



INFLUENCE OF BUSINESS EDUCATORS' ICT SKILLS AND FUNCTIONAL ICT LABORATORY ON STUDENTS' ICT SKILLS ACQUISITION IN FEDERAL COLLEGE OF EDUCATION (TECH.), OMOKU, RIVERS STATE

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Abstract

This study investigated the influence of business educators' ICT skills and functional ICT laboratory on students' ICT skills acquisition in Federal College of Education (Tech.), Omoku-Rivers State. Three specific purposes, three research questions and one hypothesis guided the study. Descriptive survey research design was adopted for the study. The population consisted of 32 Business Education Lecturers and 110 NCE Business education students during 2019/2020 academic session. The sample size is made up of 32 lecturers and 45 NCE III Business education students. Purposive sampling technique was used to select the students based on the criteria that they are NCE III students. Data were collected using a structured questionnaire. The instrument was validated by two experts, one from educational measurement and evaluation and the other from Business education department of Federal College of Education (Tech.), Omoku degree programme unit. Cronbach alpha statistics was used to test for reliability. The computation gave reliability indexes of 0.74 and 0.78 for the two clusters and a mean reliability of 0.76 for the entire items. Data collected were analysed using mean and grand mean to answer research questions. Multiple regression was used to test hypothesis at 0.05 level of significant. Regression computation was done using Statistical Package for Social Science (SPSS). The results revealed that Business educators to a low extent possessed ICT skills. The results also showed that the ICT laboratory is moderately functional. The results also showed that the extent of ICT skills possessed by Business Educators and the extent to which ICT laboratory is functional influenced students' ICT skills acquisition. Based on the findings, it was recommended among others that Business Education administrators in Federal Colleges of Education should design ICT empowerment programme that can guarantee retraining of Business Educators after every two years on ICT skills for the modern business world.

Keywords: *Business education, minimum standard, ICT utilization and skills acquisition*



Introduction

In today's Nigeria, there is an increasing awareness of the need for graduates to be highly skilled in Information and Communication Technology (ICT) applications related to their future careers. This is because the 21st century world of work is driven by the integration and application of ICT in facilitating job performance; hence, all jobs requirements these days especially in the business world normally outline some ICT skills required from applicants. Consequently, to ensure that graduates from tertiary institutions across Nigeria meet the national and global labour market ICT skills demand, the various supervisory agencies, National Universities Commission (NUC), National Board for Technical Education (NBTE), and National Commission for Colleges of Education (NCCE) have enshrined some ICT related courses and the requirements for offering them in the different educational programmes offered at this level.

Business Education as one of the educational programmes offered across tertiary institutions in Nigeria is not left out when it comes to the need to equip its graduates with ICT knowledge and skills. To ensure this at the Colleges of Education level, NCCE included ICT courses such as computer appreciation, computer application/ICT, spreadsheet, desktop publishing and computer word process into the minimum standard for Nigerian Certificate in Education (NCE) Business Education (NCCE, 2012). Abdulkarim and Onwuchekwa (2020) noted that for the purpose of implementing these enshrined courses, the minimum standard specified input resources such as recruitment of computer literate lecturers and provision of functional ICT laboratory equipped with modern computer systems, application software (such as: Microsoft suit, Peachtree, SAGE, SPSS), computer networks (such as: internet, local area network (LAN)), video conferencing device, digital photocopier and duplicator among others. Ozuruoke and Abdulkarim(2016) opined that these inputs are needed in Business education programme in order to produce graduates with the requisite ICT knowledge and skills needed to serve in today's ICT driven business world whether or not it is teaching job.

