



Information and Communication Technology Competencies Required by Business Educators for Effective Instructional Delivery in Universities in Rivers State

Baakel, Jecinta Torbari & Prof. Williams Ubulom

**Department of Business Education,
Rivers State University, Port Harcourt, Nigeria**

ABSTRACT

The study investigated information and communication technology competencies required by Business Educators for effective instructional delivery in Universities in Rivers State. This study adopted a descriptive survey research design with a total population of sixty one (61), a non-probability sampling technique was used. Two (2) research questions and two (2) null hypotheses were formulated to guide this study. Data collected from respondents were used as sample for the study. The instrument for data collection was a self-structured questionnaire validated by a test expert from the Department of Measurement and Evaluation and two experts from Business Education. Reliability was established using Cronbach Alpha formula with coefficients of 0.75, and 0.78, established for the two clusters of questionnaire. Data were analyzed using mean and standard deviation to answer the research questions while t-test was used to test the hypotheses. The result of the findings showed that respondents from the both state owned universities are competent in the use of information and communication technological facilities for effective instructional delivery. It is recommended that it is equally important that a free wireless internet connection needed for teaching and learning should be provided since Business Educators used various search engines as resource point. The government as well as university administrators should make effort to ensure that technological facilities are available and accessible to Business Educators. This will make it easy for teaching and learning to take place in the school with the right educational outcome. Electricity should be provided within and around the universities for effective communication between educators. This is because steady power supply plays a vital role in the use of office technological communication facilities among Business Educators.

Keywords: Business Educators, information and communication technology, instructional delivery

INTRODUCTION

Effective use of Information and Communication Technology by Business Educators for effective teaching in universities requires the acquisition of certain competencies. This is because Business Educators play a prominent role in preparing students to be responsible citizens, capable of making astute economic decisions that will benefit their personal and professional lives in particular and the nation's economic development in general.

The importance of Information and Communication Technology to the teaching-learning process cannot be underestimated in the sense that Information and Communication Technology has made teaching and learning a relevant and functional way of providing education to learners in order to assist them in imbibing the required capacity for the world of work (Kosoko-Oyedeko & Fella, 2010). Ajayi (2008) posited that with the aid of Information and Communication Technology, teachers can take students beyond traditional limits, ensure their adequate participation in teaching and learning process and create vital environments to experiment and explore. Information and Communication Technology has been recognized to be a very powerful tool in education reform based on the fact that there has been a tremendous transformation in the education sector as a result of rapid advances in

technology and this has radically influenced the way knowledge and information are generated, developed and transmitted.

According to Osuala, (2009) Business Education is a programme of instruction which consists of two parts: office education which is a vocational programme for office careers, and general Business Education which is a programme that provides information and competencies needed for managing and using business. Basic Business Education is an aspect of vocational education aiming at training individuals for the acquisition of practical skills needed for gainful employment (Atueyi & Okolo, 2010). It is concerned with the acquisition of pedagogical and professional competencies in industry and education necessary for personal use, for entry into the business world as an employer or employee or self-employed and for effective participation in the educational industry as a professional business teacher. (Ubulom, 2006) It provides knowledge, skill and understanding needed for performance in business world as a consumer or producer (Nanassy, 2005).

Information and communication technology has been defined by many schools of thought. The Chambers English of Information and Communication Technology dictionary (2010) defines it as the technology that is related to the gathering, recording and communicating of information in computerized or electronic form. Atakpa, (2006) sees it as the range of equipment, which variously manipulates, store and communicate information. Consequently, Information and Communication Technology in this study encompasses the whole range of electronic technologies such as word processors, facsimile machines, telex, computer (hardware and software) and telecommunication facilities that are used for information acquisition, processing, management and dissemination. The use of Information and Communication Technology in electronic offices in Nigeria is of immense benefit to administrative personnel in terms of increased office productivity and job satisfaction. Brien (2007) in support of this assertion explained that Information and Communication Technology facilitates the productivity of administrative end users and reduce costs of creating, reviewing, revising and distributing office document and messages. Harrison (2007) is also of the opinion that Information and Communication Technology shortens the turn-around time between the preparation and receipt of messages and document by moving information quickly and efficiently to the people that need it, reduces the frustration, expenses and errors involved in revising text and images for attractive and effective document and presentations, stores retrieves and transmits electronic documents, image and messages quickly and efficiently.

