



ICT SKILLS REQUIRED OF BUSINESS EDUCATION GRADUATES FOR EFFECTIVE ENTREPRENEURSHIP PRACTICE IN ANAMBRA STATE

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Abstract

The study examined Information and Communication technology skills required of business education graduates for effective entrepreneurship practice in Anambra State. The design of the study was descriptive survey. The population of the study was 398 managers of small scale and medium enterprises out of which a sample of 199 was used. Four research questions guided the study and four null hypotheses were tested at 0.05 level of significance. A structured questionnaire was used for data collection. The internal consistency of the instrument was established using Crombach alpha and co-efficients of 0.80, 0.76, 0.82 and 0.78 were obtained. Mean ratings and standard deviation were used to analyze data related to research questions, while t-test inferential statistics was used to test the hypotheses at 0.05 level of significance. The findings of the study revealed that communication, technology, managerial, organization and ICT skills were required by business education graduates for effective entrepreneurship practice. Based on the findings of the study, it was recommended among others that government should make adequate provision of ICT equipment in institutions of higher learning for effective teaching and learning. Also business enterprises should partner with training institutions for effective training of students on entrepreneurship development.

KEYWORDS: *Information and Communication Technology, Entrepreneurship Practice, Business Education.*

Introduction

The global technological advancement and the Nigeria current economic trends have called for proper acquisition of ICT skills for entrepreneurship development among graduates. The federal government has mandated all training institutions of higher learning to integrate into the programmes of study, entrepreneurship education that will equip students with appropriate entrepreneurial skills. Proper acquisition of these skills by the students will enable them establish their own businesses, become self-reliant and excel in the modern business world after graduation.

According to Lankard (1991), entrepreneurship education is a lifelong learning process, starting as early as elementary school and progressing through all levels of education, including adult education. It prepares youths to be responsible and highly enterprising future entrepreneurs or entrepreneurial thinkers by immersing them in real life learning experiences where they can take risks, manage the results and learn from the



outcome. Entrepreneurship education enables individuals including those who are physically challenged to learn organization skills, management skills, leadership development and interpersonal skills all of which are highly transferable skills sought by employers. Olaniyi (2016) contended that the aim of entrepreneurship education is to encourage and train graduates of secondary schools and higher institutions to take up self employment. Students' acquisitions of entrepreneurial skills enable them to develop personal business enterprises and become self-reliant after graduation.

According to Emejulu (2014), entrepreneurship is the act of being an entrepreneur which involves the process of generating ideas and venturing into business risks created by dynamic environment and making the best of opportunities for profit purposes. Entrepreneurship enables one to be innovative, creative and take business risks to become a successful entrepreneur. An entrepreneur is one who is creative, resourceful, innovative, skillful, and ventures into business risks to become successful. The entrepreneur is an initiator and wealth creator. Deen in Ezenwafor and Olaniyi (2016) advocated that there was growing scientific evidence that entrepreneurship development is capable of stimulating employment, productivity and economic growth in terms of establishment of small and medium enterprises.

The existence of small and medium scale enterprises in a developing country like Nigeria is of paramount importance. Business enterprises in Nigeria are predominately small and medium scale enterprises which form the basis for the country's economy. A more robust SME sector contributes immensely in building a nation's wealth without it having too many investments of sophisticated technology. These small and medium scale enterprises are mostly in the areas of commerce, manufacturing, finance, insurance, agriculture, services, trading, and construction and so on. The enterprises are usually manned by managers that oversee their effective management and control. The managers can be male or female as the case may be.

Given the present technological innovations in the business world, the use of technology should as a matter of urgency be vigorously pursued by SME operators in order to produce optimally and maximize profit. Prospective entrepreneurs should be well exposed and adequately equipped with ICT entrepreneurial skills to be successful, since information and communication technology is now revolutionizing the business world.

According to the Federal Republic of Nigeria in the National Policy on Information Technology (2001), ICT include any equipment or interconnected system or subsystem or equipment that is used in automatic acquisition, storage, manipulation, management, control and reception/ communication of data or information. Okoye (2015) contended that information and communication technology includes various kinds of electronic devices that aid communication such as computers, internet system devices,

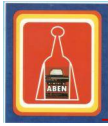


database systems, software resources among others which have brought about powerful and tremendous changes in all sectors of life.

