when the university produced its first batch of graduates, the difference became very clear. According to Ekwegbalu (2010:1):

*In 1963, the University turned out her first graduates. It was time to test whether the graduates were half-baked or truly found worthy in character and learning as the University had dubbed them as they received their certificates. The Federal Government, in order to ascertain the quality of graduates from the country's owned University, decided to introduce qualifying tests for all new graduates that would be employed by the Civil Service.*

*For three consecutive years, the graduates of the University of Nigeria took the first 15 positions. The critics were silenced. The qualifying examination into the Civil Service was stopped. The underdogs had indeed turned out to be the champions.*

The university fell into bad times after the end of the civil war in 1970 but things became considerably worse since 1990s. During the war, many facilities in the university were vandalized by rampaging and vengeful federal troops. The well-stocked library of the university was forced open and very important and rare books were used as toilet papers by the largely illiterate soldiers occupying the university.

After the war, the subsequent and succeeding governments at the centre led by mostly northern army generals paid little or no attention to reconstruction of the physical infrastructure destroyed during the war. Consequent upon these, systemic rot set in. There was massive brain drain as eggheads in the university sought greener pastures elsewhere, infrastructural decay; inadequate accommodation as students' admission increased; ceaseless industrial actions as academic and non-academic staff of the university clamour for better pay packets and many others. Expectedly, the standing and performance of the university in country and in the world waned dangerously. It was no longer considered the primus inter pares in the comity of Nigerian universities. Other younger generation universities overtook it in ranking.

Today, the university is steady regaining its lost glory. The unfinished buildings that once littered the university environment have been completed, the staff strength has improved; laboratory equipment have also increased. The university has also, in partnership with leading ICT firms, developed information and communication facilities that are believed to be the biggest and most ambitious in the whole of Africa.

### **UNN and ICT Development**

Since the inception of the university, Information and Communication technologies have been in a retarded state of development. This has been the bane of the university as there were virtually no ICTs facilities in the university until Professor Nebo took over as the Vice-Chancellor of the university. Early in his administration, he went into private partnership with some ICTs-based organizations like Afrihub to provide online services for the university. He also developed the UNN cybercafé where both staff and students of the school can obtain Internet services. Though this effort was remarkable, it was grossly inadequate.

With the coming on board of Professor Bartho Okolo as the new Vice-Chancellor of the university, a fresh breath of life was put into ICTs development in the university. The Vice-Chancellor has engaged in massive ICTs development and

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expansion scheme in the university as well as linkage programmes with other universities.

The whole vision guiding ICTs development in university entitled UNN/ICT Strategy Programme according to the university's official website, [www.unn.edu.ng](http://www.unn.edu.ng).

### **Goals and Objectives**

1. The provision of ICT infrastructure, including support and standards by raising the quantity of Internet Bandwidth to a level that makes the use of Internet for research and communication comparable to what obtains in some of the best universities in the world.
2. The delivery of high quality and cost effective ICT services and training by making Internet accessible from the staff research desks, student workplaces and laboratories in the shortest possible time.
3. The fostering of innovation, best practice, and value for money in the use of ICT in teaching, learning and research across the University.

The UNN ICT Strategy Programme is aimed at “transforming near term economic participants (staff and students) into fully fledged members of the digital economy. They will be equipped with competencies, attitudes and information management skills that will reduce the learning curve as students enter the job market, facilitate private enterprise both in the Information Technology sector and other sectors, and create the opportunity for the emergence of near term global outsourcing”.

### **Infrastructure Scope**

1. Ubiquitous Wireless Network is always on
2. Campus-wide Optical Fibre Cabling with redundancy for reliability
3. Structured Cabling of all Academic and Administrative Buildings
4. Data Centre and Network Operating Centre
5. Operations Support Centre for the smooth running of the system  
To restore the dignity of man

**Programme Scope:** The Scope of the UNN ICT Strategy programme includes providing, within **36 months**, the following: **Internet Connectivity:** 1-4 Mbps per 1000 students and staff.

Minimum requirement is 50-250Mbps. Terrestrial bandwidth is preferred.

