



**COMPETENCIES IN THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) AMONG FINAL YEAR UNDERGRADUATE BUSINESS EDUCATION STUDENTS IN TERTIARY INSTITUTIONS IN NORTH-EASTERN NIGERIA**

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**Abstract**

*In view of the acceptance, relevance and contributions of information and communication technology (ICT) in education and all spheres of work in the world, this study was designed to determine the competencies in the use of ICT among the final year undergraduate business education students in tertiary institutions in North-East Nigeria. The respondents used for the study were all 400 level students of institutions in North-East Nigeria. A total of 200 final year undergraduate students were randomly selected as sample for this study. A validated nine item self-developed closed-ended questionnaire with “competent” and “not competent” options were administered to the respondents for data collection. It was found that most final year undergraduate business education students were competent in the use of Information and Communication Technology (ICT). Based on the findings, the researcher concluded that final year undergraduate business education students were competent in using ICT and also recommended that parents/guardians and governments should provide adequate ICT resources to their children/wards and tertiary institutions for effective learning.*

**Key words:** *Competencies, information and communication Technology, undergraduate and business education.*

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**Introduction**

The world has witnessed four distinct socio-economic ages in the history of human civilization. These are the stone age, characterized by hunting and gathering of food; agriculture age characterized by farming; industrial age which brought to birth work in factories/industries and now the information age which is characterized by the acquisition, analysis and communication of information. The information age also termed information of knowledge which is primarily based on the production of knowledge which has led to the rise in information technology. The most successful individual, group, community, society or nation today, therefore, is the one that has access to information and the ability to process it (Giddens, & Mohammed, in Usoroh, 2011). Terry (2014) held that information and communication technology is the acquisition, processing, storage and dissemination of



vocal, pictorial, textual and numeric information by a micro-electrics based combination of computing and telecommunications.

UNESCO, in Gusen (2013) saw information and communication technology as the combination of computer and communication system to improve the teaching, learning and telecommunication systems and research in universities. Its revolutionary impact affects the way people live, learn, work, spend leisure time, and communicate. The impact of ICT has brought a lot of revolutions in the theory of learning communication model, teaching method, mobile learning, cloud computing applications, one-to-one computing, online game, tablet laptop with built-in support for ink, drawing with stylus, hand writing recognition and speech recognition, student-centred video conferencing and teleconferencing (Hawkins, in Gusen 2013:).

To encourage active competitiveness in ICT and to be a knowledge society in line with the world class universities status, the National Economic Empowerment and Development Strategies (NEEDS, 2005) set out seven goals for education in Nigeria to promote the use of ICT competencies at all levels. These goals are to ensure that:

1. 10percent of Primary school graduates are computer literate;
2. 80percent of secondary school graduates are computer literate;
3. 80percent of graduates of tertiary institutions are computer literate;
4. 50percent of school managers and proprietors are computer literate;
5. 50percent of secondary schools have functional ICT facilities;
6. 80percent of tertiary institutions have ICT facilities;
7. 50percent of teachers at all the levels are equipped with computer skills.

The strategies for achieving these laudable goals according to NEEDS include the following:

- a. Incorporate computer literacy in primary school curricula
- b. Develop and produce curricula for teaching computer education in secondary schools
- c. Provide secondary school and tertiary institutions with ICT equipment and facilities.

The National Commission for Colleges of Education (NCCE, in Daramola and Babagbemi 2015) in its wisdom has enumerated the goals of ICT in education programmes as follows:

- 1 to enhance a better education for staff and students in all relevant subject areas.
- 2 to facilitate avenue where students throughout Africa may work together
- 3 to make current relevant journals and books available to all at affordable cost
- 4 to improve the education and pedagogical competence of teachers at all levels through specially designed modular placed on the website.
- 5 to support conventional classroom work.



- 6 ICT is particularly useful in research as it gives access to a world of resources especially in electronic form.
- 7 ICT can play a key role in administration, student data, personnel administration, purchasing and supplies, advertisement; etc can be handled with ease using ICT.