The use of ICT in business education programme will go a long way in developing the students' ICT skills, intellectual and competencies needed in the establishment of business enterprise. For effective entrepreneurial practice in the present technological dispensation, the acquisition of the following ICT skills by graduates of business education are of paramount importance vis-a-vis ICTs communication, technology, organization and management skills. Business education should embrace enormous changes in technology in a bid to provide quality entrepreneurial students who will become successful in the modern business world. Turner (2005) contended that those in education (business education inclusive) have moved at light speed in the area of education technology. Business educators should possess and make effective use of information and communication technology skills in the impartation of entrepreneurial knowledge to the students. They should make use of a variety of ICT tools such as e-mail, desktop conferencing, online programmes such as web CT and Blackboard as well as video conferencing in their instructional activities so as to impart the necessary skills to business education students for their entrepreneurial practice after graduation.

On the other hand, skill is ability for someone to do something that is inherent or acquired effectively. Wikipedia (2008) defined skill as the learned capacity to carry out pre-determined results often with the minimum outlay of time, energy or both. There is need for students to acquire ICT skills in this digital age. Turner (2005) and Omotayo and Umor (2015) identified ICT skills which graduates of business education must possess for effective entrepreneurship practice 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. Information and communication technologies have the potentials to innovate, accelerate, enrich, and deepen skills to motivate and engage students to help relate school experiences to work practices, create economic viability for tomorrow's workers as well as strengthening teaching and helping institutions change (Davis and Tearler, 1999; Lemke and Coughlin, 1998, cited by Omotayo and Umoru, 2015).

Consequently, business education is an entrepreneurship based programme which equips students with relevant skills, knowledge and competences needed in the business world. Consequently, Olumese and Clark (2011) advocated that there is need to equip business education students with relevant ICT entrepreneurial skills needed in the modern business world. Business educators should therefore equip themselves with the new technological skills needed to train students to fit into the demands of modern business world. Effective teaching of ICT skills in business education department will adequately



equip business education graduates with relevant ICT skills needed to establish and manage their personal business enterprises more profitably in the modern technological business world.

Statement of the Problem

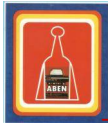
In the current phase of technological changes in the business world, students should be properly equipped with the necessary ICT skills to enable them be successful future entrepreneurs. These new skills are in the areas of computer and internet connectivity, teleconferencing, multimedia technology, webCT, formatting tools, web-based initiatives etc. Okwuanaso (2004) lamented that the expectations for which the National Policy introduced business education as an entrepreneurial base programme in Nigerian schools have not been fully met. The equipment needed to teach the skills are grossly inadequate. Ngurukwem (2005) also advocated that although lecturers have been sensitized to be computer literate, the skills acquired by most of them fall short of what is required to be able to utilize ICT in teaching and learning. Njoku (2004) also advocated that unless the lecturers use these devices (ICT gadgets) and direct the students' attention to what they should look for, the students will not learn as much as is intended from the devices.

The problem of this study therefore, is that business education teachers/lecturers seem to be lacking the necessary ICT skills required to impart in students the appropriate ICT skills needed to operate in the modern business world.

Purpose of the Study

The main purpose of the study was to ascertain information and communication technology skills required of business education graduates for effective entrepreneurship practice in Anambra State. Specifically, the study sought to:

1. Determine ICT communication skills required of business education graduates for effective entrepreneurship practice.
2. Ascertain ICT technology skills required of business education graduates for effective entrepreneurship practice.
3. Determine ICT managerial skills required of business education graduates for effective entrepreneurship practice.
4. Find out ICT organization skills required of business education graduates for effective entrepreneurship practice.



Research Questions

The following research questions guided the study:

1. What ICT communication skills do business education graduates require for effective entrepreneurship practice?
2. What ICT technology skills do business education graduates require for effective entrepreneurship practice?
3. What ICT managerial skills do business education graduates require for effective entrepreneurship practice?
4. What ICT organization skills do business education graduates require for effective entrepreneurship practice?

