

Integration of Information and Communication Technologies Competencies in Business Education in Colleges of Education in the South East of Nigeria

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Abstract

The study sought to evaluate the Information and Communication Technologies (ICT) competencies required by Business Education lecturers in Colleges of Education in the South East of Nigeria. The population of the study comprised of 53 lecturers in the five selected Colleges of Education in the South East zone of Nigeria. The instrument for data collection was a structured questionnaire. The data collected were analysed using mean and standard deviation for research questions while the hypotheses were tested at 0.05 level of significance using t-test. The findings of the study showed that Business Education lecturers highly require ICT competencies like Microsoft word, internet, power point, spreadsheet and Database amongst others. The study also revealed that the knowledge of these ICT competencies is highly required for effective teaching of Business Education as a subject in Colleges of Education. The study thus recommends that lecturers should be encouraged to go for in service training to enable self-paced learning through e-learning as well as by fostering a live contact between teachers and learners through e-mail, chalk session, web based learning including the use of internet.

Keywords: ICT, Business Education, Web based learning, Lecturers, Competencies

Introduction

Business Education is a skill oriented course. It gives individuals the skills to hire, learn and work as productive citizens in a global society. The economic down turn have great impact on the graduates of Business Education but it is likely to have a severe impact on these graduates who are not skilled in their area of study. Thus, according to Igbokwe (2012) Business Education is that aspect of the total educational programme that provides the knowledgeable skills, understanding and attitudes needed to perform in the business world as producers or consumers of goods and services that business offers. Igbokwe(2012) opined that the philosophy of Nigeria's education is based on the Nigeria National Objectives of particular interest to Business Education which includes the training of the mind in the understanding of the world around; the acquisition of appropriate skills, abilities and competences both mental and physical as equipment for individual to live in and contribute to the development of his society (FGN, 2004). Based on these, it is the function of the curriculum in tertiary institutions to provide experiences and means through which students shall gain experiences that will influence their physical, social, emotional growth in desirable ways. However, in order to provide such experiences and means in the study of Business Education, it is pertinent to know that it is better achieved if the business teacher is ICT competent enough to handle and achieve the objectives of Business Education which includes amongst others development of personal skills such as word processing skill, computer fundamental skills and internet. Thus, a business teacher who has acquired the basic ICT competencies required in teaching and learning of Business Education subjects especially skill subjects like office Technology and Management qualifies himself for either of two careers- one in business and the other in teaching profession since the experience gained in either career usually strengthens his qualification for both careers. Information and communication technology is a term used in describing the use of technologies like computers, internets, mobile phones and other communication networks.

It includes all the technologies that help in disseminating and using information by individuals and institutions. National Board for Technical Education (NBTE) (2004) identified some of the competencies expected of Business Education teachers to include competencies in - word processing, spreadsheet, power point presentation, data base management system among others. Each of these areas of competencies consists of a body of knowledge, skills and abilities which the teacher must possess. (Okoro, 2013). He further explained that for a teacher to teach the use of computer, that the teacher must be computer literate and should have adequate knowledge in computer fundamentals like micro soft words, how to create files, use files, use input device to enter and edit text, manipulate information, preview, print and save a document etc. With power point, a Business Education lecturer can create educational presentation that can add variety and vitality to his teaching. Database on the other hand is an organized collection of data that can produce efficient retrieval when necessary while spreadsheet is a group name for software that is used for financial management and calculation. They are used in a wide range of business situation such as, forecasting, cash flow analysis, budgeting, financial statement preparation, scenario analysis etc. The knowledge in these computer fundamental packages will enable teaching and learning in Business Education to be more effective as it will equip the students with what they will expect in the labour world as well as expose them in being self-reliant and good entrepreneurs in future.