**University Network:** A comprehensive, ubiquitous, wired and wireless network that covers the entire geography of the four campuses of the university. A hybrid implementation of a Fibre Optic backhaul, an extensive structured cabling to all major buildings for teaching, laboratory work, administration, student, staff residences and WiFi for the last metre. Professor Okolo [2010] concludes that:

*With this programme, the UNN continues its tradition of being a pace setter and trail blazer in Nigeria and African higher education. This ICT infrastructure would enable research and learning. It is also the first time that Goggle is launching forth with a University Access Programme to support and promote e-learning in Africa.*

Consequent upon the development of these ICTs infrastructure and services, the whole academic landscape of the university is witnessing a dramatic change. Cybercafés have sprung up in a number of locations in the university besides the university's elaborate MIS unit. Internet can be accessed in most offices in the university. Because of this, most staff and students of the university have computers of different makes, sizes and configurations. There is an increased use of the Internet among both students and staff of the university. So far, these Internet services are free.

### **Theoretical Framework**

According Baran [2004:418], “mass communication theories are explanations and predictions of social phenomena that attempt to relate mass communication to various aspects of our personal and cultural lives or social system.” Theoretical framework on the other hand is a device or scheme for adapting or applying the assumptions, postulations and principles of a theory in the description and analysis of a research problem [Obasi, 1999]. Accordingly this worked is anchored the Technological Determinism theory. This theory was propounded by Marshall McLuhan in 1962. In his book, *Guternberg Galaxy: Making of the Typographic Man*, McLuhan postulated that media technology determines how we as individuals think, feel and act as the society move from one technological age to the other. The basic idea behind the theory is that changes in technology ultimately change the way humans communicate and thus shape our existence. McLuhan believes that our culture is moulded by the level of our ability to communicate. To further buttress his argument; McLuhan explains that: First, inventions in communication technology cause cultural change. Second, changes in modes of communication shape human life. Third, and in McLuhan's own exact words, “We shape our tools, and they in turn shape us”.

According to Chandler [[www.allsand.com](http://www.allsand.com)]

*Technological determinists interpret technology in general and communications technologies in particular as the basis of society in the past,*

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*present and even the future. They say that technologies such as writing or print or television or the computer 'changed society'. In its most extreme form, the entire form of society is seen as being determined by technology: new technologies transform society at every level, including institutions, social interaction and individuals. At the least a wide range of social and cultural phenomena are seen as shaped by technology. 'Human factors' and social arrangements are seen as secondary.*

This theory has three basic assumptions namely:

### **1. Ontological Assumption**

This assumption believes that human beings do not have much free will or wills of their own. Hence whatever the whole society uses to communicate, they will use to communicate not minding its shortcomings. They will simply adapt to the medium or media in use so that they can send and receive messages.

This assumption is true at least in the present day world as everybody has adjusted or is adjusting to the use of new communication gadgets like the radio, television, cell phone, television, e-mails, chat rooms and others. Consequently, the older modes of communication like letter-writing are gradually giving way to text messages and e-mails. The use of town-criers is almost a relic found only remote villages today.

### **2. Epistemological Assumption**

This assumption says that as the medium changes so does society's way of communicating. People can only use the medium for what it was created for. This implies that a new medium can only be used to serve the purposes for which it was created and nothing else. For instance, we use phone for talking over lines or electronic mail for talking through the Internet. The cell phone cannot be used to talk to a mass audience the way the radio or television can. It is practically a medium for interpersonal communication. If it is an impersonal medium like television, then the message too becomes impersonal.

### **3. Axiological Assumption**

This assumption believes that technological determinism is an objective theory. This is because everyone will act and feel the same no matter what the medium they are using provided that they are using the same medium. Values are not involved because evidence is seen strictly through observation.

According to this theory:

*There are several giant evolutions in the way humans have learned to communicate over time. Each of these innovations works as an extension of*

*one of the human senses. McLuhan has divided human history into 4 critical periods of time. In each case, the moving on from one era to another is brought on by a new mode of communication which causes some sort of significant change in society. McLuhan believed that the invention of the telegraph was the next giant step, moving people into the current 'electronic age'. The ability to instantly communicate via technology has caused humans to be pre-occupied with sound and touch, not unlike our ancestors of the 'tribal age'. [www.allsand.com].*

In summary, the theory explains that when new communication technologies are developed, the culture or society invariably changes to reflect and adopt the senses needed to use the new technologies. It also predicts and so far, rightly too, that with every new system of media technology, society will change and adapt to that technology. The theory maintains that there is a simple cause and effect analysis between the introduction of new technology and the changes in society's way of thinking, feeling, acting, or believing and ultimately, a change in their culture. And finally, that there is a logical proof of this after a period of observation.