Null Hypotheses

H₀₁: Male business managers do not differ significantly from female counterparts in their mean ratings of ICT communication skills required of business education graduates for effective entrepreneurship practice.

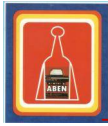
H₀₂: Experienced managers do not differ significantly from less experienced managers in their mean ratings of technology skills required of business education graduates for effective entrepreneurship practice.

H₀₃: Male managers do not differ significantly from female managers in their mean ratings of ICT managerial skills required of business education graduates for effective entrepreneurship practice.

H₀₄: Experienced managers do not differ significantly from less experienced managers in their mean rating of ICT organization skills required of business education graduates for effective entrepreneurship practice.

Method

Survey research design was adopted for the study. The population of the study comprised of 398 managers of small and medium scale enterprises registered with the Anambra State Ministry of Commerce. The managers were chosen because they are more exposed and better experienced in the skill of business practice. A sample size of 199 was drawn from the population using Taro Yamane formula for the selection of the sample. The instrument for data collection was a structured questionnaire developed by the researcher. A structured questionnaire was used to elicit information from the respondents on communication, technology, managerial and organization ICT skills required of business education graduates for effective entrepreneurships practice. The instrument was validated by two experts. The Cronbach Alpha reliability co-efficient was used ascertain the internal consistency of the instrument. This yielded co-efficient values of 0.80, 0.76, 0.82 and 0.78 respectively, indicating that the instrument was deemed reliable for the study. Arithmetic mean was used to analyze data related to the research



questions while inferential statistics (the t-test) was used to test the hypotheses at 0.05 level of significance. Mean ratings between 4.5 to 5.00 were regarded as highly required; mean ratings between 3.5 to 4.49 were regarded as required; mean ratings between 2.5 to 3.49 were regarded as moderately required; mean ratings between 1.5 to 2.49 were regarded as lowly required while mean ratings below 1.5 were regarded as very lowly required. A null hypothesis was rejected if the calculated t-value is equal to or greater than the critical t-value. Whereas if the calculated t-value is less than the critical t-value, the null hypothesis was accepted.

Result

Table 1: Respondents' mean ratings of ICT communication skills required of business education graduates for effective entrepreneurship practice.

(N = 199)

S/N	Items on ICT Communication Skills	\bar{x}	SD	Remarks
1	E-mail management skills	4.4	0.60	Required
2	Teleconferencing application skill	3.4	1.21	Moderately required
3	Web conferencing application	3.9	1.26	Required
4	Facsimile (Fax) skill	4.0	0.94	Required
5	Telex machine operation	4.1	0.84	Required
6	Office intercom operation skill	3.5	1.15	Required
7	Video conferencing operation	3.2	1.27	Moderately required
8	Desktop conferencing application	4.3	0.84	Required
	Grand mean	3.8		Required

Data in Table 1 show that out of the eight items on ICT communication skills, six items (items 1, 3, 4, 5, 6 and 8) had mean ratings ranging from between 3.5 to 4.4 indicating required. While two items (items 2 and 7) had mean ratings of 3.4 and 3.2 indicating moderately required. The grand mean of this category 3.8 shows that the respondents were of the opinion that business education graduates require communication skills for effective entrepreneurship practice. The standard deviation shows that the respondents are relatively close in their opinion of ICT communication skills required of business education graduates for effective entrepreneurship practice.

Table 2: Respondents' mean ratings of ICT technology skills required of business education graduates for effective entrepreneurship practice.

(N = 199)

S/N	Items on ICT Technology Skills	\bar{x}	SD	Remarks
9	Computer network knowledge application	4.3	0.59	Required
10	Internet explorer/application	4.3	0.53	Required
11	Software application	4.3	0.50	Required
12	Computer related storage device skill	4.3	0.80	Required
13	World Wide Web navigation application	4.0	0.89	Required



14	WebCT or blackboard teaching skills	3.8	1.05	Required
15	PowerPoint presentation	3.9	1.0	Required
Grand mean		4.1		Required

Data in Table 2 show that all the seven items on ICT technology skills listed (items 9, 10, 11, 12, 13, 14 and 15) with mean ratings ranging between 3.8 to 4.3 were rated required. The grand mean 4.1 shows that the respondents were of the view that business education graduates require ICT technology skills for effective entrepreneurship practice. The standard deviation indicates that the respondents are relatively close in their opinion of ICT technology skills required of business education graduates for effective entrepreneurship practice.