Admittedly, Gusen (2013) observed that in line with the NEEDS aspiration, the Federal Government of Nigeria took similar initiation in 2007 and introduced computer studies for primaries 1-6 and JSS 1-3 (Nigerian Educational Research and Development Council, NERDC, 2007 a-c). The National Teachers Institute (NTI) and Universal Basic Education Commission (UBEC, 2010) also developed a manual for capacity building workshop for teachers to promote teachers' skills and knowledge in the use of ICT in primary and secondary schools in Nigeria as a pre-requisite for university education (NTI, 2010). To this effect, the Post Unified Tertiary Matriculation Examination (UTME) is equally conducted online. The role of computer knowledge in the life of every average Nigerian student cannot be underestimated. Adagunodo and Idowu in Oladunjoye and Benwari (2014) indicated that knowledge, skills and confidence with computer technology are now an asset for entering the competitive employment market. They pointed out that every aspect of life from education, leisure and work environment to social interactions is influenced by computer technology. With the increasing use of ICT in education the world over, new skills and competencies among students are required for them to executively learn.

### **Statement of the Problem**

Today's fast-paced world is becoming increasingly characterized by technology-driven communication, which has transformed the world into a large global connected community with ever-increasing out-reach of information and communication technology (ICT) (Danner & Pessu, 2013). It has virtually become impossible to effectively function and participation in the training of business education students in the information and communication technology (ICT) age without its application, hence the need for all undergraduate students of business education to exhibit competencies in the use of information and communication technology (ICT) at this age. Graduates of business education programme from universities, colleges of education and polytechnics are expected to utilize their skills and competencies in information and communication technology. However, Nwagwu and Azih in Orike, Iyalla & Okereke, (2017) lamented that, it is worrisome as many business education departments are yet to enjoy the benefits of e-learning because of lack or inadequacy of electronic resources...which makes business education seems delay to effectively integrate e-learning into the programmes because of the doubt on availability of the needed resources. This doubt is obvious as most business education classrooms and studios seem to be overcrowded with manual typewriters and



other out-dated equipment which are not in tone with the modern technological prerequisites for e-learning integration. In most cases, students are asked to come with their private manual typewriters. Even some institutions that have computer laboratories seem to be lacking most of other technology needed in carrying out learning using electronic media. Cases abound where learners are exposed to notional pictures of technology they will use in modern offices without any practical skills (Orike, Iyalla & Okereke, 2017). It is in the light of this, that this study was carried out to investigate the Competencies in the use of Information and Communication Technology among final year undergraduate business education students in North-Eastern Nigeria.

### **Research Questions**

1. What percentage of final year undergraduate business education students are competent in operating the computer?
2. What percentage of final year undergraduate business education students are competent in using Microsoft word Processor for processing and formatting documents?
3. What percentage of final year undergraduate business education students are competent in operating GSM for communication?
4. What percentage of final year undergraduate business education students are competent in using E-mail?
5. What percentage of final year undergraduate business education students are competent in using Face-book?
6. What percentage of final year undergraduate business education students are competent in using World Wide Web in browsing and downloading materials?
7. What percentage of final year undergraduate business education students are competent in using Microsoft Excel in competing results, data analysis and profits?
8. What percentage of final year undergraduate business education students are competent in using PowerPoint for presentation?
9. What percentage of final year undergraduate business education students are competent in operating E-Banking transaction?

### **Method**

The researcher adopted a descriptive survey design for the study. All final year undergraduate business education students in tertiary institutions in Adamawa, Bauchi, Gombe, and Taraba States constituted the research population. These four states constituted the research population. A sample of 200 final year undergraduate students were drawn from the four tertiary institutions in Adamawa, Bauchi, Gombe and Taraba states (Modibbo Adama University of Technology, Abubakar Tafawa Belewa University, Federal College of

Education (T) and Federal Polytechnic Bali) respectively. Simple random sampling technique was used in the study to draw fifty final year undergraduate business education students from each institution making two hundred. A closed-ended questionnaire with “Competent” and “Not competent” options was designed for the collection of data. Three professional business educators validated the instrument for both, face content and criterion validity. Copies of validated questionnaire were administered to respondents and were retrieved after completion with the help of four trained research assistants through e-mail. The descriptive statistics was used to answer the research questions.