In view of the above, information and communication technologies stand out as a tool that, if properly harnessed will go a long way in entrenching educational development at all levels. This is so because information has become the livewire of all modern developments propelling different sectors to optimal performance.

### **Methodology**

This study employed the survey research method. This is because, when an investigation involves the measurement of public opinion, attitudes and orientations dominant in among a large population at a given period in time, survey research is the most appropriate. Okoro [2001:37] agrees that survey research is very vital method for collecting data for the purpose of describing a population too large to be observed directly.

The population of this study comprised all the students and staff (both academic and non-academic) of the University of Nigeria. The University has a combined staff and students' strength of nearly 35,000 (Academic Planning Unit, UNN). But since this number is too large to be reasonably well-studied, the researcher selected a part of the population to represent the whole. Hence, the sample size of this study is 220 respondents drawn from the university community. This number is considered representative of the entire population for in the words of Ohaja (2003:85), "most student researchers ... do not exceed a sample size of 300 due to obvious constraints of time, finance and programme level.

This study adopted only non-probability sampling techniques. The purposive, quota and accidental sampling techniques were used in three different but coordinated stages. First, the purposive sampling technique was used in selecting Departments of Mass Communication and Theatre Arts, Faculty of Arts; Departments of Marketing and Management, Faculty of Business Administration and the MIS units of the university. This was informed by their deep knowledge of communication, marketing and information and communication technologies which are the hallmarks of the study.

Second, the quota sampling technique was used in allotting the number of respondents to individual departments and units according to their numerical strengths thus:

Department of Mass Communication and Theatre Arts:	100
Departments of Marketing and Management:	100
MIS Units:	20
Total:	220

Third, the accidental sampling technique was used in selecting the 220 respondents from the different departments and units in the department that make up the sample size of the study. This was done by administering the instrument on any of the students or staff of the departments and the units selected for sampling respectively.

### **Method of Data Collection**

This study adopted multiple methods of data collection. According to Jick [1983] there is a distinct tradition in the literature of social science research methods that advocates for the use of multiple methods. Essentially, qualitative and quantitative methods should be viewed as complementary where each method enhances and confirms the findings of the other [Denzin and Lincoln, 1998]. Denzin [1989] calls this 'triangulation' and stresses that multiple methods should be employed in social science research because each method reveals an aspect of empirical reality. In this study, these multiple methods include the use of questionnaire, interviews and observation.

The first stage involved the distribution questionnaire aimed at eliciting responses from respondents. The questionnaire was stratified into two parts: demographic and psychographic sections and both parts contain only structured questions.

The second stage involved oral interviews with experts in mass communication, marketing and information and communication technologies. The interviews were on appointment and conducted in English and the responses recorded on tape.

The third stage was careful observation of the ICTs facilities and usage in the university by the researcher.

Data collected were analyzed using frequency distribution tables and simple percentages.

**Data Presentation and Analysis**

Data gathered from the field were carefully grouped, collated, coded and analyzed. The researcher distributed a total of 220 copies of the questionnaire. Out of this number, 218 [99.09%] were returned. However, during collation, 3[1.36%] copies were discarded because of mutilation and poor filling by the respondents. This makes 215 [97.72] copies the authentic sample size for this study.

**Findings and Discussions**

**Research Question No.1:** What is the level of availability of ICTs in the University of Nigeria?

**Questions Nos. 6, 7, 8, 9, 10 and 11** in the questionnaire will jointly try to answer the above question.

<b>Question</b>	<b>Options</b>	<b>Frequency</b>	<b>Percent</b>
<b>6.</b> Do you have any relationship with the University of Nigeria	Yes	215	100%
	No	-	0.00
	<b>Total</b>	<b>215</b>	<b>100%</b>
<b>7.</b> What kind of relationship do you have with the university	Student	104	48.37
	Academic staff	39	18.14
	Non-academic staff	72	33.48
	<b>Total</b>	<b>215</b>	<b>100%</b>
<b>8.</b> For how long have you had this relationship with the university	Less than four years	84	39.06
	More than four years	49	22.79
	Up to ten years	32	14.88
	More than ten years	50	23.25
	<b>Total</b>	<b>215</b>	<b>100%</b>

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Details of the findings in the above table show that all 215[100%] respondents have ***some kind of relationship the University of Nigeria***. All the respondents are either ***student*** [104 or 48.37%]; ***academic staff*** [39 or 18.14%] or ***non-academic staff*** [72 or 33.48%].

