



ICT SKILLS REQUIRED OF BUSINESS EDUCATORS FOR EFFECTIVE ENTREPRENEURSHIP EDUCATION IN TERTIARY INSTITUTIONS IN ANAMBRA STATE

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Abstract

*The study examined Information and Communication technology skills required of business educators for effective entrepreneurship education in the tertiary institutions in Anambra State. Survey design was adopted for the study. Area of the study was Anambra State. Population of the study was 45 business educators in the tertiary institutions in the State. No sampling technique was used since the population is manageable. Four research questions and four null hypotheses guided the study. A five-point rating scale questionnaire was used for the study. Internal consistency reliability co-efficient of the instrument were established using Crombach alpha and co-efficient of 0.82, 0.78, 0.80 and 8.4 were obtained. Mean rating and standard deviation were used to analyse data related to research questions. While *t* – test inferential statistics was used to test the hypotheses at 0.05 level of significance. The results of the analyses revealed the communication technology, managerial and organization ICT skills are required of business educators for effective entrepreneurship education. The study recommended among other things that government should make adequate provision of ICT equipment in institutions of higher learning. Also lecturers should avail themselves of short development programme to enable them acquire the necessary skills needed for effective entrepreneurship education.*

Keywords: Information and Communication Technology, Entrepreneurship Education, Business Education.

Introduction

The increasingly rate of unemployment among school leavers has necessitated training institutions of higher learning to integrate into various programmes of study entrepreneurship education to equip students with entrepreneurial skills. The training will expose students into job creation and enable them establish their own businesses 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. According to Lankard, 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. Celcee in Olumese and Clark (2011) also defined entrepreneurship education as the process of providing individuals with concepts to



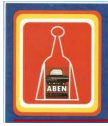
recognize opportunities and skills that others have over-looked, and to have the insight, self esteem and knowledge to act where others have hesitated.

Emejulu (2014) defined entrepreneurship as the act of being an entrepreneur which involves the process of generating ideas and venturing into business risk created by dynamic environment and making the best of opportunities for profit purpose. Entrepreneurship enables one to be innovative, creative and takes business risks to become a successful entrepreneur. An entrepreneur is one who is creative, resourceful, innovative, skillful, ventures into business risk for passion and become successful. He is an initiator and wealth creator. A prospective entrepreneur to be successful should be well exposed and adequately equipped with ICT entrepreneurial skills since information and communication technology is now revolutionizing the business world.

According to Federal Republic of Nigeria in National Policy on Information Technology (2001), ICT include any equipment or interconnected system of 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 computer, internet system devices, database system, software resources etc which have brought about powerful and tremendous changes in all sectors of life.

The use of ICT in entrepreneurship education will go along way in developing the students' skills, intellectual and competencies needed in the establishment of business enterprise. For effective entrepreneurship education in present technological dispensation, the acquisition of the following ICT skills are of paramount importance vis-a-vis ICTs communication, technology, organization and management skills. Entrepreneurship education should embrace enormous changes in technology in a bid to providing quality entrepreneurial students who will become successful in the modern business world. Turner (2005) contended that those in education have moved at light speed in the area of education technology. Educators should possess and make effective use of information and communication technology skills in impartation of entrepreneurial knowledge to the students. They should make use of 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 purposes.

Effective entrepreneurship education in our institutions of higher learning require lecturers' efficient acquisition of ICT skills to enable them impart in students the necessary entrepreneurial skills needed to operate in the modern business society. Turner (2005) and Omotayo and Umor (2015) identified ICT skills for effective entrepreneurship education as follows: 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 device. Information and Communication Technologies have the potential to innovate, accelerate, enrich, and deepen skills to motivate and engage students to help



relate school experience 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). In the same vein, Omotayo and Umoru (2015) contended that pedagogy through the application of information and communication technologies have the advantage of high motivation, helping recall previous learning, providing new institutional stimuli, activating the learner's response; providing systematic and steady feedback, facilitating appropriate practice, sequencing learning appropriately and providing a viable source of information for enhanced learning.