## Results

### Question One

What percentage of final year undergraduate business education students are competent in operating the computer system

**Table 1:** Level of competency of final year undergraduate business education students in operating the computer.

<b>Competency in Operating the Computer</b>	<b>Competent F</b>	<b>%</b>	<b>Not Competent F</b>	<b>%</b>
Competency in cool-booting	136	68	64	32
Competency in formatting	127	63.5	73	36.5
Competency in installing various software	105	52.5	95	47.5
Competency in shutting down	134	67	66	33
Competency in importing software	99	49.5	101	50.5

Data in Table 1 show that 68% of the final year students are competent in booting the computer while 32% of them are not competent. Similarly, 63.5% of the students were competent in formatting the computer while 36.5% are not competent. Similarly, 52.5% of the students are competent in installing various software, while 47.5% of them are not competent. A total of 67% of the students are competent in shutting down the computer, while 33% of them are not competent. Also 49.5% of the students are competent in importing software, while 50.5% of them are not competent in importing software.

### Question Two

What percentage of final year undergraduate business education students are competent in using word Processing in creating and formatting documents?

**Table 2:** level of competency of final year undergraduate business education students in using word processing in creating and formatting documents



<b>Competency in Creating and Formatting of Documents</b>	<b>Competent F</b>	<b>%</b>	<b>Not Competent F</b>	<b>%</b>
Competency in creating text	142	71	58	29
Competency in inserting pictures	132	67	65	32.5
Competency in editing text	140	70	60	30
Competency in formatting	130	65	70	35

Table 2 shows that 71% of the respondents are competent in creating text, while 29% of them are not competent. Out of 200 students, 67% of them are competent in inserting pictures while 32.5% of them are not competent. Similarly, 70% of the students are competent in editing text. 65% of them are competent in formatting text.

**Question Three**

What percentage of final year undergraduate Business Education students are competent in the use of GSM for communication?

**Table 3:** Level of competency of final year undergraduate business education students in operating GSM.

<b>Competency in using GSM:</b>	<b>Competent F</b>	<b>%</b>	<b>Not Competent F</b>	<b>%</b>
Competency in composing text messenger	145	72.5	55	27.5
Competency in sending text messages	145	72.5	55	27.5
Competency in using calculator	143	71.5	57	28.5
Competency in using WhatsApp/face book	144	72	56	28
Competency in using YouTube	119	59.5	81	40.5
Competency in using GSM Camera/Video	138	69	62	31

Table 3 shows that 72.5% of the students are competent in composing text messenger, while 27.5% of them are not competent in composing text messenger. Also 72.5% of the students are competent in sending text messages using GSM. While 71.5% of them are competent in using the calculator, 28.5% are not competent. Only 72% of the final year students are competent in using WhatsApp/Face book, 28% of them are not competent. 59.5% of the respondents are competent in using YouTube while 40.5% are not competent. Similarly 69% of the students are competent in using GSM camera/video while 31% are not competent.

**Question Four**

What percentage of final year undergraduate Business Education students are competent in using e-mail?



**Table 4:** Level of competency of final year undergraduate business education students in using E-mail

<b>Competency in Using E-mail</b>	<b>Competent F</b>	<b>%</b>	<b>Not Competent F</b>	<b>%</b>
Competency in composing messages	130	65	70	35
Competency in receiving messages (inbox)	144	72	56	28
Competency in sending messages	140	70	60	30
Competency in attaching document (s)	119	59.5	81	40.5
Competency in accessing attached document	113	56.5	87	43.5
Competency in downloading/uploading messages	125	62.5	75	37.5

Table 4 shows that only 65% of the final year students are competent in composing messages while 35% of them are not competent. Also 72% of the respondents are competent in receiving messages (inbox), and 28% are not competent in receiving messages (inbox). Similarly, 70% of the students are competent in sending messages, 30% of them are not competent in sending text messages. Also, 59.5% of the students are competent in attaching document(s). Only 56.5% of the final year students are competent in accessing attached documents, 43.5% of them are not competent. Also, 62.5% of the students are competent in downloading/ uploading messages, while 37.5% of them are not competent.