A critical factor in educational implementation is the teacher. The teacher, as a matter of fact is at the core of any educational programme implementation. Teachers form the bedrock of the entire education system; similarly, Business Educators carry out directly the most important responsibility of translating Business Education curricula into reality. A qualified Business Educator is one who has acquired knowledge, skill and competencies for efficient and effective service delivery.

Obi (2011) stated that the present system of education requires a functional Business Educator who can use the knowledge and skills acquired in one situation in solving problems in another situation. Obi further maintained that if the student is to receive the best type of skills, then the Business Educator should possess the best type of skills.

However, teachers are faced with new opportunities and new challenges in all dimensions of teaching. As observed by Eze (2004) observed in Jimoh (2006), the challenge of Business Education is keeping up with the changes taking place in the business world. The era of Information and Communication Technology is one that is growing limitlessly. It is therefore imperative that Business Educators must focus on making technological learning a part of their own lives so that it can be incorporated into the teaching of their students. They need to learn how to think, create, work and collaborate in new ways in order to properly integrate the use of Information and Communication Technology into their teaching to avoid being left behind. To that extent, this study shall attempt to assess the Information and Communication Technology competencies required of Business Education teachers in Rivers State owned universities.

Osuala (2009) stated that a Business Educator is a person who is knowledgeable in the six components courses that makes up a Business Education programme: office practice, commerce, book-keeping, shorthand, keyboarding and accounting. He is a professional teacher of business who is constantly aware of the state of the art in Business Education. In other words, a Business Educator is any person who plays the critical role in making Business Education viable and visible in the community, plays the role of agent of change in Business Education, delivers high – quality Business Education programmes that are equal to any academic offerings in the school system, is able to

identify problems facing learning and teaching in Business Education subjects and is able to speculate solutions to these problems.

Competencies are a set of identified behaviours, skills and abilities that directly and positively impact the success of employees and the organization. When consistently demonstrated, competencies make employees particularly effective in their work, and lay out a road map to career success (Virginia Career Resource Network, 2006). Nwosu (2002) viewed competencies as the proven individual capacity to use know-how, skills, qualifications or knowledge in order to meet both familiar and evolving occupation situations and requirements. Competencies therefore in this study, mean the acquisition of knowledge and skills in the use of industrial training as well as the development of positive attitude that make a Business Educator who is a trainer of students of different business sub-disciplines, employable and successful in effective teaching in Universities.

In Rivers State, there are two state-owned universities running Business Education programmes. Also, these schools are equipped with variety of Information and Communication Technology facilities and professional Business Educators are employed to impact the knowledge and know – how of these facilities to the students. Essentially therefore, there is need to develop relevant Information and Communication Technology competencies in order for the student to benefit. Based on the above background, the issue now is what are the Information and Communication Technology competencies required of Business Educators for effective instructional delivery in universities in Rivers State; hence this study.

Statement of the Problem

It is unfortunate that some teachers today do not have technological training to guide both themselves and the students in the use of computers and other Information and Communication Technology facilities needed to enhance teaching achievements, in spite of the importance of Information and Communication Technology for teachers to improving knowledge. With this regard, ignorance of teacher's Information and Communication Technology skills needed for effective instructional delivery could be caused by the dearth of Information and Communication Technology facilities in most high institutions for the training of students, technological facilities needed for effective teaching and learning are not provided in their right quality and quantity.

In many schools and offices in Rivers State, varieties of electronic office equipment such as computers, fax machines and other telecommunication equipment's are present; and the application of Information and Communication Technology to office functions. According to Agomuo and Isu (2008) demands new skills from business graduates when they state that; "the computerization of the office has added new dimension to the role of business graduates in information processing and communication. The business graduates are therefore required to possess new skills and competencies to remain relevant. However, Business Educators are of the view that advancement in technology particularly innovations and telecommunications technologies and the resultant effects have probably rendered some trained office workers ineffective in the electronic office to the extent that they need to improve on what they have learnt in training to enable them function effectively (Agomuo & Isu 2008).