Consequently, business education is a vocational education course which is an entrepreneurship based programme. Olumese and Clark (2011) contended that entrepreneurship development as a course is not new in the university course study as it was been taught as far back as 1992 in the Department of Vocational and Technical Education (Business Education and Technical Education). On the other hand, Osuala (2009) contended that business education is a programme of study which consist of two parts: office education – a vocational education programme for office careers through initial refresher and upgrading education leading to employability and advancement in office occupation. General business education – a programme to provide students with information and competencies which are needed by all in developing and managing personal business affairs and in using services of business world. On this note, Olumese and Clark (2011) advocated that there is need to equipping vocational education student (business education inclusive) with relevant entrepreneurial skills needed in the 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 entrepreneurship skills in business education department will adequately equip students with the necessary skills, knowledge and abilities needed to establish and manage their personal business enterprises more profitably in the nation's present unemployment crisis.

Statement of the Problem

In the current phase of technological changes in the business world, students should be properly equipped with the necessary ICT entrepreneurship skills to enable them be successful future entrepreneurs. These new technological 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 Nigeria 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 acquire computer literacy, 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 ICT skills and knowledge that are appropriate in imparting the right skills that are needed to operate in present day highly automated business world.

Purpose of the Study

The main purpose of the study was to ascertain information and communication technology skills required of business educators for effective entrepreneurship education in the tertiary institutions in Anambra State. Specifically, the study intends to:

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

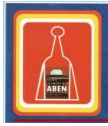
Research Questions

The following research questions were formulated for the study:

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

Null Hypotheses

- H₀₁: Male business educators do not differ significantly from female business educators in their mean rating of ICT communication skills required of business educators for effective entrepreneurship education.
- H₀₂: University business educators do not differ significantly from business educators from other tertiary institutions in their mean rating of technology skills required of business educators for effective entrepreneurship education.
- H₀₃: Male business educators do not differ significantly from female counterparts in their mean rating of ICT managerial skills required of business educators for effective entrepreneurship education.



H₀₄: University business educators do not differ significantly from their counterparts from other tertiary institutions in their mean rating of ICT organization skills required of business educators for effective entrepreneurship education.

Method

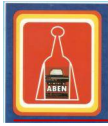
Survey research design was adopted for the study (Nworgu, 2006). The study was conducted at Anambra State. The population of the study comprised of 45 business educators from five tertiary institutions offering business education in the state. No sampling was done since the population size is manageable. The instrument for data collection was a structured questionnaire developed by the researcher. The questionnaire instrument was used to elicit information from the respondents on communication, technology, managerial and organization ICT skills required of business educators for effective entrepreneurship education. It was validated by two experts from Nnamdi Azikiwe University. The reliability co-efficient was established through a measure of internal consistency of the questionnaire items. The Cronbach Alpha reliability co-efficient was used to analyze the data and it yielded reliability coefficient values of 0.82, 0.78, 0.80 and 0.84 respectively, indicating that the instrument was deemed reliable for the study. Arithmetic mean was used to analyze 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 undecided. Mean ratings between 1.5 to 2.49 were regarded as seldomly required while mean ratings below 1.5 were regarded as not required. A null hypothesis was rejected if the calculated t–value is equal to or greater than the critical t–value. Where as if the calculated t–value is less than the critical t–value, the null hypothesis was accepted.

Data Analysis and Result

This section presented and analysed the data generated from the study as shown below.

Table 1: Respondents’ mean rating of ICT communication skills required of business educators for effective entrepreneurship education.