**Question Five**

What percentage of final year undergraduate business education students are competent in using face-book

**Table 5:** Level of competency of final year undergraduate business education students in using Face-book

<b>Competency in using Face-book:</b>	<b>Competent F</b>	<b>%</b>	<b>Not Competent F</b>	<b>%</b>
Competency in opening Face-book account	144	72	62	31
Competency in chatting with friends	148	74	66	33
Competency in having live chat through messenger	132	66	68	34
Competency in uploading videos	134	67	52	26
Competency in downloading music	138	69	57	28

Table 5 reveals that 72% of students are competent in opening Face book account, while 28% of them are not competent. Similarly, 74% of the students are competent in chatting with friends while 26% of them are not competent. Also, 66% of the students are



competent in having live chat through messenger while 34% are not competent. A total of 67% of the students are competent in uploading videos, while 33% of them are not competent. It was also discovered that 69% of the final year business education students are competent in downloading music, while 31% of them are not competent in downloading music.

**Question Six**

What percentage of final year undergraduate business education students are competent in using World Wide Web (www) for browsing and downloading materials?

**Table 6:** Level of competency of final year undergraduate business education students in using World Wide Web (www).

<b>Competency in using World Wide Web</b>	<b>Competent F</b>	<b>%</b>	<b>Not Competent F</b>	<b>%</b>
Competency in using Search Engines	130	55.5	89	35
Competency in downloading files	126	42	116	37
Competency in editing files	121	55.5	89	39.5
Competency in creating Home Page	111	60.5	79	44.5
Competency in add hypertext in Home Page	94	63	74	58
Competency in converting downloaded materials to MS Word	111	65	70	44.5

The result presented in Table 6, shows that 65% of students are competent in using search engines while 35% of them are not competent enough to use search engines. Similarly, 63% of the students are competent in downloading files, while 37% of them are not competent. Also 60.5% of the students are competent in editing files, while 39.5% of them are not competent. Also 55.5% of the final year students are competent in creating Home page, while 44.5% of them are not competent. It was also discovered that 42% of the students are competent in add hypertext in Home page, while 58% are not competent.

**Question Seven**

What percentage of final year undergraduate business education students are competent in using Microsoft Excel in solving business problems that requires calculation, projection and comparism?

**Table 7:** Level of competency of final year undergraduate business education students in using Microsoft excel



<b>Competency in using Microsoft Excel</b>	<b>Competent F</b>	<b>%</b>	<b>Not Competent F</b>	<b>%</b>
Competency in using chart	118	59	82	41
Competency in preparing results	118	59	82	41
Competency in manipulating in cells	116	58	84	42
Competency in summation/subtraction/ division	112	56	88	44

Table 7 shows that 59% of the final year students are competent in summation, subtraction and division using Microsoft Excel, while 41% of them are not competent. Similarly, 59% of the students are competent in preparing results using micro soft Excel, while 41% of them are not competent. Also 58% of the students are competent in manipulating in cells, while 42% of them were not competent. It is also observed that 56% of the students are competent in using chart, while 44% of them are not competent.

### **Question Eight**

What percentage of final year undergraduate business education students are competent in using Microsoft PowerPoint?

**Table 8:** Level of competency of final year undergraduate business education students in the use of PowerPoint

<b>Competency in using Microsoft PowerPoint</b>	<b>Competent F</b>	<b>%</b>	<b>Not Competent F</b>	<b>%</b>
Competency in using animation	120	60	80	40
Competency in arranging slides	119	59.5	81	40.5
Competency in adding slides	118	59	82	41
Competency in deleting	122	61	78	39

The data presented in Table 8 reveal that 60% of the students are competent in using animation; while only 40% are not competent. Similarly, 59.5% of the students are competent in arranging slides, while 40.5% of them are not competent. Also 59% of the students are competent in adding slides, and 41% of them are not competent. Out of 200 students, only 61% of them are competent in deleting, while 39% of them are not competent.