In pursuance of the minimum standard for offering Business education programme in Colleges of Education across Nigeria, financiers and administrators of the programme have employed many lecturers and also provided ICT laboratory which are examined during the accreditation



process by their supervisory body (Abdulkarim & Akpan, 2017). Underpinning the importance of input resources in the actualization of the goal of any education programme, the Federal Ministry of Education (2011) stated that the actualization of the goal of the educational sector depends on the quality of teaching and learning inputs and the qualitative utilization of such inputs which include ICT facilities for teaching and learning purposes. Many researchers have also given their position on the need to provide the input requirements for ICT knowledge and skills acquisition. Ajie-Uche, Efughi, and Ajaero (2018) opined that an important condition for ensuring proper utilization of technological tools to promote knowledge and skills acquisition is access to the required technological tools. Supporting this, Abah (2019) opined that in assessing the utilization of ICT to drive task performance in education, the issue of access to and skills for utilization remain preeminence.

Access to functional ICT tools and skills of the users in Business Education is definitely of significance since ICT skills acquisition focuses on how Business educators can assist their students to develop the abilities required in performing business tasks using ICT devices. Supporting this, Idoko (2014) noted that skill acquisition has to do with training of individual or group of individuals to develop the abilities required in carrying out tasks. Amesi (2018) opined that skill acquisition is a definite structure of training that encompasses the gaining of knowledge through practice in order to make the learner become autonomous, industrious and self-sufficient in the society. Thus, it can be concluded that student's ICT skill acquisition in Business Education would be dependent to a large extent on their access to ICT tools and the abilities of the teachers to orient them effectively during their training. It is for this reason that Ezeani (2012) noted that the Business Education teacher is very significant in skills acquisition because the teachers first acquires the various skills and then effectively orients these skills to the students. Ukor, Agwazie and Ayemhenre (2014) also opined that to a large extent the utilization of technologies in Business Education depends on the availability of functional technologies and teachers' capacity to use them. The teachers' capacity to use ICT becomes very necessary if the appropriate declarative knowledge for ICT skills development must be provided to the students as propagated by Fitts' theory of perceptual motor skill acquisition (1964). Onojetah (2014) also noted that factors such as the relevance of the technology and proper understanding of the technology functionality serve as driving force for their utilization. Abdulkarim and Onwuchekwa (2020) noted the need to address the issue of access to ICT tools and ICT literacy skills of personnel when considering the utilization of ICT tools for ICT knowledge and skills acquisition amongst Business Education student. Danagogo (2020) noted the need for continuous assessment of the functionality of technologies



provided in Business education laboratory given the fast rate at which technological hardware and software are evolving in the business world and rendering early inventions obsolete.

There are numerous ICT skills that educators need to develop based on their area of specialization. According to Michika and Manabete (2019), on a general note, teachers at every level of the education system are required to have basic skills of computer operations such as running a word, connection of a computer and its peripherals, moving files between drives, using application software such as: Microsoft office suit, filtering files, updating data in database, and other ICT tools for teaching and assessment. Omotayo and Umoru (2015) also identified ICT skills which business educators and students must possess to include: word processing skills, spreadsheets, database, electronic presentation, e-mail management, digital cameras, file management and windows explorer, video conferencing, installing computer software, scanner knowledge, computer related storage devices. Okoye (2017) opined that in this era of technological driven business world, business educators need to acquire basic ICT skills in order to help their students in ICT usage for skills development.

Several studies have assessed the ICT skills possessed or required of Business Educators in order to utilize ICT tools to facilitate teaching and learning. Udo (2017) found out that most Business Educators in Nigerian universities lack the required skills and competencies, especially in the area of Information Communication Technology skills and noted that these factors have negatively influenced the acquisition of ICT skills by students. Timya, Moris and Bewaran (2019) discovered that office technology and management teachers, an aspect of Business education teachers, highly required new technology skills in the use of search engines, hypertext markup language, browsers on the World Wide Web, interactive multimedia packages, web 2.0 tools, Wi-Fi, short messaging services, and multimedia messaging service. Abdulkarim and Onwuchekwa (2020) discovered that younger Business educators possessed more ICT skills and utilized more ICT tools in Federal Colleges of Education than their older colleagues. Nevertheless, access to adequate and functional ICT tools in ICT laboratory is also as important as the ICT skills possessed by Business educators. This is because where such are lacking, the engagement of Business Educators with ICT skills would not make any impact on the students ICT skills acquisition.



