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Assessment of Information and Communication Technology Competencies Possessed by University Postgraduate Business Education Students to Handle Entrepreneurship Business Challenges in Nigeria

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Abstract - University business education graduates, by the nature of their programme, ought to possess relevant information and communication technology competencies for successful entrepreneurship but casual observation and empirical reports indicate that they are not doing well in this aspect. Therefore, this study assessed the ICT competencies possessed by the university postgraduate business education students to handle entrepreneurship business challenges in Nigeria. One research questionand five hypotheses guided the study. Descriptive survey design was adopted for the study. The population, also used as the sample, consisted of 388 business education graduates who are currently running their postgraduate programme in universities in the south-south and south-east geopolitical zones. A validated questionnaire with a reliability coefficient of 0.96 was used for data collection. The mean and standard deviation were used to analyze the research questions while Z-test was used to test the hypotheses at 0.05 level of significance. The results revealed that the respondents have relevant competent in ability to send e-mail, ability to receive e-mail, skills in producing documents with word processors among others. However, it was recommended that university authorities should encourage business education lecturers and students to organize workshops and conferences with a view to keeping them abreast to acquire more skills in ability to receive and send fax messages and ability to create website.

Keywords : *ICT competencies, possessed, postgra-duate business education students, entrepreneurship challenges, Nigeria.*

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ASSESSMENTOFINFORMATIONANDCOMMUNICATIONTECHNOLOGYCOMPETENCIESPOSSESSEDBYUNIVERSITYPOSTGRADUATEBUSINESSEDUCATIONSTUDENTSTOHANDLEENTREPRENEURSHIPBUSINESSCHALLENGESINNIGERIA

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Assessment of Information and Communication Technology Competencies Possessed by University Postgraduate Business Education Students to Handle Entrepreneurship Business Challenges in Nigeria

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Abstract - University business education graduates, by the nature of their programme, ought to possess relevant information and communication technology competencies for successful entrepreneurship but casual observation and empirical reports indicate that they are not doing well in this aspect. Therefore, this study assessed the ICT competencies possessed by the university postgraduate business education students to handle entrepreneurship business challenges in Nigeria. One research questionand five hypotheses guided the study. Descriptive survey design was adopted for the study. The population, also used as the sample, consisted of 388 business education graduates who are currently running their postgraduate programme in universities in the south-south and south-east geopolitical zones. A validated questionnaire with a reliability coefficient of 0.96 was used for data collection. The mean and standard deviation were used to analyze the research questions while Z-test was used to test the hypotheses at 0.05 level of significance. The results revealed that the respondents have relevant competent in ability to send e-mail, ability to receive e-mail, skills in producing documents with word processors among others. However, it was recommended that university authorities should encourage business education lecturers and students to organize workshops and conferences with a view to keeping them abreast to acquire more skills in ability to receive and send fax messages and ability to create website.

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I. Introduction

The federal government affirmed that teacher education shall continue to be given major emphasis in all educational planning and development since no education system may rise above the quality of its teachers, and by extension, no nation can rise above the quality of her leaders (FRN, 2009). Development and education of teachers, especially business teacher is necessary for stability in our economic and political system as a nation. Teacher education can only contribute to global development when appropriate economic, scientific, technological, management structures and measures are put in place. Nwaiwu (2009) observed that the world of business has gone global.

Business education is education for and about business (Esene, 2012). It is a training in business skills that will enable the students after graduating from university programme set-up their own businesses and run it successful without failure. The curriculum of business education at university level is well articulated and covers many areas of career opportunities. These are information and communication technology, management, accounting, marketing, secretarial studies. Business education programme is an important part of Nigeria's educational system at the university level which provides a solid foundation of knowledge and skills to graduates to successful entrepreneurs. It prepares its recipients at all levels to be economically literate citizens, with knowledge, skills and competencies that will enable them fit into a variety of careers or be self-dependent especially now that vocationalization and information and communication technology (ICT) competencies are global issues. Manual competencies and skills for office work and business are, today, gradually giving way to modern technologies. Okolocha and Ile (2007) stated that technology has opened a new world of learning which has drastically increased output. The new technology calls for the update of education programmes and training of students to acquired relevant competencies. The programme should therefore form part of the new training arena in Nigerian universities. In line with the new demands, Gates (1996) opined that the digitalization of information will be the disparity between what exists and future demands.