It also shows that 84[39.06] of these respondents have had ***less than four years*** relationship with the university; 49[22.79%] have ***had more than four years*** relationship; 32[14.88%] have had a relationship of ***up to 10 years and*** 50[23.25%] have ***had more than 10 years*** relationship with the university. The implication of the above findings is that all the respondents are insiders in the university with many years experience and therefore can pass informed opinion on the university.

Out of the 215 respondents, 214[99.53%] are ***aware of existence of ICTs facilities*** in the university. Only one [0.47%] respondent ***declined knowledge of these facilities***. 34[15.81%] of these respondents say that ***these facilities are enough***; 180[83.72%] say that they ***are not enough*** while one [0.47%] say he ***does not know***. This means that though there are some ICTs facilities in the University, they are just not enough.

Further findings show that 136[63.26%] of the respondents agree that the ICTs facilities are available to ***a very large extent*** to both students and staff of the university; 70[32.55%] say that they are ***available to large extent***; 9[4.18%] say they are available to ***a small extent*** while none of the respondents says that they are available to ***an insignificant extent***.

In view of the above response, we conclude that ICTs facilities are available to a very large extent in the University of Nigeria.

**Research Question No. 2:** To what extent do staff and students of the University of Nigeria use ICTs facilities in their programmes?

<b>9.</b> Are you aware of existence of ICTs in UNN?	Options		
	Yes	214	99.53
	No	1	0.47
	<b>Total</b>	<b>215</b>	<b>100%</b>
<b>10.</b> If yes, do you think that the university has enough ICTs facilities presently?	No	34	15.81
	Yes	180	83.72
	I don't know	1	0.47
	<b>Total</b>	<b>215</b>	<b>100%</b>

<b>11.</b> To what extent are these facilities available and accessible to both students and staff of UNN?	To a very large extent	136	63.26
	To a large extent	70	32.55
	To a small extent	9	4.18
	To an insignificant extent	0	-
	<b>Total</b>	<b>215</b>	<b>100%</b>

Responses to questions number 9 - 12 in the questionnaire answers this question. In response to question number, 214 (99.53%) respondents said they were aware of existence of ICTs facilities in UNN. Only one (0.47%) respondent was unaware of existence of ICTs in UNN.

Question number 10 wanted to find out whether UNN presently have enough ICTs facilities. The findings showed that 34(15.84%) said that they were not enough; while 180(83.72%) said that they were enough. Only one respondent (0.47%) said he does not know. According to answers to question 12, 189[87.90%] respondents agree that both students and staff of the university *make optimal use of ICTs facilities in their academic and non-academic works*; 22[10.23%] *disagree with this opinion* while 4[1.86%] said that *they do not know*. Because of this, it is safe conclude that both staff and students of the University Of Nigeria use ICTs facilities to a large extent in their academic and non-academic works.

**Research Question No. 3:** Has the development and use of ICTs facilities contributed in improving the ranking of the university in the country?

The details of the answer to the above research question are given in the table below.

<b>13.</b> Would you say that the improved ICT facilities in the university contributed to its improved ranking among other universities?	Yes	126	58.60
	No	26	12.09
	I don't know	63	29.30
	<b>Total</b>	<b>215</b>	<b>100%</b>

The answer to the above question is given by responses to question number 13 in the questionnaire. Details of the responses show that 126(58.60%) respondents agree that development and use of ICTs in UNN have contributed to improving the ranking of the university in the country; 26(12.09%) disagree with this opinion while 63(29.39%) have no opinion.

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From the above analysis, it is clear that the development and use of ICTs in the University of Nigeria contributed to its improved ranking among universities in the country.

**Research Question No. 4:** What are the impediments to the use of ICTs facilities in the University of Nigeria?

The details of the responses to the above research question are given in the table below.

14. what are the impediments to better use of ICTs in the University of Nigeria	Poor Internet network	63	29.30
	Epileptic power supply	110	51.17
	High cost of access	-	-
	Cost of procurement of computers	42	19.53
	<b>Total</b>	<b>215</b>	<b>100%</b>

The answer to the above question is provided in the responses in question number 14 in the table below. Details of the responses show that 63(29.30%) believe that the major impediment to better use of ICTs in the university is poor access to Internet network; 110(51.17%) believe that epileptic power supply is the major impediment faced by the use of ICTs in the university while 42(19.53%) attribute the problem to high cost of procurement of computers. None of the respondents believe that cost of Internet access constitutes an impediment. On the basis of the above figures, we conclude that unstable power supply constitutes the biggest impediment to ICTs usage in the university.