Earlier researches conducted on the issues relating to adequacy of functional ICT laboratory tools in Business education have shown mixed results. For instance, Owenvbiugie and Ojewale (2014) discovered that new technological equipment needed for teaching business education subjects are not adequately provided. Danagogo (2020) discovered that to a low extent functional electronic learning technologies for Business education were available in Federal Colleges of Education in south-south, Nigeria. While Onojetah (2014) discovered that new technologies needed for teaching and learning business education such as video conferencing devices, ipad, internet, intranet and business educators' blog are not available. The reviewed empirical works showed that there are many works on ICT skills required and possessed by Business Educators as well as on the availability and adequacy of ICT tools but to the best of the researchers' knowledge, none of the existing studies have considered investigating the influence of ICT skills possessed by Business Educators and functional ICT laboratory on Business Education students' ICT skills acquisition which in one of the cardinal reason why ICT input resources are provided in Colleges of Education. It is this gap in existing literature that the present study intends to fill.

Statement of the Problem

The acquisition of ICT skills has become a relevant aspect of educational discourse in Nigeria regardless of programme. This is because of its immense important to self-reliance and job performance. However, the researchers observed ICT skills gap amongst graduates of Business education over the years from most Federal Colleges of Education in south-south, Nigeria. This gap can be viewed from the cases of highly concentrating on theoretical abstraction without an opportunity for practical skills acquisition. The spillover effect has been obsolete skills acquisition that can neither empower the graduates of the programme to be self-reliant or be at advantage of securing job in technological driven business world. Consequently, these lack of ICT skills graduates end up joining the ever increasing army of unemployed youth across Nigeria. To address, this situation, many researchers have advocated for the retraining of Business Education teachers in ICT skills and the equipping of Business Education programme with functional ICT laboratory (Akhare, 2014; Ajie-Uche, Efughi, & Ajaero, 2018). In response to this, training and retraining of Business Educators on ICT have taken place through Tertiary Education Trust Fund (TETFUND) sponsorship since 2012 and many ICT tools have been procured to make the ICT laboratory functional. Nevertheless, there is no empirical evidence to show that the efforts made have or can improve on ICT skills acquisition amongst Business education students in F.C.E. (T.), Omoku, hence, the need to fill this gap in order to encourage



continuous spending on ICT related issues in the institution and other sister institutions in Rivers State. It is against this background that present study investigates the influence of Business educators ICT skills and functional ICT laboratory on Business Education Students' ICT skills acquisition in Federal College of Education (Tech.), Omoku – Rivers State.

Research Questions

The following research questions guided the study:

1. To what extent do Business educators possess ICT skills in Federal College of Education (Tech.), Omoku, Rivers State?
2. To what extent are the ICT laboratory tools for Business education programme functional in Federal College of Education (Tech.), Omoku, Rivers State?
3. To what extent are Business education students exposed to ICT skills acquisition in Federal College of Education (Tech.), Omoku, Rivers State.

Hypothesis

The following null hypothesis was test at 0.05 level of significance:

1. The extent of ICT skills possessed by business educators and the extent of functional ICT laboratory tools for Business education programme has no significant influence on the extent to which Business education students are exposed to ICT skills acquisition in Federal College of Education (Tech.), Omoku.

Method

This study adopted descriptive survey research design to collect opinions from the respondents. Ezekiel, Oguzor, Onyeukwu, Onwuchekwa and China (2017) indicated that descriptive survey research is the most appropriate when it comes to assessing opinion of respondents on the characteristics of certain phenomena in order to draw certain conclusions. The population consisted of 32 Business Education Lecturers and 110 NCE Business education students during the 2019/2020 academic session.