The 21st Century business teacher talks about electronic business (e-business) and electronic commerce (e-commerce). One can stay in Nigeria and order for goods abroad and make payments through the computer (online shopping). One can learn how to set up a business enterprise by accessing information which abounds, on the internet. One can apply for job on-line and get employment through the internet without

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first visiting the company. Ndinechi and Okereke (2005) state that:

At present, the whole world is laying emphasis on entrepreneurship and small business development which is the oil that turn the engine of a nation's economy. The Business education graduates must be conversant with ICT and how to pass on the knowledge to students who will eventually grow to become teachers. It is a vicious circle, if the business teacher is not trained on ICT which is the modern way of doing business. The students will not learn, and they will not have anything to impart on the next generation of students and the effect on the entire nation is better imagined

The fact that most successful business education graduates are those who can find their way on the information superhighway is no longer contestable. With the world becoming a minute global village, there is connectivity between individuals, groups and corporate bodies and this is made possible through technology. Today, many bureaucratic activities are made easy and function effectively through the use of one technology or the other. Invariably, no matter the occupation an individual chooses, chances are that he/she will have the need for adequate knowledge and skills in basic technology usage to be appreciated in the work environment (Koko, 2005). In the past, the teaching of business education was based only on theory and illustrations, and based on the use of old technology like manual typewriters and similar equipment. However, in the 21st Century, business education that is not based on information and communication technology will be classified as outdated and not in tune with the present realities. This is because the world has become a global village where education is globalized as nations agree to standard business rules, regulations and practices (Okoro & Okoro, 2009).

Globally, the use of information and communication technology (ICT) in good business teaching must be based on enquiry, activities and observation. One of the objectives of teacher education as contained in the National Policy on Education (FRN, 2009) is to provide teachers with the intellectual and professional background required for their assignment and to make them adaptable to any organizing situation not only in the life of their country but also in the wider world. Business teachers need to adapt to the changing environment in the business world by equipping themselves with knowledge of information and communication technology such as computers, mobile telephones, fax machines, electronic mails and so on in order to bring about desired effectiveness and efficiency in job performance leading to greater achievement of the educational goals of the nation. In Nigeria, the use of ICT especially the computer has gradually become a rule than an exception. Therefore, the use of computer has come to stay to improve the quality of life through the advancement of education (Nwaiwu, 2009). Olise and Ihimekpen (2008) defined information and communication technology as the study of the use of electronic processes for storing information and making it available when the need arises. That means that ICT is the science of storing information through electronic devices and making such information available whenever it is needed. The core of ICT is, however, the computer. Abifarin (2003) defined ICT as modern communication system of all types for transferring information.

The term information and communication technology includes electronic information processing, technologies such as computers and the internet as well as fixed-line telecommunication, mobile phones and other wireless communication networks. Information and communication technology devices can be embedded in other machines and appliances to increase their functionality. A good way to think about information and communication technology is to consider all the uses of digital technology that already exists to help the use of information by individuals businesses and organizations. Information and communication technology (ICT) can also be referred to as the handling and processing of information and instructions, graphs, texts and images for use by means of electronic and communication devices such as computer and telephone. It is a mechanism that provides easy world wide communication with access to vast array of data and assessment of skills which improve the living condition of man. Ademulegun (2006) explained information and communication technology as the items of equipment (hardware) and computer programmes (software) that allow people to access, retrieve, store, organize, manipulate, share and present information by electronic means.

Information and communication technology (ICT) has become a household term globally and has brought radical changes in the way people live, learn and work. Obviously, the last decade or two have witnessed tremendous changes in the ways business and organizations operate due to the emergence of ICT. It plays very vital roles in the social, political and economic life of every nation because it makes information collection, processing, dissemination and storage very fast, easy and efficient Ezenwafor, 2012). Consequently, more and more Nigerian schools, especially those in urban areas, are acquiring microcomputers and putting them to use for instruction, record keeping, word processing and so on. The lack of use of ICT in our schools previously can be attributed to lack of support and/or training, lack of adequate funding for information and communication technology, lack of adequate knowledge of what is available and lastly lack of adequate knowledge of the benefit of ICT in the teaching and learning process. Computer has found

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itself in every aspect of human enterprise hence education and business education cannot be exceptional in being aware of its role in human development. ICT therefore should be seen, in this context as a tool for managing and transferring education programmes. As a matter of fact, ICT is an indispensable ingredient in the education programme.