Nevertheless, as a result of the variety of Information and Communication Technologies available in schools, electronic offices, and the Federal Government decision that all government employees must be computer literate, there is the need for Business Educators to be competent in the use of Information and Communication Technology in order to be effective in their responsibilities in transferring this knowledge and know-how to their students who on graduation will go into the labour market. Therefore, it is necessary to identify the Information and Communication Technology competencies required of Business Educators for effective instructional delivery in universities in Rivers State.

Purpose of the Study

The purpose of this study is to investigate the Information and Communication Technology competencies required of Business Educators for effective instructional delivery in Universities in Rivers State. Specifically, the study was designed to achieve the following:

1. Determine the word processing technology competencies required of Business Educators in Universities in Rivers State.
2. Determine the data processing technology competencies required Business Educators in Universities in Rivers State.

Research Questions

The following research questions guided the study:

- 1 What are the word processing technology competencies required of Business Educators for effective instructional delivery in Universities in Rivers State?
- 2 What are the data processing technology competencies required of Business Educators for effective instructional delivery in Universities in Rivers State?

Hypotheses

The following hypotheses were formulated and tested for the student 0.05 significance level.

- (1) There is no significant difference in the mean response of Business Educators in Rivers State University and Ignatius Ajuru University of Education on the word processing technology competencies required of Business Educators for effective instructional delivery in Universities in Rivers State.
- (2) There is no significant difference in the mean response of male and female Business Educators on the data processing technology competencies required of Business Educators for effective instructional delivery in Universities in Rivers State.

METHODOLOGY

The study adopted the descriptive survey design and the population for the study comprised of the entire sixty one (61) Business Educators from the Rivers State University and Ignatius Ajuru University of Education. The sampling technique used was the non-probability sampling technique. This technique is used when the population of the study is very small. The research instrument that was used for data collection was the self-structured questionnaire which consisted of 44 information and combination. The research instrument is made up of two cluster areas: the word processing technology competencies and data processing competences. A 4-point rating scale was used to determine the level of information and communication technology competencies under the response options of highly required (HR) – 4 points, required (R) – 3 points, moderately required (MR) – 2 points and Not Required (NR) – 1 point. The null hypotheses were accepted if the z – calculated is greater than z – critical but it was rejected if z -critical is greater than z -calculated.

RESULT

Research Question 1: *What are the word processing technology competencies required of business educators for effective instructional delivery in Universities in Rivers State?*

Table 4.1: Mean and Standard Deviation Ratings on the Word Processing Technology Competencies

S/No	ITEMS	RSU Business Educators n=11		IAUOE Business Educators n=50		Total Mean (XX)	Total SD	Remarks
		Mean	SD	Mean	SD			
1	Ability to define word processing technology of an electronic office	3.28	0.84	3.45	0.69	3.37	0.77	Required
2	Knowledge and appreciation of the relevance of word relevance of word processing hardware and software packages to secretarial office functions	3.54	0.72	3.52	0.66	3.53	0.69	Required
3	Knowledge of maintenance and safety procedures in the use of word processing technologies	3.34	0.89	3.35	0.80	3.35	0.85	Required
4	Ability to select and access their appropriateness of word processing technologies of an office	3.15	0.87	3.29	0.83	3.22	0.85	Required
5	Ability to perform keyboarding operations speedily and accurately	3.49	0.70	3.65	0.70	3.57	0.70	Required
6	Ability to use standalone word processor or the computer to perform basic word processing operations such as word document managing text, spell and grammar, mail merge, template, table, bullets and numbering, layout, saving and printing	3.52	0.64	3.68	0.63	3.60	0.32	Required
7	Ability to use electronic typewriter to accomplish word processing job-task	3.44	0.76	3.50	0.71	3.47	0.38	Required
8	Ability to safeguard word processing technologies against errors and unauthorized users	3.33	0.79	3.39	0.75	3.36	0.40	Required
9	Ability to maintain and follow safety procedure while using word processing technologies for greater efficiency	3.34	0.63	3.74	0.61	3.54	0.33	Required
		3.38	0.76	3.51	0.41	3.44	0.58	Required

Source: Field Survey, 2019.