### **Question Nine**

What percentage of final year undergraduate business education students are competent in operating E-Banking transactions?

**Table 9:** Level of competency of final year undergraduate business education students in operating E-Banking



<b>Competency in operating E-Banking:</b>	<b>Competent F</b>	<b>%</b>	<b>Not Competent F</b>	<b>%</b>
Competency in using ATM/phone to check balance	139	69.5	61	30.5
Competency in checking balance using Phone	138	69	62	31
Competency in transferring money using phone	134	67	66	33
Competency in deposite /withdraw online	143	71.5	57	28.5
Competency in using/ phone ATM to buy Airtime	114	57	86	43

The result in Table 9 reveal that 69.5%, 69%, 67%, 71.5% and 57% of the students are competent in using ATM/ Phone to check balances, checking balance using phone, transferring money using phone, in deposit/withdraw online and using phone/ATM to buy Airtime respectively. While 30.5%, 31%, 33%, 28.5% and 43% of them are not competent in using ATM/phone to check balance, deposit/withdraw online as well as buying Airtime.

### **Discussion of Findings**

Findings from the study showed that final year business education students were competent in operating the computer except in importing software. The result also revealed that final year undergraduate business education students were competent in using Microsoft word in processing documents for their consumption, and were aware of GSM in learning in tertiary institutions. This is in line with Okiki in Dambo and Uranta (2016) who found that there was an increasing awareness of the use of information and communication technologies (ICTs) in the teaching and learning process. Findings from study indicated that final year undergraduate business education students were competent in using electronic mails (e-mail) in composing, receiving and sending messages to their colleagues and other educators as well as attaching documents, accessing attached documents and downloading/ uploading messages.

The study revealed that majority of the final year undergraduate business education students were competent in using face-book. They were competent in opening accounts, chatting with friends, having live chat through messenger, uploading videos and downloading music. Similarly, study revealed that final year undergraduate business education students were competent in using World Wide Web (www) for browsing learning materials online. Also the results revealed that 56%-59% of the final year undergraduate business education students were competent in using Microsoft Excel in summation, subtraction and division as well as preparing results, manipulating in cells and using chart. Similarly, the study revealed that final year undergraduate business education students were competent in using Microsoft PowerPoint in presentation. This is in line with the view of Nnanedu in Nwosu and Mbaezue (2016) that the use of PowerPoint in class room lectures



has been observed to motivate students' learning/performance in comparison to lectures based on overhead projectors, traditional lectures and online lectures. PowerPoint application competencies are necessary for individual and collective development by providing the youths with competencies, knowledge and attitudes necessary to enter into, retain and progress in the world of work. The result revealed that business education students were competent in operating E-banking through the use of phone and ATM machines in the areas of checking balance, withdrawing/depositing/transferring money as well as buying Airtime.

### **Conclusion**

It is concluded that majority of final year undergraduate business education students were competent in using different Information and Communication Technology (ICT) resources for academic purposes. The acquisition of ICT competencies by the final year undergraduate business education students will go a long way to make them relevant in the labour market.

### **Recommendations**

Based on the findings of the study and the conclusion drawn therefrom, the following recommendations are proffered:

- 1 Special scholarship be given to final year undergraduate business education students to enable them purchase ICT resources such as Smartphones, Laptops and Modems
- 2 Parents are encouraged to provide ICT resources for their children/wards to guarantee their competencies in the use of ICT facilities for learning
- 3 Curriculum planners should make computer studies compulsory right from primary education to tertiary level
- 4 There should be ICT Centres fully equipped with facilities in all business education departments in universities, colleges of education and polytechnics in Nigeria
- 5 All tertiary institutions in Nigeria should be networked with wireless connectivity to enable students have access to ICT facilities.

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