Requisite competencies and skills for office work and businesses, therefore, are very paramount for business education programmes especially in this era of technological evolution where no government, globally, can boast of providing employment to all her citizenry. The changing needs of the society and demands in terms of competencies made by the government, private sector and the business world have created what is referred to as "new vocationalism" (Okolocha & Ile, 2007). These authors identified the following computer operating competencies- ability to start up, log off or short-down a computer system and its peripherals, ability to key in data or create documents, ability to use text editing and layout, ability to use different packages like Microsoft Word, Excel, Corel Draw, ability to use borders in designing and decorating a typed document, ability to copy data, paste or insert in another location and so on. Desktop skills include ability to open a desktop publishing environment, ability to identify and use documents, format existing ones in the system to prepare reports, memos, invoices and letters. Some spreadsheet competencies are ability to identify and open a spreadsheet environment, ability to key in figures in table rows, columns, insert additional rows and delete where necessary, ability to identify cells, arrange, re-arrange, name or rename a cell, and so on.

The introduction of information and communication technology (ICT) has brought a lot of blessings to business educators in the area of job creation for self employment. Okolocha and Ile (2007) observed that for business education programmes to meet the challenges in the world of work, it must provide its recipients with the requisite skills for life in the form of competencies in technical know-how, creativity, leadership abilities, awareness of values that constitute the society and community. The evolution of information and communication technology has brought various changes in the way information is processed and disseminated, the way businesses are planned, managed and carried out, the type of equipment and facilities needed in the processing of information and business transaction, the type of employable skills that are needed for one to fit into office work and/or manage business for others or be self dependent (Okolocha & Ile). At the university level business education students are taught some relevant skills in ICT before they are graduated into the business world. They are exposed to various competencies in ICT courses.

There is no course or discipline that does not require the use of ICT especially for secondary and tertiary institution teachers who are supposed to be custodians of knowledge. An uninformed teacher is the one who refuses to consider the use of ICT. Such a teacher ultimately performs a disservice to his/her students (Byrd & Kohang, 1989). Teacher's competence is of particular concern when new subjects or media are introduced into the school system. Yusuf (2004), in a survey of public secondary schools teachers, reported that a sample of teachers who have over ten years of teaching experience are not too knowledgeable in using computers for any form of teaching. Unfortunately, some who are interested have low level of competence especially in the area of ICT. Thus, the introduction of ICT skills into the curricular for training teachers and students both in secondary schools and tertiary institutions most especially students of business education, is a welcome idea.

The Federal Government of Nigeria is very much interested in inculcating ICT skills into the educational system of the country, that is why it spelt out certain rules, policies and guidelines for the deveopment of relevant ICT curricular for the primary, secondary and tertiary institutions. Such curricular will be based on the appropriate national syllabus at the selected level and other global certification syllabus to tie into key elements of the Universal Basic Education (UBE).

Olise and Ihimekpen (2008) identified the ICT competencies that should be possessed by university business education graduates to include:

- Basic information systems concepts about components
- Operations, managerial and strategic roles of information systems
- Basic communication systems concepts
- Characteristics of channels of communication
- Types of Networks areas covered
- Communication media travel paths
- Communication processes within a network
- Communication methods
- Communication service providers network and ownership
- Major concepts in technology, issues on information technology
- Development concepts hardware, software, telecommunication, and database processing technologies.

Internet services are integral part of information communication technology (ICT). Therefore, element of internet skills is very relevant in business education curriculum. In support of this, Ohakwe (2003) and Chukwumezie (2003) identified relevant internet skills/-competencies such as

- Knowledge that the internet is a world-wide assemblage of interconnected computer networks connecting all manners of private, commercial,

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government and academic network including a growing number of home computers.

- Skill in using internet services such as e-mail, File Transfer Protocol (FTP), World Wide Web, e-commerce, internet phone, telnet, internet relay chart, electronic data interchange.
- Ability to connect to the internet
- Skill in using internet equipment such as the computer system, telephone line, modem, internet account and power supply.
- Skill in internet browsing
- Knowledge of the vast benefits of the internet as a vast library, storing latest information use for marketing (Chukwumezie).
- Knowledge of internet concept - as a worldwide interconnected computer networks connecting private, commercial, government and school network.
- Knowledge of all equipment used for internal services such as computer system, computer aided telephone, telephone line modem, etc.
- Knowledge of available internet service as well as their application and operation such as e-mail, e-commerce, e-banking, e-marketing, newsgroup/-usenet, internet relay chart, world wide web (www).
- Knowledge of the advantages of internet education as a contemporary
- Knowledge of the internet connectivity that is, method of connection to the internet
- Knowledge of internet service providers
- Knowledge of data security, protecting private information against authorized access and modification and other protection techniques such as the use of passwords.