### **Discussion of Findings**

The findings of this study are quite instructive and revealing. The findings clearly show that the university has radically developed and improved the deployment and employment of information and communication technologies in all its affairs especially in the area of academics. The university according our findings has adequate ICTs facilities to meet the demands of an academic institution of its type worldwide. Because of this, the level of use and ICT-compliance in the university has significantly increased. Availability and accessibility of ICTs especially the Internet is remarkably higher today than was the case a few years back. This is confirmed by the improved ranking the university recently received from webometric rankings of universities in Africa and in Nigeria. In Nigeria, UNN now ranks fifth as against 15th previously ranked. The former Public relations officer of the university, Dr. Nnanyelugo Okoro attests to this when he observed that “with development of the largest ICTs facilities in the University of Nigeria, the ranking of the university has improved dramatically.”

Students and staff of the university now make extensive use of the ICTs facilities on campus. This finding is corroborated by the observation of the researcher. Specifically, the researcher observed ICTs facilities are available to both staff and students a very large extent as access to Internet is free of charge. This perhaps explains the ubiquitous use of laptops by students and staff of the university observed by the researcher. However, these laptops are privately-owned. This has also improved the quality of scholarship as performances of the students and quality of teaching has also increased as can be seen from the recent performances of the students.

Epileptic power supply is the major impediment. Both students and staff of the university observe that power supply in university has been less than impressive. Often electricity supply may be cut off for days before being restored thus hampering the use of ICTs in the institution. This is true considering that even nationally, epileptic power supply has been a cause of concern to the government and one the reasons for the country's poor economy. Secondly, it is also observed that sometimes, Internet network is unavailable due to technical hitches leading to disruption in the use of the facilities.

### **Conclusion**

It is simply stating the obvious to say that the University of Nigeria doing well in the area of ICTs development in comparison with others in its level. The problem as we have seen is mainly its inability to provide and make substantial provision of computers for the use of both students and staff. Second, the erratic power supply which is common in every part of this country. Though the university embarked on massive project to improve its ICTs facilities including a big linkage deal with Google, they should ensure regular maintenance of these facilities to ensure its continued use.

The university administration should also ensure that these facilities are not just made available but also put to effective use. With all these, it will not be long before the University of Nigeria becomes a force to reckon with among other universities once again. We therefore conclude by agreeing with President Jonathan that:

*To attain world-class status, Nigerian universities require first-rate faculty with strong researches, citation impact and inventions to their credit; research reputation; international presence; aggressive mobilization and efficient deployment of resources, development of strong and effective alliances and networks; multidisciplinary approach; technological expertise; and good management, including requisite funding.*

### **Recommendations**

Taking into cognizance the findings of this study, we make the following recommendations.

1. The University of Nigeria, Nsukka should make provision for a reliable alternative power source that should immediately be switched on each time the national grid

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goes off. For instance, each of the nine faculties should have serviceable power-generating set that should be ready for use each time there is power outage. This is instructive given the epileptic power supply in the university which has, sadly hampered the height of learning and scholarship.

2. The university should employ ICTs experts who will ensure regular maintenance of the facilities and thus ensure that their services are available on 24-hour basis throughout the university. It is observed that despite the large bandwidth allocated to the university and the state-of-the-art equipment in use, the Internet service in the university is still unstable. The service fluctuates time and again thus hampering usage often.
3. The university management should make it compulsory for each staff, in fact, its academic staff to open an e-mail with the University Nigeria Nsukka website as its domain for example [apex.ape@UNN.edu.ng](mailto:apex.ape@UNN.edu.ng). The advantage of this approach is that if a staff's work is published in a journal, it links the university automatically hence improving its visibility.
4. The university should increase number of computers in use in the school to ensure that each student or staff has a reasonable chance of using them.
5. The university should establish linkages with some well-established and reputable universities in the world. Such linkages should include access to their libraries and such academic data bases that would allow students and staff uninterrupted access to files, books, journals and other academic materials.
6. Besides, the university should engage in vigorous corporate advertising using international media like the Internet, radio programmes, sponsorships; public relations activities like corporate social responsibility programmes and the like launder its image and market itself in the international academic circles.

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