Table 4.1 shows that the average mean of Rivers State University Business Educators was 3.38 while the average mean of the Business Educators in Ignatius Ajuru University of Education was 3.51. The responses show that the Business Educators in the both Universities required word processing technology for effective instructional delivery in Universities in Rivers State. However, Business Educators in Rivers State University with an average mean of 3.38 appears to require word processing technology required of Business Educators for effective instructional delivery in Universities in Rivers State more than the Business Educators in Ignatius Ajuru University of Education with average mean ratings of 3.51.

Similarly, from the table, the responses of Business Educators in Rivers State University for items 1-9 showed mean ratings of 3.28, 3.54, 3.34, 3.15, 3.49, 3.52, 3.44, 3.33 and 3.34. Since all of these items are above the criterion mean score of 2.50 used for making decision, they were all required. On the other hand, the responses of the Business Educators in Ignatius Ajuru University of Education produced mean ratings of 3.45, 3.52, 3.35, 3.29, 3.65, 3.68, 3.50, 3.39 and 3.74. These items were also required since they are also above the criterion mean score of 2.50 used for making decision. This

implies that Business Educators from both Universities required word processing technology for effective instructional delivery.

Research Question 2: *What are the data processing technology competencies required of Business Educators for effective instructional delivery in Universities in Rivers State?*

Table 2: Mean and Standard Deviation Ratings on the Data Processing Technology Competencies

S/No	Items	Male Business Educators n=38		Female Business Educators n =23		Total Mean (XX)	Total SD	Remarks
		Mean	SD	Mean	SD			
10	Knowledge of the concept of data and data processing technologies	3.33	0.79	3.22	0.90	3.28	0.85	Required
11	Knowledge of the various activities involved in data processing such as organizing, sorting, calculating and summarizing data	3.30	0.80	3.46	0.72	3.38	0.76	Required
12	Familiarity with the components of electronic data processing technology-the computer system unit, monitor, mouse and the keyboard	3.05	0.99	3.31	0.82	3.18	0.91	Required
13	Knowledge of application software packages used for data processing such as spreadsheet, desktop publishing and database	3.32	0.85	3.59	0.75	3.46	0.80	Required
14	Knowledge of maintenances and safety procedures in the use of data processing technologies	3.18	0.87	3.40	0.73	3.29	0.80	Required
15	Ability to organize, sort, calculate and summarize data processing using appropriate data processing software packages	2.93	1.05	3.40	0.73	3.17	0.89	Required
16	Ability to select and install computer hardware and data processing software	3.31	0.84	3.48	0.78	3.40	0.81	Required
17	Ability to ensure strict adherence to ergonomics-adequate temperature, keep computer clean and follow local fire and safety regulations	2.45	1.10	2.03	1.15	2.24	1.13	Not Required
18	Ability to appreciate and adapt to innovations in data processing technology	3.24	0.91	2.25	1.09	2.75	1.00	Required
		3.12	0.91	3.13	0.85	3.13	0.88	Required

Source: Field Survey, 2019.

Table 4.2 showed that the average mean ratings of male Business Educators were 3.12 while the average mean ratings of the female Business Educators was 3.13. The average mean ratings were all above the criterion mean score of 2.50 used for making decision and this implies that the respondents require data processing technology for effective instructional delivery in Universities in Rivers State. However, the average mean ratings of 3.12 for the male Business Educators and 3.13 for female Business Educators implied that the female Business Educators moderately required data processing technology for effective instructional delivery in Universities in Rivers State.

The table also showed that the responses of the male Business Educators for items 10, 11, 12, 13, 14, 15, 16, 17 and 18 produced mean ratings of 3.33, 3.30, 3.05, 3.32, 3.18, 2.93, 3.31, 2.45 and 3.24. The responses of items 10, 11, 12, 13, 14, 15, 16 and 18 with mean ratings of 3.33, 3.30, 3.05, 3.32, 3.18, 2.93, 3.31 and 3.24 were all above the criterion mean score of 2.50 and were therefore required item 17 with mean ratings of 2.45 was not require. On the part of the female Business Educators, the same set of items produced mean ratings of 3.22, 3.46, 3.31, 3.59, 3.40, 3.40, 3.48, 2.03 and 2.25. Items 10, 11, 12, 13, 14, 15 and 16 with mean ratings of 3.22, 3.46, 3.31, 3.59, 3.40, 3.40 and 3.48 were all above the criterion mean score of 2.50 and were required while items 17 and 18 with mean ratings of 2.03 and 2.25 for the female Business Educators were below the criterion mean score of 2.50 and were not required.