In the same vein, Olise and Ihimekpen (2008) identified the following ICT competencies that are required for business education graduates:

- Ability to operate computer
- Knowledge to send and receive e-mail
- Skills in producing documents with word processors
- Knowledge to send and receive fax messages
- Knowledge in using collating machine
- Ability to create agenda using contra vision electronic software
- Skills in producing accounting jobs using spreadsheet software
- Knowledge to receive vocal messages using the internet
- skills in using tele/video conferencing
- Skills in conducting research using the internet
- Ability to merge mails by adding, amending and deleting
- Skills in editing text on the screen by inserting materials
- Ability to perform basic data processing

a) Statement of the Problem

University business education graduates by their education and training ought to possess the relevant competencies in information and communication technology that will enable them establish and run their own businesses successfully. Research findingsby Ile & Okolocha (2007) revealed that business education graduates are not competent in information and communication technology (ICT) skills. The poor performance of business education graduates in ICT skills could be attributed to changes in technology. Business education graduates are excepted to be competent in ICT skills after graduating from business education programme since they are exposed to ICT courses in business education curriculum. This study is, therefore, conceived to investigate the ICT skills possessed by university business education graduates in ICT utilization.

b) Purpose of the Study

The purpose of this study was to assess ICT competencies possessed by university postgraduate business education students to handle entrepreneurship business challenges in Nigeria. Specifically, the study sought to determine entrepreneurship competencies possessed by university business education students in Information and communication technology utilization.

II. Research Question

The following research question was raised to guide the study:

To what extent do university business education graduates possess relevant competencies in information and communication technology utilization?

a) Hypotheses

The following hypotheses were tested at 0.05 level of significance.

- There is no significant difference between male and female university business education graduates in the mean ratings of their possessed competencies in information and communication technology utilization.
- There is no significant difference between south east and south west university business education graduates in the mean ratings of their possessed competencies in information and communication technology utilization.
- There is no significant difference between B.Sc. and M. Ed university business education graduates in the mean ratings of their possessed competencies in information and communication technology utilization.
- There is no significant difference between federal and state universities business education graduates in the mean ratings of their possessed competencies in information and communication technology utilization.

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- There is no significant difference between full-time and part-time university business education graduates in the mean ratings of their possessed competencies in information and communication technology utilization.

III. Method

This study adopted a descriptive survey design. A descriptive survey design was used for this study because it was aimed at ascertaining and establishing the status quo, facts or pieces of information concerning the population. According to Nworgu (1991), survey method is appropriate, especially for seeking individual's opinions, attitudes and perceptions in their natural setting. The population of the study comprised all postgraduate university business education students who are currently undergoing their post-graduate programme in five universities in the area of study, namely, university of Benin, Benin City, University of Uyo, NnamdiAzikiwe University, Awka, University of Nigeria, Nsukka and Ebonyi State University, Abakaliki. Business education graduates who are currently undergoing postgraduate programmes in business education were chosen for the study due to the fact that they could easily be contacted by the researcher. Statistical information from postgraduate school records of the institutions puts the figure of registered postgraduate business education students of two academic sessions (2009/2010 and 2010/2011) at 388.

