

NIGERIAN UNIVERSITY GRADUATES' PROFICIENCY IN THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) AND PRODUCTIVITY

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Abstract

The study examined employers' assessment of Nigerian university graduates productivity based on their level of proficiency in the use of ICT. Stratified random sampling technique was used to select 12 States across the six geo- political zones. Captive audience sampling technique was used to select 936 respondents from the sampled organizations. Questionnaire entitled "Graduates Proficiency in ICT and Productivity Questionnaire" (GPICTPO) was used to elicit information from the respondents. The data collected were analyzed using frequency counts, percentages, Pearson product- moment Correlation, and Duncan multiple range of mean/group separation statistics.

Findings revealed that 99% of Nigerian university graduates were ICT literate, there was positive significant relationship between proficiency in the use of ICT and productivity of Nigerian university graduates. Based on these, it was recommended among others that lecturers should use e-lecturing, e-assignment, e-project supervision for 100 to 400/500 levels students as the case may be.

Key words: University graduates, Proficiency, and Productivity.

Introduction

Effective communication is such a crucial fundamental phenomenon in life that no human endeavor can thrive without it. The process of reproduction, growth, teaching, learning, research working, construction, manufacturing of manpower training, entertainment, governance and any other form of development can not be accomplished in the absence of appropriate and adequate information and communication technology. Information technology permeates man's society and is entire educational system. Technology refers to a wide variety of items and abilities used in the creation, storage and dispersal of information. (Nwaokolo & Ahukannah, 2000) as elucidated by

Nwaokolo & Ahukanah, Information Technology embraces all modern systems for proceeding information and communication in data, text usage and voice.

The purpose of Information Technology is to solve problems, to unlock Creativity and to make people more effective than they would be if they do not Solve IT in their activities. (Oyedepo 2003). In the light of this, both micro- and micro- and macro- organizations of human endeavours see ICT development as the solution of quick and effective service delivery. This new development has provided opportunity to face the challenges of life generally, and aid knowledge and skill acquisition and utilizations. Oyedepo (2003) emphasized this when she said that academic staff in Colleges of Education should improve on their proficiency in their use of ICT because the more use we put into the computer in the schools and colleges the more we would discovered the hidden treasure in computer. The world is fast turning into a global village with the ICT and globalization, where information reaches the doorstep of stakeholders. Most university graduates are computer literate and most of them can access the internet for information gathering. University graduates acquire different certificates in ICT such as Bachelor degrees. Diploma Certificate just literacy in Computer and so forth. This development is assumed to have positive or negative link with work outcome called productivity.

Productivity is the relationship between the output of an industrial unit and the input in terms of labour (work). It is the ability to achieve greater output in a shorter time without any reduction in the quality of the product. According to Nok and Goni (2007), productivity is measured in terms of both qualities and quantities. It is how well resources are utilized to accomplish specific desired results. Sofoluwe (2000) used productivity as a measure of how well available resources are combined by the employee and utilized to accomplish specific desirable result. It is a measure of what is got as a result of what has been provided. The more productive use of resources reduces waste and conserves scarce and expensive resources. Steady productivity is a way a nation can solve pressing problems such as inflation, unemployment, an increased trade deficit and unstable currency.

The importance of ICT to productivity, has been stressed, for instance Nwaokolo & Ahukannah (2000). Ubulom (2004) Agomuo (2005) and Akunyili (2009), reported that most of the developmental initiatives in education, health, agriculture, and economics empowerment being undertaken by all the States and Federal organizations can be accelerated by the application of appropriate ICT tools. In fact the federal government has established a federal ministry of Science communication which works with the Federal Ministry of Science and of Technology to promote ICT in the country.

The productivity measurement of Nigerian university graduates take into cognizance the recourses used to produce graduates in terms of quantity and quality of what is produced. Therefore, high productivity is very important so as to justify allocation of scarce resources used to accelerate technological progress, improve human capital development, reduce unemployment, and increase equilibrium in foreign trade. These advantages make it important for all organizations to work towards obtaining high productivity at work

Methodology

Descriptive survey was employed for the study. Stratified random sampling technique was used to select 12 out of the 36 States across the six geo- political zones of Nigeria. Captive audience

sampling technique was used to sample 936 respondents from selected organizations. One research question was raised and two research hypotheses were formulated. A researcher's designed instrument titled, "Graduates Proficiency in ICT and Productivity Questionnaire" (GPICTPO) consisting of two sections, 00 was used to elicit relevant information from the respondents. Section A contains information about the selected organizations, while section B contains the productivity indices rated by Heads of Department on behalf of the University graduates in their Departments, based on their level of proficiency in the use of ICT. The data collected were analyzed using frequency counts, percentages, Pearson product-moment correlation and Duncan multiple range of mean//group separation statistics. For the purpose of this study ICT proficiency was graded as the additional qualification acquired by the university graduates in computer education as follow:

Bachelor degrees in computer only / highly proficient

Bachelor degrees in any field with Diploma in computer /very proficient

Bachelor degrees in any field with certificate in computer /averagely proficient

Bachelor degrees in any field with literacy in the use of ICT

Without any ICT certificate /below average proficient

Bachelor degrees and not ICT literate at all / not proficient at all

Research Question

- 1) What are the various levels of ICT certificates acquired by Nigerian University graduates?

Research Hypotheses

- HO₁** There is no significant relationship between proficiency in the use of ICT and productivity of Nigerian university graduates.
- HO₂** There is no significant difference between productivity level and proficiency in the use of ICT of Nigerian university graduates.

Results

Research Question 1

What are the various CT literacy levels of Nigerian university graduates?