However, it is pertinent to know that some Business Education lecturers in Colleges of Education seem to lack the required ICT skills to cope with the demands of modern office technology and for effective teaching of ICT related courses in the department of Business Education. Often times it seems that these lack of ICT requirement by Business Educators in Colleges of Education could be a gender factor since experience has shown that ICT programmes are mainly handled by male lecturers even though this assertion could be based on personal opinion. Therefore, it is very necessary to examine the ICT competencies required by Business Education lecturers as well as determine the extent in which these ICT competencies are acquired by lecturers in the Colleges of Education in South East Zone of Nigeria hence focus the study.

The main objective of the study is to determine the basic competencies required by Business Education lecturers for effective implementation of Business Education programme. The specific objectives of the study include:

1. To determine the word processing competencies required by Business Education teachers.
2. To ascertain the internet competencies required by business educators.
3. To determine the data base competencies required by business educators.
4. To determine the power point competencies required by business educators
5. To determine the spreadsheet competencies required by business educators.

To address the objectives of this study, the following research questions are posited:

- What are the Microsoft word competencies required by business educators?
- What are the internet competencies required by business educators?
- What are the data base competencies required by business educators?
- What are the power point competencies required by business educators?
- What are the spreadsheet competencies required by business educators?

For the purpose of this study, the following hypotheses are formulated and were tested at 0.05 level of significance.

H₀: There is no significant difference between the mean rating of male and female lecturers on the word processing competencies required by Business Education lecturers in Colleges of Education.

H₁: There is no significant difference between the mean rating of federal and State lecturers on the internet competencies required by Business Education lecturers in Colleges of Education.

H₂: There is no significant difference between the mean ratings of lecturers based on length of service on data base on competencies required by Business Education lecturers in Colleges of Education.

H₃: There is no significant difference between the mean rating of male and female lecturers on power point competencies required by Business Education teachers in Colleges of Education.

H₄: There is no significant difference between the mean ratings of lecturers based on length of service on spreadsheet competencies required by Business Education teachers in Colleges of Education.

This research is significant in that it will help to promote the academic standard of the students in order to achieve a better academic performance in ICT subjects of Business Education. The result of this study will help the ICT lecturers to envisage how best to adapt ICT in terms of teaching method, educational upgrading, human resources development and better academic performance of students in higher institutions in Nigeria. The study will help enlighten the government on various areas of ICT which are required by business educators thereby by enabling them to mobilize an in service training for business educators.

Methodology

The study adopted the descriptive survey research design. Descriptive survey research is used for the discovery of meaning in the data collected so that facts and events can be understood, interpreted and explained. The present study fits into the above description as it only sought the opinion of respondents on the ICT skills possessed by Business Education lecturers in the South East of Nigeria. The survey instruments were shared to 65 lecturers in five higher education institutes in south east Nigeria, however, due to unavailability of the all the respondents, the collected survey instruments were 53 questionnaires.

Population of the Study

The population of this study is made up of all lecturers in Business Education department in the selected Colleges of Education in the South East of Nigeria. The institutions, the owner of the institutions and numbers of lecturers are listed below as follows:

S/N	Institutions	Ownership	Lecturers
1.	Federal College of Education Umunze.	Federal	23
2.	Nwafor-Ori-uzor College of Education, Nsugbe.	State	12
3.	Ebonyi state College of Education, Ikwo	State	14
4.	Enugu state College of Education technical Enugu	State	13
5.	Federal College of Education Eha-Amufu	Federal	13
	Total		65

Sample of the Study

S/N	Institutions	Ownership	Lecturers
1.	Federal College of Education Umunze.	Federal	12
2.	Nwafor-Ori-uzor College of Education, Nsugbe.	State	09
3.	Ebonyi state College of Education, Ikwo	State	11
4.	Enugu state College of Education technical Enugu	State	10
5.	Federal College of Education Eha-Amufu	Federal	11
6.	Total		53

The above table shows the sample of the study which was derived from the evaluation of the instrument used for the study.