The sample of the study was made up of the 32 lecturers and 45 NCE III Business education students. Purposive sampling technique was used to select the students based on the criteria that they are NCE III students. Data were collected from the respondents through a structured questionnaire titled "Business Education Lecturers' ICT Skills, Functional ICT Laboratory and Business Education Students' ICT Skills Acquisition Questionnaire (BUEICTSFICTLBUSICTSKILLSQ)". The instrument contains 40 items, 25 items to research questions 1, 10 items to research question 2



and 5 items to research question 3. The instrument was divided into two sections. Section 1 contains items for research question 1 & 2 and to be responded to by Business Education Lecturers while section 2 contains items for research question 3 to be responded to by Business Education Students. The responses to the questionnaire items were structured based on four-points rating scale of very high extent/Excellent Functional (VHE/EF: 4 points); high extent/Moderately Functional (HE/MF: 3points); low extent/Fairly Functional (LE/FF:2 points); and very low extent/Not Functional (VLE/NF: 1point).

The instrument was given to two experts for face validation, one from educational measurement and evaluation and the other from Business education department of Federal College of Education (Tech.), Omoku degree programme unit. The reliability of the instrument was determined using Cronbach alpha statistics to obtain reliability indexes of 0.74 and 0.78 for the two clusters and a mean reliability of 0.76 for the entire items.

The data collected were analysed using descriptive statistics of mean and grand mean to answer the research questions. Multiple regression was used to test the hypotheses at 0.05 level of significant. The computations were done with the help of Statistical Package for Social Science (SPSS) version 21.0. For decision making, the following were used as guide:

- (a) Cluster mean of 3.5 above was regarded as Very High Extent (VHE)/Excellent Functional (EF), 2.5 to 3.45 was regarded as High Extent (HE)/Moderately Functional (MF), and 1.5 to 2.49 was regarded as Low Extent (LE)/Fairly Functional (FF) and below 1.5 was regarded as Very Low Extent (VLE)/Not Functional (NF).
- (b) In testing the null hypotheses, the decision rule of computation with SPSS was used to draw conclusion regarding the results obtained.



Results

Research Question 1: To what extent do Business educators possess ICT skills in Federal College of Education (Tech.), Omoku, Rivers State?

Table 2: Summary of Mean Value on ICT Skills Possessed By Business Educators in Federal College of Education (Tech.), Omoku. n = 32

S/N	Availability Items	\bar{x}	Decision
	Internet navigation skills		
1	Ability to create and manage websites	1.16	VLE
2	Ability to browse and navigate the internet	3.52	VHE
3	Ability to use different search engines	2.58	HE
4	Ability to create and manage blogs/online journals	1.25	VLE
5.	Ability to deliver learning materials online using web 2.0	1.54	LE
	Cluster mean	2.01	LE
	Video conferencing skills		
6	Ability to on video conferencing device	3.59	VHE
7	Ability to set video conferencing device for meetings	1.44	VLE
8	Ability to communicate using video conferencing device	1.21	VLE
9	Ability to share document through video conferencing device	1.29	VLE
10	Ability to	1.10	VLE
	Grand mean	1.73	LE
	Microsoft suit skills		
11	Ability to use Microsoft word for word processing	3.30	HE
12	Ability to use Microsoft excel for spreadsheet application	3.24	HE
13	Ability to use Microsoft PowerPoint for presentation	3.32	HE
14	Ability to use Microsoft Access to create records	2.26	LE
15	Ability to use Microsoft publisher to create documents	2.13	LE
	Grand mean	2.85	HE
	Multimedia skills		
16	Ability to design multimedia instruction	3.51	VHE
17	Ability to use multimedia video conferencing	2.21	LE



18	Ability to design instructional videos	2.22	LE
19	Ability to setup multimedia devices for presentation	3.56	VHE
20	Ability to design and present multimedia power points presentations	3.68	VHE
	Grand mean	3.04	HE
	Photocopying skills		
21	Ability to on photocopying machine	3.25	HE
22	Ability to scan original copies before copying	2.55	HE
23	Ability to set paper size	2.65	HE
24	Ability to set image printing	1.75	LE
25	Ability to set number of copies to be reproduced	3.52	VHE
	Grand mean	2.74	HE
	Average of grand mean scores	2.47	LE