Hypotheses 1: There is no significant difference in the mean response ratings of Business Educators in Rivers State University and Ignatius Ajuru University of Education on the word processing technology competencies required of Business Educators for effective instructional delivery in Universities in Rivers State

Table 3: z-test Analysis of the Significant Difference Between the Mean Response Ratings of Business Educators in Rivers State Universities

Variable	n	Mean	SD	Df	z-cal.	z-crit.	Level of Significance	Decision
RSU Business Educators	11	3.38	0.76	59	0.54	1.96	0.05	H ₀ was not rejected
IAUOE Business Educators	50	3.51	0.41					

Source: field survey, 2019

Table 4.7 showed that the value of z-cal. was 0.54 while the value of z-crit. was 1.96. Therefore, since the value of z-cal. of 0.54 was less than the value of z-crit. of 1.96, the null hypothesis was not rejected and this indicated that there was no significant difference between the mean response ratings of Business Educators in Rivers State University and Ignatius Ajuru University of Education on the word processing technology competencies required of Business Educators for effective instructional delivery in Universities in Rivers State.

Hypotheses 2: There is no significant difference in the mean response ratings of male and female Business Educators on the data processing technology competencies required of Business Educators for effective instructional delivery in Universities in Rivers State

Table 4: Z-test Analysis of the Significant Difference Between the Mean Response Ratings of Male and Female Business Educators on the Data Processing Technology Competencies

Variable	n	Mean	SD	Df	z-cal.	z-crit.	Level of Significance	Decision
Male Business Educators	38	3.12	0.91	59	0.04	1.96	0.05	H ₀ was not rejected
Female Business Educators	23	3.13	0.85					

Source: field survey, 2019

Table 4.8 showed that the value of z-cal. was 0.04 while the value of z-crit. was 1.96. Therefore, since the value of z-cal. of 0.04 was less than the value of z-crit. of 1.96, the null hypothesis was not rejected indicating that there was no significant difference in the mean response ratings of male and female Business Educators on the data processing technology competencies required of Business Educators for effective instructional delivery in Universities in Rivers State

DISCUSSION OF FINDINGS

Findings were fully discussed under the following subheadings:

Word Processing Technology Competencies of Business Educators for Effective Instructional Delivery in Universities in Rivers State

One of the basic computer applications that is expected of every Business Educator is to know how to operate the word processing package. This application is usually needed for making simple written communications. Business Educators therefore require adequate skills in this area because it is one of the fundamental areas of computer appreciation and very little teaching and learning activities can take place without this requisite skills.

The responses provided by Business Educators in both Rivers State University as well as Ignatius Ajuru University of Education revealed that they were all competent, needs and possesses this skill for their instructional activities. It was revealed from the responses of the respondents that they all possess the ability to define word processing technology of an electronic office. Similarly, it was revealed in their responses that Business Educators sampled for the study possessed the knowledge and as such will be able to maintain and follow safety procedures while using word processing technology for greater efficiency. This implies that these Business Educators do not only know how to use the word processing applications available but also possess the technical knowhow to operate the devices which carry some of these work processing applications.

Furthermore, the knowledge of word processing package will be of no use if Business Educators do not know how to access these applications from any available devices. The responses from those sampled for the study showed that they are able to access the software whenever they access any of the hardware with these applications. The ability to access these applications is vital for Business Educators to be able to use these applications and it was revealed from their responses that they possessed this ability. It was also pointed out in their responses that they know how to use the keyboard to make simple commands into the devices available. The keyboard is an input device which makes it easier for Business Educators to issue command into any of these devices and the responses from them showed that they can do this effectively.