Instrumentation

The instrument for data is a structured questionnaire developed by the researcher. The questionnaire is divided into two sections. Section A is prepared to obtain background information of the respondents and comprises three (3) items. Section B contains items grouped into 5 (five) headings in line with the specific purposes of the study. The items are structured on a 4 point rating scale of Very Highly Required (VHR), Highly Required (HR), Moderately Required (MR) and Not Required (NR).The number of questionnaire items derived from each of the five (5) categories of the ICT software under study is shown below:

Groups	Headings	No of Items
A	ICT competencies in MS-Word sub-skills	10
B	ICT competencies in Internet services	10
C	ICT competencies in spreadsheet sub-skills.	10
D	ICT competencies in power point sub-skills	10
F	ICT competencies 25in Data base sub-skills.	10
	Total	50

Table One: Mean Response on Microsoft Word competencies required by Business Education lecturers in South-East Colleges of Education

S/N	Microsoft Word competencies	VHR	HR	MR	NR	Mean	Std	Decision
	Ability to start Microsoft Word	36	12	4	1	3.57	.72	HR
	Ability to use Menu options	29	20	3	1	3.45	.70	HR
	Ability to create a well formatted document	29	13	10	1	3.32	.85	HR
	Ability to save a document	39	9	2	3	3.38	.82	HR
	Ability to open an existing document	32	15	5	1	3.47	.75	HR
	Ability to use the tool bar	28	15	9	1	3.32	.83	HR
	Ability to open an existing word document	31	17	4	1	3.47	.72	HR
	Ability to print out document	35	10	6	2	3.47	.85	HR
	Ability to undo and redo text	24	23	5	1	3.32	.73	HR
	Ability to edit document	26	21	5	1	3.36	.74	HR

The result of the data analysis of research question 1 as shown in table 1 reveals that business education lecturers require Microsoft Word competencies. This assertion is true since it has a grand mean of 3.43 which is within the range of 2.50 and above which implies that the Business Education lecturers highly require Microsoft Word competency. This finding indicates that Maduabuchi (2008) was right when he posited that many teachers had shallow depth of computer skills in which word processing is inclusive. The respondents also revealed that ability to save document is the most important aspect in the knowledge of Microsoft word while there is none with least importance in the list of items.

Table Two: Mean response on internet competencies required by Business Education lecturers in South East Colleges of Education

S/N	Internet Word Competencies	VHR	HR	MR	NR	Mean	Std	Decision
	Ability to get connected to the internet	28	20	4	1	3.42	.72	HR
	Ability to locate a search engine	26	18	8	1	3.30	.80	HR
	Ability to use the search engine	25	15	12	1	2.21	.86	HR
	Ability to use an e-mail	29	13	2	1	3.32	.82	HR
	Ability to locate a website	25	17	7	4	3.19	.75	HR
	Ability to insert email link on web pages	16	17	14	6	2.81	.83	HR
	Ability to upgrade an existing service	16	20	14	3	2.92	.72	HR
	Ability to edit text in different division on web pages	15	17	17	4	2.81	.85	HR
	Ability to log in and out from the internet	28	20	4	1	3.41	.73	HR
	Ability to publish web pages to local and public search engines	19	20	11	3	3.03	.74	HR

The result of the data analysis of research question 2 as shown in table 2 reveals that Business Education lecturers require Internet competencies. This assertion is true since it has a grand mean of 3.41 which is within the range of 2.50 and above which implies that the Business Education lecturers highly require internet competency. This finding indicates that Kingdom e-government policy (2001) stated that emphasis should shift from manual to use of electronic media in government programme. The document explained that this shift can be possible through staff acquisition of skills in relevant area including internet competency. The respondents also revealed that ability to get connected to the internet is the most important aspect in the knowledge of internet while ability to insert an email link on web pages and ability to edit text in different internet competencies. Thus, Agomuo (2014) posited that the main benefit of email is the close to instantaneous delivery of messages.

Table Three: Mean response on Database competencies required by business education lecturers in selected colleges of education in the South-East.