Table 3: Respondents' mean rating of ICT managerial skills required of business education graduates for effective entrepreneurship practice.

(N = 199)

S/N	Items on ICT Managerial Skills	\bar{x}	SD	Remarks
16	Word processing skill	4.4	0.48	Required
17	File management and window explorer skill	4.3	0.68	Required
18	Web site design skill	4.3	0.59	Required
19	Micrographic system skill	4.1	0.83	Required
20	Management information system skill	4.3	0.53	Required
Grand mean		4.3		Required

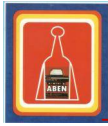
Data in Table 3 reveal that all the five items (items 16, 17, 18, 19 and 20) on ICT managerial skills required of business education graduates for effective entrepreneurship practice had mean ratings ranging between 4.1 to 4.4 were rated required. The grand mean 4.3 indicates that the respondents were of the view that business education graduates require ICT managerial skills for effective entrepreneurship practice. The standard deviation shows that the respondents are closely related in their opinion.

Table 4: Respondents' mean rating of ICT organization skills required of business education graduates for effective entrepreneurship practice.

(N = 199)

S/N	Items on ICT Organization Skills	\bar{x}	SD	Remarks
21	Data base management skill	4.2	0.67	Required
22	Spread sheet application	4.4	0.55	Required
23	Digital camera knowledge	4.0	0.78	Required
24	Computer security knowledge	4.2	0.55	Required
25	Network knowledge application	4.3	0.55	Required
Grand mean		4.2		Required

The data presented in Table 4 reveal that all the five items on ICT organization skills listed had mean ratings ranging between 4.0 to 4.4. This indicates that the respondents were of the view that all the items on ICT organization skills were required



of business education graduates for effective entrepreneurship practice. The standard deviation indicates relatively close opinion of the respondents on ICT organization skills required of business education graduates.

Results of Test of Null Hypotheses

Table 5: t–test result of respondents’ mean rating on ICT communication skills required of business education graduates based on gender.

Gender	N	\bar{x}	SD	Level of significance	t-cal	t-crit	Decision
Male	158	2.2	1.09	0.05	0.92	1.96	Accepted
Female	41	2.0	1.01				

Data in Table 5 show that the calculated t–value of 0.92 at 0.05 level of significance is less than the critical t-value of 1.96. Since the calculated t–value is less than the critical t–value, the null hypothesis was therefore accepted. This means that male and female managers do not differ significantly in their mean rating of ICT communication skills required of business education graduates for effective entrepreneurship practice.

Table 6: t–test result of respondents’ mean rating on ICT technology skills required of business education graduates based on years of experience.

Years of Experience	N	\bar{x}	SD	Level of significance	t-cal	t-crit	Decision
Experienced Managers (5 yrs and above)	132	1.85	0.80	0.05	0.46	1.96	Accepted
Less experienced Managers (below 5 yrs)	67	1.88	0.78				

Table 6 shows that the calculated t–value of 0.46 at 0.05 level of significance is lower than the critical t–value of 1.96. Since the calculated t–value is less than the critical t–value the null hypothesis of no significant difference is thereby accepted. This indicates that experienced managers and less experienced managers do not differ significantly in their mean rating of ICT technology skills required of business education graduates for effective entrepreneurship practice.



Table 7: t–test result of respondents’ mean rating on ICT managerial skills required of business education graduates based on gender.

Gender	N	\bar{x}	SD	Level of significance	t-cal	t-crit	Decision
Male	158	1.77	0.67	0.05	0.57	1.96	Accepted
Female	41	1.83	0.79				

The result in Table 7 shows that the calculated t–value is 0.57 at 0.05 level of significance. Since the calculated t–value 0.57 is less than the critical t–value 1.96, the null hypothesis was not rejected. This implies that male managers and female managers have similar views on ICT managerial skills required of business education graduates for effective entrepreneurship practice.

Table 8: t–test result of respondents’ mean rating on organization skills required of business education graduates based on years of experience.