Operating the word processing package makes no much impact except the user's knows how to navigate the software. This includes the ability of the user to detect errors, make corrections and carry out some deigns and formatting. The responses of Business Educators pointed out that they also know how to perform these simple operations when the need arises. The skills for protecting documents also appear to be adequate among the Business Educators in the study area. This means that Business Educators knows how to preserve and access the documents they have stored in the computer. The ability to maintain adequate safety in the course of using these devices is also very important and these respondents revealed that the Business Educators possess this skill.

From the responses of the respondents, it was revealed that the greatest area of strength of the Business educators is the ability to navigate the word processing package and this is a very important skill as an educator can achieve very little if he or she cannot navigate the software to perform any activity. In a related study conducted by Salleh, Musa et al., (2017), the ability to navigate the word processing technology helps to build the scheduling skill of Business Educators who have a lot of tasks to perform. This is why Business Educators cannot ignore the knowledge of this important Information and Communication Technology software. The ability to navigate the various functions in the word processing package is very important for using the package for any instructional delivery.

Data Processing Technology Competence of Business Educators for Effective Instructional Delivery in Universities in Rivers State

The knowledge of data processing is another important skill that is needed by Business Educators to quality service delivery in any organization. The knowledge of data processing technologies is very important for making forecasting, record management as well as analysis of raw facts. It is when Business Educators possess this skill that they can make projection in various areas that relates to their profession. The responses from the study showed that the male and female Business Educators sampled for the study have the knowledge of data processing technologies. This implies that these respondents are not novice when it comes to the data processing package. In addition to this, the respondents pointed out that functions such as sorting of data, organizing, calculating and summarizing of data which are basic commands in data processing application are known by the male and female Business Educators. The importance of the knowledge of this technology was revealed in the findings of the study conducted by Umezeike & Ille (2009) who revealed that knowledge of data

management technology is vital for the achievement of the Vision 2020 in Nigeria. This implies that projection activities will be difficult to achieve by any Business Educator who does not know how to use the data processing technology for his or her instructional delivery. These Educators have basic knowledge of this command and can apply them in their discharge of their duties.

The familiarization of Business Educators with the components of the computer which makes it easy to use data processing application is also important for instructional delivery. These components provide easy method of carrying out data management activities and it was revealed that the respondents possess the knowledge of the components needed for carrying out such activity. This implies that Business Educators in the study area irrespective of their gender knows how to use the components of the computer to carry out data management functions in the course of instructional service delivery. Their ability to do this saves the business educator time and energy during teaching and learning activities.

There are different data management software which makes it easy for a computer user to manage data. It was revealed from the responses of the respondents that they are familiar with this software. The Business Educator is therefore free to make a choice among these varieties in carrying out his or her work. Furthermore, the study showed that the respondents knows how to install these packages and also use basic data management commands in this software to carry out various activities in the school. In addition to this, the study has also been able to reveal that the respondents do not know how to use data management software innovatively. This is because data management technologies are technical and require sound mathematical knowledge for technical actions to be initiated while using the application.

The responses from the respondents showed that both male and female Business Educators lack the ability to adhere to ergonomics in the use of data management technologies. Similarly, from the responses of the respondents, while the male Business Educators pointed out that they know how to improvise command in the use of data management technologies, the female business educators responded otherwise. This implies that the male and female Business Educators needs to be exposed to adequate training programmes where they will be educated on how to issue special command in the use of data management technologies as this helps to simplify their work during instructional service delivery.

CONCLUSION

The following conclusions were made based on the findings of the study:

The study showed that Business Educators in the Rivers State Universities are competent on information and communication technological facilities needed for instructional delivery in their schools. The study showed that Business Educators in Rivers State University and Ignatius Ajuru University of Education differ slightly in their technological competencies for instructional delivery. It was also revealed from the findings of the study that Business Educators are more competent on word processing packages than other technological hardware needed for instructional delivery.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations were carefully made:

1. It is equally important that a free wireless internet connection needed for teaching and learning should be provided since Business Educators used various search engines as resource point. The government as well as university administrators should make effort to ensure that technological facilities are available and accessible to Business Educators. This will make it easy for teaching and learning to take place in the school with the right educational outcome.
2. Electricity should be provided within and around the universities for effective communication between educators. This is because steady power supply plays a vital role in the use of office technological communication facilities among Business Educators.

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