S/N	Database Competencies	VHR	HR	MR	NR	Mean	Std	Decision
	Ability to add records from database	18	27	7	1	3.17	.73	HR
	Ability to generate reports from database	13	23	15	2	2.89	.82	HR
	Ability to link information from different environment	15	23	12	3	2.94	.86	HR
	Ability to share information among different work stations	18	21	11	3	3.01	.89	HR
	Ability to use Access objects e.g. tables, forms, query, etc	10	23	7	3	3.13	.86	HR
	Ability to Access objects e.g. tables, forms, query etc.	15	23	13	2	2.96	.83	HR
	Ability to use tags for various types of objects	8	23	20	2	2.70	.77	HR
	Ability to plan a database before creating it.	14	25	11	3	2.94	.84	HR
	Ability to design tables	17	15	18	3	2.87	.94	HR
	Ability to design fields using data types	16	27	13	3	3.06	.82	HR

The result of the data analysis of research question 3 as shown in table 3 reveals that Business Education lecturers require Database competencies. This assertion is true since it has a grand mean of 2.97 which is within the range of 2.50 and above which implies that the Business Education lecturers highly require Database competency. This finding is in agreement with the observations of Ohakwe and Njoku (2010) that Business Education lecturers require Database competencies for effective utilization of technologies in their classrooms and other presentations. Therefore it is necessary for Business Education lecturers to have the knowledge of Database. The finding also revealed that ability to add records from database is the most important aspect in the knowledge of Database while ability to use tags for various types of objects is seen as the least important knowledge in Database competency. The finding of this study is in consonance with that of Garba (2012) who found out that data base is highly required by business educators. He explained that proficiency in database is very important for performing office activities.

Table 4: Mean response on PowerPoint competencies required by business education lecturers in selected colleges of education in the South-East

S/N	Internet Word Competencies	VHR	HR	MR	NR	Mean	Std	Decision
	Ability to open a PowerPoint work environment	14	28	9	2	3.02	.78	HR
	Ability to create slides using different layouts	28	21	3	1	3.43	.69	HR
	Ability to assign tables to a slide	13	32	7	1	3.08	.68	HR
	Ability to change font sizes of text in a slide	12	24	12	5	3.81	.90	HR
	Ability to set up a presentation	21	24	7	1	3.23	.75	HR
	Ability to create object in a presentation	12	25	13	3	2.87	.83	HR
	Ability to print out slides	12	31	6	4	2.96	.81	HR
	Ability to store slide presentation	12	31	7	3	2.98	.77	HR
	Ability to make a presentation using slides and projectors	14	30	7	2	3.06	.74	HR
	Ability to edit a presentation using a template	14	26	9	4	2.94	.86	HR

The result of the data analysis of research question 4 as shown in table 4 reveals that Business Education lecturers require PowerPoint competencies. This assertion is true since it has a grand mean of 3.11 which is within the range of 2.50 and above which implies that the Business Education lecturers highly require PowerPoint competency. This

finding is in agreement with the observations of Onuoha in Okolocha and Nwadiani (2014) that Business Education lecturers require PowerPoint competencies for effective utilization of technologies in their classrooms and other presentations. Therefore it is necessary for Business Education lecturers to have the knowledge of PowerPoint. The respondents also revealed that ability to change font sizes of text in a slide is the most important aspect in the knowledge of PowerPoint while ability to create object in a presentation is seen as the least important knowledge in PowerPoint competency.

Table 5: Mean response on Spreadsheet competencies required by business education lecturers in selected colleges of education in the South-East

S/N	Spread Sheet Competencies	VHR	HR	MR	NR	Mean	Std	Decision
	Ability to open a Spread Sheet application software	25	23	4	1	2.98	.80	HR
	Ability to plan a spread sheet	19	28	6		3.25	.65	HR
	Ability to use columns and rows	18	26	8	1	3.15	.74	HR
	Ability to move from cell to cell in Ms-Excel	16	28	7	2	3.09	.77	HR
	Ability to change Spread sheet look	15	21	11	6	2.85	.97	HR
	Ability to manipulate data	17	21	10	6	2.94	.95	HR
	Ability to produce basic spread sheet	10	36	6	1	3.04	.62	HR
	Ability to create an arithmetic formula	15	23	12	3	2.94	.66	HR
	Ability to use common excel functions	25	23	12	3	2.94	.86	HR
	Ability to fill formulae automatically	14	24	13	2	2.94	.82	HR