The data for this study were collected using a questionnaire developed and titled "Assessment of ICT Competencies Possessed by University Postgraduate Business Education Students to handle Entrepreneurship Business Challenges in Nigeria." It consists of 31 items developed in line with the research question. The questionnaire comprised two parts- "A" and "B". Part A is for background information of the respondents and has 5 items while part B is divided into five sections, B1- B5, covering the research question and containing 107 items. The instrument is structured on a 4 point scale of Very Competent (VC)– 4 points, Competent (C)– 3 points, Fairly Competent (FC)– 2 points, Not Competent (NC) – 1 point. The face and content validity of the questionnaire was done by six experts, three from the Department of Vocational Education and one from the Department of Guidance and Counselling at NnamdiAzikiwe University, Awka plus two experts from the Department of Technical and Business Education, Delta State University, Abraka. These experts were selected based on the fact that they have knowledge and experience in test construction. The title, purpose of the study, research questions and hypotheses were presented to them with a draft copy of the instrument and they were requested to thoroughly scrutinize the instrument for clarity and relevance of the items. To establish the internal consistency of the instrument, a questionnaire was administered to twenty-five (25) business education graduates who are currently undergoing their postgraduate programme in business education at OlabisiOnabanjo University, Ago-Iwoye in Ogun State in south west Nigeria. The data collected were subjected to cronbach alpha reliability method, 0.96 coefficient was obtained. The researcher and eight research assistants trained by the researcher personally distributed the 388 copies of the questionnaire to the respondents. Some respondents completed their copies of the questionnaire and returned to the researcher and research assistants on the spot. In cases where on-the-spot completion and retrieval were not possible, the researcher and research assistants visited the institutions at later times as agreed with the concerned respondents to collect the completed copies of the questionnaire. The rate of return stood at 336, out of 388 (86.6%).

The arithmetic mean and standard deviations were used to analyse the data on the research questions. The z-test statistical tool was used for testing the hypotheses at 0.05 level of significance. Any item with a mean value between 2.5 and above was regarded as competent by the respondents while any item whose mean rating is less than 2.5 was regarded as not competent by the respondents. A null hypothesis was rejected if the calculated value of the z-test (t-cal) is greater than the table value (t-tab). On the other hand, if the calculated value (t-cal) is less than the table value (t-tab), the null hypothesis was retained.

IV. Results

a) Research Question 1

To what extent do university business education graduates possess relevant competencies in information and communication technology utilization?

Table 1 : Mean ratings and standard deviation of the respondents on their possessed competencies in information and communication technology utilization

S/N	Aspects of Information and Communication Technology Competencies	Mean	SD	Remarks
1	Ability to send e-mail	3.27	0.71	Competent
2	Ability to receive e-mail	3.20	0.67	Competent
3	Skills in producing documents with word processors	3.07	0.69	Competent
4	Ability to send fax messages	2.42	1.01	Not Competent
5	Ability to receive fax messages	2.46	1.07	Not Competent
6	Ability to create agenda using contra vision electronic software	2.60	0.93	Competent
7	Skills in producing accounting jobs using spreadsheet software	2.83	0.82	Competent

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8	Ability to receive vocal messages using the internet	2.87	0.80	Competent
9	Skills in using tele/video conferencing	2.45	0.82	Not Competent
10	Skills in conducting research using the internet	3.03	0.74	Competent
11	Ability to merge mails by adding	2.69	0.86	Competent
12	Ability to merge mails by deleting	2.76	0.86	Competent
13	Skills in editing text on the screen by inserting materials	2.95	0.78	Competent
14	Ability to perform basic data processing	3.00	0.66	Competent
15	Ability to log on or shut-down a computer system	3.30	0.74	Competent
16	Ability to key in data	3.19	0.73	Competent
17	Ability to use text editing and layout	2.87	0.84	Competent
18	Ability to key in Microsoft word package	2.84	0.90	Competent
19	Ability to use borders in designing and decorating a typed documents	2.99	0.82	Competent
20	Ability to copy, paste or insert in another location	3.06	0.79	Competent
21	Ability to open a desktop publishing environment	2.84	0.89	Competent
22	Ability to identify and use documents, format existing ones in the system to prepare reports, memos, invoices and letters	2.71	0.82	Competent
23	Ability to identify and open a spreadsheet environment	2.97	0.77	Competent
24	Ability to key in figures in table, rows, columns, insert additional rows and delete where necessary	2.96	0.78	Competent
25	Ability to identify cells, arrange, re-arrange, name or rename a cell.	2.84	0.92	Competent
26	Ability to create website.	2.41	0.92	Not Competent
	Grand Mean/S.D =	**2.89**	**0.82**	Competent

Table 2 contains twenty-six (26) information and communication technology competencies. The mean scores of responses of the respondents show that they are competent in all the aspects of information and communication technology utilization relative to entrepreneurial challenges. Ability to log on or shut down a computer system (item 15) has the highest mean score of 3.30 and ability to send fax message (item 4) has the lowest mean score of 2.50. In all, the respondents indicated that they are competent in all aspects of information and communication technology utilization relative to entrepreneurial challenges. This was confirmed by the grand mean of 2.89 and standard deviation of 0.82.

i. *Hypothesis 1*

There is no significant difference between male and female university business education graduates in the mean ratings of their possessed competencies in information and communication technology utilization.