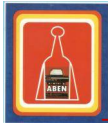
Years of Experience	N	\bar{x}	SD	Level of significance	t-cal	t-crit	Decision
Experienced Managers (5 years and above)	132	1.77	0.65	0.05	0.77	1.96	Accepted
Less experienced Managers (1 - 5 years)	67	1.84	0.73				

The data in Table 8 shows that at 0.05 level of significance, the calculated t–value is 0.77. Since the calculated t–value 0.77 is less than the critical t–value 1.96, the null hypothesis was accepted. This indicates that experienced managers and less experienced managers do not differ significantly in their mean rating of ICT organization skills required of business education graduates for effective entrepreneurship practice.

Discussion

The current technological innovations in different spheres of life especially in the areas of business operations, academics, office procedures have made it virtually impossible for individuals lacking ICT skills to be successful in life endeavours. Today, different ICT targets are in use for different purposes. Business education being an entrepreneurial base programme require lecturers that are knowledgeable and skillful in ICT so as to train future entrepreneurs.

The findings of the study revealed that for effective entrepreneurship practice, business education graduates should be properly equipped with the following ICT communication skills: such as e-mail management, teleconferencing, web conferencing,



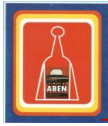
facsimile, telex machine, office intercom, video conferencing and desktop conferencing. Emejulu (2014) contended that global business environment has been taken over by the internet. Through the combination of e-mail, video conferencing, telephone and web conferencing, there is maximum potentials to communicate with world wide audience. The need to accurately exchange information in a fast moving world using a variety of ICT communication skills cannot be over-emphasized. The use of ICT communication skills in entrepreneurship education will adequately equip students with the necessary ICT skills needed to be able to attract much development in their future business venture.

The findings on ICT technology skills revealed that business educators should acquaint themselves with computer network knowledge, software application, computer related storage device and World Wide Web navigation. Bolarinwa and Adeola (2012) contended that Nigeria has plans for a more widespread use of computer and related information and communications technology (ICT) in educational areas to ensure that graduating students are proficient in the use of such technology. The education system is to be improved through the implementation of ICTs in the areas of computer network knowledge, software application, multimedia technology, World Wide Web networking, and internet connectivity. Business educators need the skills and competences to use those technologies for effective instructions. This will necessitate proper acquisition of these ICT skills by business education graduates for effective entrepreneurship practice.

Finally, the findings of the study also revealed that for effective entrepreneurship practice, business education graduates should require ICT organization skills such as data base, spreadsheet, digital cameras knowledge, and computer security knowledge and network knowledge application. Turner (2005), Bolarinwa and Adeola (2012) and Nwazor (2014) were of the view that for efficient and effective entrepreneurship practice, business education graduates should be knowledgeable and skillful in areas of ICT organizational skills such as data base, spread sheet, digital cameras knowledge, computer security knowledge, and network knowledge application which are of paramount importance to business sectors.

Conclusion

Information and communication technology has revolutionalized every facet of human life especially in the areas of education, science, economy, politics among others. Today's entrepreneurs must be adequately equipped with ICT entrepreneurial skills that will enable them excel in life. Business education lecturers are now obliged to acquaint themselves with the necessary ICT skills and they should make effective use of them in their instructional delivery so as to equip business education graduates with the necessary ICT skills required for effective entrepreneurship practice.



The major concern of this study was to find out ICT skills required of business education graduates for effective entrepreneurship practice. The findings revealed that virtually all the identifiable ICT skills are required of business education graduates for effective entrepreneurship practice.

Recommendations

Sequel to the findings and conclusion of the study, the following recommendations are made:

1. Lecturers should be provided with laptops at highly subsidized rate to enable them make effective utilization of them and become conversant with the system so as to develop the required ICT skills that will enable them impart in students the relevant ICT skills needed in the business world.
2. Business education graduates and Lecturers should avail themselves opportunities of short training programmes regularly to enable them keep abreast of current technological innovations needed in the business world.
3. Government should make adequate provision of ICT equipment in institutions of higher learning for effective teaching and learning.
4. Business enterprises should partner with training institutions for effective training of students on ICT entrepreneurship skills required in the business world.

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