Table 1

Distribution of sampled university graduates from selected organization on level of ICT literacy

Level of ICT literacy	Number of university graduates	Percentage
Bachelor degree in ICT only	206	4
Diploma degree in ICT	815	16
Certificate in ICT	2302	45
No certificate but ICT literate	1700	34
Not literate at all in ICT	53	1
Total	5,076	100

Table 1 shows that 45% of the sampled university graduates had certificate in ICT, 34% were without any paper qualification in ICT but they were ICT literate 16% had diploma degree in ICT, only 4% had bachelor degrees in ICT and just 1% were not computer literate at all.

Hypothesis

HO₁: There is no significant relationship between graduates' proficiency in the use of ICT and productivity of Nigerian university graduates.

Table 2

Proficiency in ICT and productivity of university graduate

Variables	N	X	SD	Df	Cal.	Critical r-value	Decision r-value
Proficiency in the use of ICT	836	2180	5.45	834	.95	.09	Ho not accepted
Productivity of graduates	836	11.11	3.63				

Table 2 is a correlational analysis of relationship between graduate test proficiency in the use of ICT and the productivity of Nigerian university graduates. The result indicates that the calculated r-value of .95 is greater than el. This the critical r-value .09 for 834 degree of freedom and .05 significance level This shows that the null hypothesis which states that there is no significant relationship between proficiency in. the use of ICT and productivity of Nigerian University graduates is not accepted. This show that the level of graduate's proficiency in the use of ICT is a significant predictor of level of productivity of Nigerian University graduates

HO₂ *There is no significant difference in the productivity of Nigerian university graduates and based on their level of proficiency in the use of ICT*

Table 3

Separation of Productivity of Graduates based on Proficiency in ICT usage acquired

Proficiency in ICT	N	Subset for alpha is .05				
		1	2	3	4	5
Diploma in ICT	214	27.20				
Certificate in ICT	199		23.23			
Bachelor in computer	118			21.90		
No paper qualification in ICT	181				18.08	
Not ICT literate	124					17.0

Table 2 shows the Duncan multiple range of mean//group separation of productivity of Nigerian University graduates based on their level of proficiency in the use of ICT. The result shows that graduates with diploma in computer are more productive with 27.20 than their counterparts with certificate which is 23.23. Graduates with bachelor degrees in ICT had productivity level of 21.90 which is more than that of their counterparts without any paper qualification in ICT with 18.08. Graduates who are ICT illiterates have 17.0 productivity level. The result shows that graduates with diploma in ICT had the highest productivity while the least productivity was recorded in the University graduates without any competency in the use of ICT. Therefore, there was significant difference between the productivity of University graduates based on their level of proficiency in the use of ICT.

Discussion

Productivity as defined by industrial engineers is more operational and quantifiable. It is work measurement and performance standard. According to Oduwaiye (2000), productivity is the balance between any factors of production that gives the greatest return for the smallest effort all organizations be it formal or informal had set goals to achieve while efforts are put in place towards achieving the set goals.

In this information and communication technology era, the entire world has been reduced to a global village; hence time and space for information have been reduced making it possible for decisions on development and management to be made at high speed. It means that the position of ICT as a driver of modern development has never been in doubt.

The result on university graduates' level of proficiency in the use of ICT shows that almost all Nigerian university graduates are computer literate the findings supported Mulimi (2006) report that youth are the major users of various forms of ICTs which have brought about increase in their performance because according to World Bank (2002), people who are informed in ICT are better equipped to take advantage of opportunity access services and exercise their right and take actions at the appropriate time.

Findings in this study reveal that there is positive and significant relationship between proficiency in the use of ICT and productivity of Nigerian university graduates. Corroborating this. Ndu (2004) and Agomuo (2005) had found that competency in business education of university graduates in today's business office is largely measured by their level of computer literacy. Adeyemi (2009) also confirmed that the ability to achieve greater output in a short time

without any reduction in the quality of the product is made possible with high proficiency of university graduates in ICT usage. In the light of this, most universities improved on the use of ICT for admissions, teaching, examinations, dissemination of research outcomes, and general administration. Therefore, the obvious need for literacy in ICT becomes a norm rather than an exception. This might explain why university graduates make effort to undertake self development venture by embarking on computer training during their Youth Service period and while waiting for employment.

Conclusion

The new technologies which are opportunities to open in the changing world of today are powerful tools for development. Through the instrumentality of education, man has been able to explore, subdue and conquer his environment to enable him live a more ordered, predictable, comfortable and self-fulfilling life. No wonder, therefore, that a person with adequate ICT skills would have increased awareness, economic growth, and technological advancement that will improve his life. Hence proficiency in the use of ICT is necessary for improved productivity.

Recommendations

On the basis of the findings of this study the following recommendations are considered;

- 1) Government should make relevant policies and provide enough funds to make available for the necessary equipment that will enhance adequate use of ICT tools.
- 2) The Federal government, through the Petroleum Development Trust Fund (PDTF), should intensify the execution of ICT related projects in our Universities such as ICT laboratories
- 3) The growing use of ICT in almost all aspects of work implies that changes are bound to occur both in availability of jobs and job placement. Therefore, curriculum of Universities should include enough training in ICT more than what we have presently in General Studies, so as to enable the University graduates fit into the changing technologies, and be flexible in the labour market
- 4) University under graduates should be exposed to ICT in their early years in the University by using on -line for lectures method, continuous assessment tests, semester examinations, project supervision, to make them fit into global trend of Information, Communication and Technology.
- 5) All workers throughout state and federal offices must be encouraged to transit in to using more e -tools platform as well as building on ICT compliant work culture and environment.
- 6)

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