Table 2 : Z-test result of the difference on respondents' mean ratings of their possessed information and communication technology utilization competencies based on gender

Variables	N	Mean	SD	Df	z-cal	z-tab	Remarks
Male	176	75.48	15.71	334	0.364	1.960	NS
Female	160	74.90	13.37				

From the above table, the calculated z-value of 0.364 is less than the z-tabulated value of 1.960 at 334 degree of freedom and 0.05 level of significance. This means that there was no significant difference between mean ratings of male and female respondents regarding their information and communication technology utilization competencies to handle entrepreneurship challenges in Nigeria. The null hypothesis, is, therefore upheld while the alternate hypothesis is rejected.

ii. *Hypothesis 2*

There is no significant difference between south east and south west university business education graduates in the mean ratings of their possessed competencies in information and communication technology utilization.

Table 3 : Z-test result of the difference on respondents' mean ratings of their possessed information and communication technology utilization competencies based on location

Variables	N	Mean	SD	Df	z-cal	z-tab	Remarks
South East	204	76.97	15.51	334	0.770	1.960	NS
South west	132	75.11	13.32				

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Table 3 : Z-test result of the difference on respondents' mean ratings of their possessed information and communication technology utilization competencies based on location

Variables	N	Mean	SD	Df	z-cal	z-tab	Remarks
South East	204	76.97	15.51	334	0.770	1.960	NS
South west	132	75.11	13.32				

In the table, the calculated z-value of 0.770 is less than the z-tabulated value of 1.960 at 334 degree of freedom and 0.05 level of significance. This means that there was no significant difference between mean ratings of south east and south west respondents regarding their information and communication technology utilization competencies to handle entrepreneurship challenges in Nigeria. The null hypothesis, is, therefore upheld while the alternate hypothesis is rejected.

iii. *Hypothesis 3*

There is no significant difference between B.Sc. and M. Ed university business education graduates in the mean ratings of their possessed competencies in information and communication technology utilization.

Table 4 : Z-test result of the difference on respondents' mean ratings of their possessed information and communication technology utilization competencies based on qualification

Variables	N	Mean	SD	Df	z-cal	z-tab	Remarks
B.Sc.	283	72.98	14.41	334	1 .15	1.960	NS
M.Ed	53	7 1.21	12.88				

In the table, the calculated z-value of 0.1.15 is less than the z-tabulated value of 1.960 at 334 degree of freedom and 0.05 level of significance. This means that there was no significant difference between mean ratings of B. Sc. and M. Ed respondents regarding their information and communication technology utilization competencies to handle entrepreneurship challenges in Nigeria. The null hypothesis, is, therefore upheld while the alternate hypothesis is rejected.

iv. *Hypothesis 4*

There is no significant difference between federal and state universities business education graduates in the mean ratings of their possessed competencies in information and communication technology utilization.

Table 5 : Z-test result of the difference on respondents' mean ratings of their possessed information and communication technology utilization competencies based on university type

Variables	N	Mean	SD	Df	z-cal	z-tab	Remarks
Federal	321	71.82	15.55	334	0.944	1.960	NS
State	15	7 0.06	16.82				

In the table, the calculated z-value of 0.944 is less than the z-tabulated value of 1.960 at 334 degree of freedom and 0.05 level of significance. This means that there was no significant difference between mean ratings of federal and state universities respondents regarding their information and communication technology utilization competencies to handle entrepreneurship challenges in Nigeria. The null hypothesis, is, therefore upheld while the alternate hypothesis is rejected.

v. *Hypothesis 5*

There is no significant difference between full-time and part-time university business education graduates in the mean ratings of their possessed competencies in information and communication technology utilization.

Table 6 : Z-test result of the difference on respondents' mean ratings of their possessed information and communication technology utilization competencies based on mode of study

Variables	N	Mean	SD	Df	z-cal	z-tab	Remarks
Full-time	300	78.12	14.20	334	1.03	1.960	NS
Part-time	36	77.22	14.98				

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In the table, the calculated z-value of 1.03 is less than the z-tabulated value of 1.960 at 334 degree of freedom and 0.05 level of significance. This means that there was no significant difference between mean ratings of full-time and pat-time respondents regarding their information and communication technology utilization competencies to handle entrepreneurship challenges in Nigeria. The null hypothesis, is, therefore upheld while the alternate hypothesis is rejected.