The result of the data analysis of research question 5 as shown in table 5 reveals that Business Education lecturers require spreadsheet competencies. This assertion is true since it has a grand mean of 3.02 which is within the range of 2.50 and above which implies that the Business Education lecturers highly require spreadsheet competencies. This finding is in agreement with the observations of Akarahu and Ile (2014) when they revealed that business education teachers require spreadsheet competencies for generation of students' results using Excel. Therefore it is necessary for Business Education lecturers to have the knowledge of Spreadsheet; this will enable the teaching of accounting to be easier and more understandable. This assertion is in union with Kingdom e-government policy (2001) that stated that emphasis should be made more on use of electronic technologies in the office rather than manual. Thus, the study also revealed that ability to use columns and rows are the most important aspect in the knowledge of spreadsheet while ability to change spreadsheet look is seen as the least important knowledge in learning of spreadsheet competencies.

Hypotheses Analysis

Table 6: t-test of Independent on the mean rating of male and female lecturers on the word processing competencies required by Business Education lecturers

S/N	Microsoft Word Competences	Gender	N	Mean	SD	DF	t-cal	t-crit	Decision
1	Ability to start Microsoft word	Male	27	3.52	0.80	51	-0.49	2.00	Accept
		Female	26	3.62	0.64				
2	Ability to use menu options	Male	27	3.44	0.75	51	-0.09	2.00	Accept
		Female	26	3.46	0.65				
3	Ability to create a well formatted document	Male	27	3.30	0.91	51	-0.21	2.00	Accept
		Female	26	3.35	0.80				
4	Ability to save a document	Male	27	3.56	0.89	51	-0.26	2.00	Accept
		Female	26	3.62	0.75				
5	Ability to open an existing document	Male	27	3.44	0.80	51	-0.27	2.00	Accept
		Female	26	3.50	0.71				
6	Ability to use the tool bar	Male	27	3.30	0.87	51	-0.22	2.00	Accept
		Female	26	3.35	0.80				
7	Ability to open an existing word document	Male	27	3.44	0.80	51	-0.28	2.00	Accept
		Female	26	3.50	0.65				
8	Ability to print out a document	Male	27	3.48	0.85	51	0.09	2.00	Accept
		Female	26	3.46	0.86				
9	Ability to undo and redo text	Male	27	3.33	0.68	51	0.13	2.00	Accept
		Female	26	3.31	0.79				
10	Ability to edit document	Male	27	3.33	0.78	51	-0.25	2.00	Accept
		Female	26	3.39	0.70				

The data on table 6 reveals that all the items one to ten (1 – 10) were accepted. As a result, the null hypothesis was accepted that there is no significant difference between the mean rating of male and female lecturers on the word processing competencies required by Business Education lecturers in Colleges of Education.

Table 7: t-test of Independent on the mean rating of federal and State lecturers on the internet competencies required by Business Education lecturers

S/N	Internet Competencies	Ownership	N	Mean	SD	DF	t-cal	t-crit	Decision
11	Ability to get connected to the internet	State	27	3.37	0.79	51	-0.46	2.00	Accept
		Federal	26	3.46	0.65				
12	Ability to locate a search engine	State	27	3.26	0.86	51	-0.39	2.00	Accept
		Federal	26	3.35	0.75				
13	Ability to use the search engine	State	27	3.19	0.92	51	-0.19	2.00	Accept
		Federal	26	3.23	0.82				
14	Ability to use an e-mail	State	27	3.30	0.91	51	-0.21	2.00	Accept
		Federal	26	3.35	0.80				
15	Ability to locate a web site	State	27	3.19	0.96	51	-0.027	2.00	Accept
		Federal	26	3.19	0.94				
16	Ability to insert an e-mail links on Webpages	State	27	2.81	1.00	51	0.03	2.00	Accept
		Federal	26	2.81	1.02				
17	Ability to upgrade an existing services	State	27	2.89	0.93	51	-0.29	2.00	Accept
		Federal	26	2.96	0.87				
18	Ability to edit text in different division on Webpages	State	27	2.82	0.96	51	0.03	2.00	Accept
		Federal	26	2.81	0.94				
19	Ability to log in and out from the internet	State	27	3.37	0.79	51	-0.46	2.00	Accept
		Federal	26	3.46	0.65				
20	Ability to publish Webpages to local and public search engines	State	27	3.04	0.94	51	-0.01	2.00	Accept
		Federal	26	3.04	0.87				