(N = 45)				
S/N	ICT Communication Skills	\bar{x}	SD	Remarks
1	E-mail management skills	4.3	1.09	Required
2	Teleconferencing	4.2	0.89	Required
3	Web conferencing	3.6	1.12	Required
4	Facsimile (Fax)	4.2	0.63	Required
5	Telex machine	4.4	1.01	Required
6	Office intercom	4.4	0.50	Required
7	Video conferencing	4.3	0.98	Required
8	Desktop conferencing	4.2	0.64	Required
	Grand mean and standard deviation (SD)	4.2	0.86	Required



Data in Table 1 show that all the eight items on ICT communication skills listed had mean ratings ranging between 3.6 to 4.4. This indicates that all the items on ICT communication skills are required of business educators for effective entrepreneurship education. The standard deviation shows that the respondents are relatively close in their opinion of ICT communication skills required of business educators for effective entrepreneurship education.

Table 2: Respondents' mean rating of ICT technology skills required of business educators for effective entrepreneurship education.

(N = 45)

S/N	ICT Technology Skills	\bar{x}	SD	Remarks
9	Computer network knowledge application	4.5	0.5	Highly Required
10	Internet explorer/application	4.2	0.74	Required
11	Software application	4.2	0.74	Required
12	Computer related storage device	4.1	0.89	Required
13	World Wide Web navigation	4.1	0.69	Required
14	WebCT or blackboard teaching skills	4.3	0.68	Required
15	PowerPoint presentation	4.1	0.85	Required
Grand mean and standard deviation (SD)		4.2	0.73	Required

Data in Table 2 show that one item (item 9) with mean rating 4.5 was rated highly required by the respondents. While all other six items (items 10, 11, 12, 13, 14 and 15) with mean ratings ranging between 4.1 to 4.3 were rated required. The grand mean 4.2 shows that the respondents were of the view that business educators require ICT technology skills for effective entrepreneurship education. The standard deviation indicates that the respondents are relatively close in their opinion of ICT technology skills required of business educators for effective entrepreneurship education.

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

(N = 45)

S/N	ICT Managerial Skills	\bar{x}	SD	Remarks
16	Word processing	4.3	0.47	Required
17	File management and window explorer	4.4	0.48	Required
18	Web site design	3.8	1.04	Required
19	Micrographic system	3.4	1.23	Undecided
20	Management information system	4.0	0.87	Required
Grand mean and standard deviation (SD)		4.0	0.82	Required

Data in Table 3 reveal that out of five items on ICT managerial skills required of business educators for effective entrepreneurship education, only one item (item 19) with mean rating 3.4 was rated undecided by the respondents. While all other four items (items 16, 17, 18 and 20) with mean ratings ranging between 3.8 to 4.4 were rated required. The



grand mean 4.0 indicates that the respondents were of the view that business educators require ICT managerial skills for effective entrepreneurship education. 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 educators for effective entrepreneurship education.

(N = 45)

S/N	ICT Organization Skills	\bar{x}	SD	Remarks
21	Data base	4.3	0.58	Required
22	Spread sheet	4.3	0.46	Required
23	Digital cameras knowledge	3.5	1.2	Required
24	Computer security knowledge	4.2	0.56	Required
25	Network knowledge application	4.0	0.76	Required
	Grand mean and standard deviation (SD)	4.1	0.71	Required

The data presented in table 4 reveal that all the five items on ICT organization skills listed had mean ratings ranging between 3.5 to 4.3. This indicates that the respondents were of the view that all the items on ICT organization skills were required of business educators for effective entrepreneurship education. The standard deviation indicates relatively close opinion of the respondents on ICT organization skills required of business educators.

Results of Test of Null Hypotheses

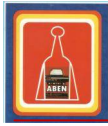
Table 5: t–test result of respondents’ mean rating on ICTcommunication skills required of business educators based on gender.

Gender	N	\bar{x}	S ²	Level of significance	t-cal	t-crit	Decision
Male	14	1.9	0.64	0.05	0.29	1.96	Accepted
Female	31	1.98	0.87				

The data in table 5 shows that the calculated t–value of 0.29 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 business educators do not differ significantly in their mean rating of ICT communication skills required of business educators for effective entrepreneurship education.

Table 6: t–test result of respondents’ mean rating on ICTtechnology skills required of business educators based on institution.