Source: Field Survey, 2020

Table 2 shows that the respondents are of the opinion that they possess internet navigation skills and video conferencing skills to a low extent with mean scores of 2.01 and 1.73 respectively. The respondents are also of the opinion that they possess Microsoft suit skills, multimedia skills and photocopying skills to a high extent with mean scores of 2.85, 3.04 and 2.74 respectively. However, when the average of grand mean scores for all the skills is considered, it can be concluded that Business educators in Federal College of Education (Tech.), Omoku are of the opinion that to a low extent they possess ICT skills assessed in this study.

Research Question 2: To what extent are ICT laboratory tools for Business education programme functional in Federal College of Education (Tech.), Omoku, Rivers State?



Table 3: Summary of Mean Value on Functionality of ICT Laboratory Tools for Business Education Programme in Federal College of Education (Tech.), Omoku. n = 32

S/N	Availability Items	\bar{x}	Decision
1	Internet	1.74	FF
2	Computer systems	3.90	EF
3	Microsoft office suit 2010 above	3.69	EF
4	Multimedia devices	3.76	EF
5.	Video conferencing	1.45	NF
6	Videos	1,34	NF
7	Scanners	2.67	MF
8	DVD/CD recorder	1.29	NF
9	Digital photocopier	3.45	MF
10	Digital duplicator	3.36	MF
	Grand mean	2.67	MF

Source: Field Survey, 2020

Table 3 shows that respondents are of the opinion that ICT laboratory tools such as computer systems, Microsoft office suit 2010 above and multimedia devices are excellently functional with mean scores of 3.90, 3.69 and 3.76 respectively. The respondents are also of the opinion that ICT laboratory tools such as scanners, digital photocopier and digital duplicator are moderately functional with mean scores of 2.67, 3.45 and 3.36 respectively. The respondents also are of the opinion that ICT laboratory tools such as internet is fairly functional with mean score of 1.74 while ICT laboratory tools such as video conferencing, videos and DVD/CD recorder are not functional with mean scores of 1,45, 1.34 and 1.29 respectively. However, when the grand mean score of 2.67 is considered, it can be concluded the ICT laboratory tools for Business Education programme are moderately functional in Federal College of Education (Tech.), Omoku.

Research Question 3: To what extent are Business education students exposed to ICT skills acquisition in Federal College of Education (Tech.), Omoku, Rivers State?



Table 4: Summary of Mean Value on the Extent Business Education Students are Exposed to ICT Skills Acquisition in Federal College of Education (Tech.), Omoku. n = 45

S/N	Availability Items	X	Decision
1	Internet navigation skills	1.66	LE
2	Video conferencing skills	1.02	VLE
3	Microsoft suit skills	3.69	VHE
4	Multimedia skills	2,45	LE
5.	Photocopying skills	1,37	VLE
	Grand mean	2.04	LE

Source: Field Survey, 2020

Table 4 shows that respondents are of the opinion that they are to a very high extent exposed to ICT skills acquisition related to Microsoft suit skills with mean score of 3.69. The respondents are also of the opinion that they are to a low extent exposed to ICT skills acquisition related to internet navigation skills and multimedia skills with mean scores of 1.66 and 2.45 respectively. The respondents are also of the opinion that they are to a very low extent are exposed to ICT skills acquisition related to video conferencing skills and photocopying skills with mean scores of 1.02 and 1,37 respectively. However, when the grand mean is considered, it can be concluded that Business Education NCE students are of the opinion that they are to a low extent exposed to ICT skills acquisition in Federal College of Education (Tech.), Omoku.