V. Discussion

The study revealed that university business education graduates are competent in 22 aspects of ICT utilization in order to handle entrepreneurship challenges in Nigeria. Ability to log on or shut down a computer system was rated highest as aspects of information and communication technology compe-tencies possessed by the respondents. This proves that university business education graduates have deve-loped a high skill in this aspect of information and communication technology utilization. Ability to send e-mail was rated competent by the respondents. Busi-ness education graduates are also competent in ability to receive e-mail, other aspects where business edu-cation graduates are competent in are: ability to key in data; skills in producing, documents with word pro-cessor; ability to copy or insert in another location, skills in conducting research using the internet; and ability to perform basic data processing. In agreement with Nwaiwu (2009) the use of ICT especially the computer has gradually become a rule than exception, the use of computer has come to stay and to improve the quality of life for the advancement of education.

The study also revealed that business education graduates are competent in the use of border designing and decorating of typed documents, they are able to identify cells, open a spreadsheet environment; they are able to key in figures in table, row, columns, insert additional rows and delete where necessary: they have skills in editing text on the screen by inserting materials, ability to receive vocal messages using internet and ability to use text editing and layout. Other aspects of information and communication technology competencies that business education graduates are competent in ability to key in different packages (ms word, excel, Corel Draws, power points), ability to open a desktop publishing environment; ability to identify cells, arrange, rearrange, name or rename a cell and skills in producing accounting jobs using spreadsheet software. Ability to merge mail by deleting, ability to identify and use document, format existing ones in the system to prepare reports, memos, invoices and letters. Business education graduates are also competent in ability to merge mails by adding, ability to create agenda using contra vision electronic software are aspects of information and communication technology where the respondents are competent. In agreement to this, Okolocha and Ile (2007) have earlier identify the following computer operating competencies expected of business education graduates– ability to start up, log off or shut down a computer system; ability to key in data or create documents, ability to use text editing and layout. Business education graduates are also competent in ability to key in different packages such as Microsoft word, excel, Corel Draws; ability to use borders in designing and decorating a typed document, ability to copy out, paste, or insert in another location. This study is also consistent with the earlier study of Olise and Ihimekpen (2008) that have earlier identified the information and communication technology competencies that are required of business education graduates such as ability to operate computer, knowledge to send and receive e-mail, skills in producing documents with word processors, knowledge to send and receive fax messages and ability to crate agenda using contra vision electronic software. However, business education graduates are not competent in ability to create website; ability to receive fax messages and ability to send fax messages. The result of the hypotheses also revealed that there was no significant difference between male and female university business education graduates in the mean ratings of their possessed competencies in information and communication technology utilization, there was no significant difference between south east and south west university business education graduates in the mean ratings of their possessed competencies in information and communication technology utilization, there was no significant difference between B. Sc. and M. Ed university business education graduates in the mean ratings of their possessed competencies in information and communication technology utilization, there was no significant difference between federal and state universities business education graduates in the mean ratings of their possessed competencies in information and communication technology utilization and there was no significant difference between full-time and part-time university business education graduates in the mean ratings of their possessed competencies in information and communication technology utilization.

VI. Conclusion

Based on the findings of the study, it is concluded that, relatively, the universities business education graduates used for the study have the required ICT competencies to handle entrepreneurship challenges in Nigeria. However, they need to be trained and retrained in those areas of ICT which they are not competent such ability to handle fax messages, Skills in using tele/video conferencing and ability to create website.

VII. Recommendations

Based on the findings of the study, the following recommendations are made:

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- University authorities should provide adequate teaching facilities to universities for business education for sufficient practical work in information and communication technology. This will help the teachers to impart requisite competencies in the students and make them better qualified graduates of business education.
- University authorities should encourage business education lecturers and students to organize workshops and conferences with a view to keeping them abreast to acquire more skills in ability to receive and send fax messages, ability to create website and skills in using tele/video conferencing.
- Business education department should be equipped by university authorities with more ICT facilities to enable to the students acquire more ICT skills before graduation.

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