Institution	N	\bar{x}	S ²	Level of significance	t-cal	t-crit	Decision
University	20	1.95	0.95	0.05	0.105	1.96	Accepted



Other tertiary 25 1.92 0.87
institutions

Table 6 shows that the calculated t-value of 0.015 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 university business educators and business educators of other tertiary institutions do not differ significantly in their mean rating of ICT technology skills required of business educators for effective entrepreneurship education in the tertiary institutions in Anambra State.

Table 7: t-test result of respondents' mean rating on ICT managerial skills required of business educators based on gender.

Gender	N	\bar{x}	S ²	Level of significance	t-cal	t-crit	Decision
Male	14	2.1	1.27	0.05	0.291	1.96	Accepted
Female	31	2.0	0.839				

The result in Table 7 shows that the calculated t-value is 0.291 at 0.05 level of significance. Since the calculated t-value 0.291 is less than the critical t-value 1.96, the null hypothesis was not rejected. This implies that male business educators and female business educators have similar views on ICT managerial skills required of business educators in the tertiary institutions.

Table 8: t-test result of university business educators and business educators of other tertiary institutions mean rating on ICT organization skills required for effective entrepreneurship education.

Institution	N	\bar{x}	S ²	Level of significance	t-cal	t-crit	Decision
University	20	1.7	2.41	0.05	0.75	1.96	Accepted
Other tertiary institutions	25	2.0	0.96				

The data in Table 8 shows that at 0.05 level of significance the calculated t-value is 0.75. Since the calculated t-value 0.75 is less than the critical t-value 1.96, the null hypothesis was accepted. This indicates that university business educators and business educators of other tertiary institutions do not differ significantly in their mean rating of ICT organization skills required for effective entrepreneurship education.

Discussion of Findings

The current technological innovations in different spheres of life especially in the areas of business operations, academics, office procedures etc have made it virtually



impossible for individuals with lack of ICT skills to be successful in life endeavour. Today different ICT gargets are in use for different purposes. Educators are no longer acceptable to be technology literate. Business education being an entrepreneurial base programme require lecturers that are knowledgeable and are skillful in ICT so as to train future eminent entrepreneurs.

The findings of the study revealed that for effective entrepreneurship education, business educators should be properly equipped with the following ICT communication skills: 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 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 plan 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. Education system are 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 (lecturers in business education department) also need the skills and competences to use those technologies for effective instructions.

Managerial skills enable entrepreneurs to maintain efficiency in the way their employees complete tasks and how other business resources are applied to ensure success of the business enterprise (Ezenwafor, 2014). Globally, ICT has advanced remarkably in recent years, changing the way educators teach and students learn with many new opportunities to apply electronic technology innovations. The findings of the study revealed that for effective entrepreneurship education in the current years of technological innovations, business educators should be proficient in the use of ICT managerial skills in the areas of word processing, file management, and window explorer, website design and management information system. According to Turner (2005) and Bolarinwa and Adeola (2012), applications of software such as (word processing, auditing software), window explorer, management information system and other technologies can help educators manage and improve instruction as well as teaching content.

Finally, the findings of the study also revealed that for effective entrepreneurship education, business educators should require ICT organization skills such as data base,



spread sheet, digital cameras knowledge, 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 instructional delivery, entrepreneurship educators 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 organization sectors.

Conclusion

Information and communication technology has revolutionalized every aspect of human life especially in the areas of education, science, economy, politics etc. Today's entrepreneurs must be adequately equip with ICT entrepreneurial skills that will enable them excel in life. Tertiary institution lecturers are now obliged to acquaint themselves with the necessary ICT skills and they should make effective use of them in their instructional delivery.

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

Recommendations

1. Lecturers should be provided with laptop at highly subsidized rate to enable them make effective utilization of it and become conversant with the system so as to develop the required skills.
2. Lecturers should avail themselves opportunities of short training programme regularly to enable them keep abreast of current technological innovations.
3. Government should make adequate provision of ICT equipment in institution of higher learning for effective teaching and learning.

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