Test of Hypothesis

Table 5: Summary of Multiple Regression Model on the Influence of Business Educators ICT skills and Functional ICT Laboratory on Business Education Students ICT Skills Acquisition in Federal College of Education (Tech), Omoku

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change
						F	df1	df2	
1	.67 ^a	.35	.32	1.31	.34	55.16	2	75	.000

a. Predictors: (Constant), Business Educators ICT Skills, Functional ICT Skills Laboratory

Table 5 above shows multiple regression (R) of 0.67, regression square of (R²) of 0.35, adjusted R² of 0.32, the standard error estimate is 1.31. The change statistics show R² 0.34 which means that the predictors actually contributed moderately to the dependent variable. This is because they contribute only 34% of the variance in the ICT skills acquisition of Business Education students. Therefore, since the p value of 0.0001 is less than the assumed p value of 0.05, using SPSS, the null hypothesis was rejected and alternative hypothesis accepted. This means that Business Educators ICT skills and functional ICT laboratory for Business Education programme in Federal College of Education (Tech.), Omoku significantly influence Business Education Students ICT skills acquisition. However, it must be noted that the influence was below average at 34%.

Discussion of Findings

The findings of the study show that Business educators are of the opinion that to a low extent they possess ICT skills. This is because they are of the opinion that they to a low extent possess internet navigation skills and video conferencing skills but to a high extent possess Microsoft suit skills, multimedia skills and photocopying skills. These findings are supported by the findings of Udo (2017) who found out that most Business Educators in Nigerian universities lack the required skills and competencies related to Information Communication Technology. However, the findings are contrary to the discovery of Abdulkarim and Onwuchekwa (2020) when they discovered that younger Business educators possessed more ICT skills in Federal Colleges of Education. Nevertheless, the concentration areas of the earlier studies differ significantly from that of the present study.

The findings of the study also showed that Business educators are of the opinion that ICT laboratory tools are moderately functional. The findings emanated from the fact that the respondents are of the opinion that only computer systems, Microsoft suits and multimedia devices are



excellently functional amongst all the ICT laboratory tools needed for Business Education in Federal College of Education (Tech.), Omoku. These findings are supported by the findings of Owenvbiugie and Ojewale (2014) when they discovered that new technological equipment needed for teaching business education subjects are not adequately provided. The findings are also supported by the discovery of Danagogo (2020) who discovered that to a low extent functional electronic learning technologies for Business education were available in Federal Colleges of Education in south-south, Nigeria.

The findings also show that the extent to which Business Educators possess ICT skills and the extent of functional ICT tools for Business Education has significant influence on extent of Business Education students skills acquisition. This is based on the fact that the students are of the opinion that to a low extent they are exposed to ICT skills acquisition.

Conclusions

Based on the findings of this study, it can be concluded that the low extent of ICT skills possessed by Business educators and the moderate functional ICT laboratory tools contributed to the low extent of exposure of Business Education students to ICT skills acquisition. This is the manifestation of the reality that teachers cannot guide the students to acquire skills they do not possess and the functionality of the ICT laboratory to a large extent remains significant in any skills oriented programme. Consequently, efforts need to be intensified to provide functional ICT laboratory and ensure that Business Educators in Federal Colleges of Education are highly skilled in ICT used in business world if they are to assist their students in adequate ICT skills acquisition before graduation.

Recommendations

Based on the findings and conclusions drawn, the following recommendations are put forward for implementation:

- i. Business Education administrators in Federal Colleges of Education should design ICT empowerment programme that can guarantee retraining of Business Educators after every two years on ICT skills for the modern business world.
- ii. Business Educators should canvass for the provision of functional and appropriate modern ICT tools for Business education programme in Federal Colleges of Education through private public partnership sponsorship as well as through TETFUND projects.



- iii. Business educators should embark on self-development programmes in order to equip themselves with ICT skills needed for guiding their students' ICT skills acquisition.
- iv. Business Education students should be exposed to more practical tasks that require the use of functional available ICT tools in order to improve their ICT skills before graduation.

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