Data on table 7 indicates that the t-cal values in items eleven to twenty (11 - 20) is less than the t-critical values. Consequently, the null hypothesis was accepted that there is no significant difference between the mean rating of federal and State lecturers on the internet competencies required by Business Education lecturers in Colleges of Education

Table 8: t-test of Independent on the mean rating of lecturers based on length of service on data base on competencies required by Business Education lecturers

S/N	Database competencies	Experience	N	Mean	SD	DF	t-cal	t-crit	Decision
21	Ability to add records from database	Low experience	27	3.15	0.77	51	-0.22	2.00	Accept
		High experience	26	3.19	0.69				
22	Ability to generate reports from database	Low experience	27	2.89	0.85	51	0.02	2.00	Accept
		High experience	26	2.89	0.82				
23	Ability to link information from different environment	Low experience	27	2.93	0.92	51	-0.15	2.00	Accept
		High experience	26	2.96	0.82				
24	Ability to share information among different workstations	Low experience	27	3.00	0.92	51	-0.16	2.00	Accept
		High experience	26	3.04	0.87				
25	Ability to use Access environment e.g. Title bar, menu bar, etc.	Low experience	27	3.11	0.89	51	-0.18	2.00	Accept
		High experience	26	3.15	0.83				
26	Ability to Access objects e.g. tables, forms, query, etc.	Low experience	27	2.96	0.85	51	0.01	2.00	Accept
		High experience	26	2.96	0.82				
27	Ability to use tags for various types of objects	Low experience	27	2.70	0.78	51	0.05	2.00	Accept
		High experience	26	2.69	0.79				
28	Ability to plan a database before creating it	Low experience	27	2.93	0.87	51	-0.15	2.00	Accept
		High experience	26	2.96	0.82				
29	Ability to design tables	Low experience	27	2.85	0.99	51	-0.13	2.00	Accept
		High experience	26	2.88	0.91				
30	Ability to design fields using data types	Low experience	27	3.04	0.85	51	-0.18	2.00	Accept
		High experience	26	3.08	0.80				

The data on table 8 shows that the t-values of all the items, twenty one to thirty (21 – 30) were accepted. Thus, the null hypothesis was accepted that there is no significant difference between the mean ratings of lecturers based on length of service on data base on competencies required by Business Education lecturers in Colleges of Education.

Table 9: t-test of Independent on the mean rating of male and female lecturers on power point competencies required by Business Education teachers

S/N	Power Point Competencies	Gender	N	Mean	SD	DF	t-cal	t-crit	Decision
31	Ability to open a power point work environment	Male	27	3.00	0.78	51	-0.18	2.00	Accept
		Female	26	3.04	0.77				
32	Ability to create slides using different layouts	Male	27	3.40	0.75	51	-0.28	2.00	Accept
		Female	26	3.46	0.65				
33	Ability to assign titles to a slide	Male	27	3.07	0.73	51	-0.02	2.00	Accept
		Female	26	3.08	0.63				
34	Ability to change font sizes of text in a slide	Male	27	2.78	0.93	51	-0.27	2.00	Accept
		Female	26	2.85	0.88				
35	Ability to set up a presentation	Male	27	3.22	0.80	51	-0.04	2.00	Accept
		Female	26	3.23	0.71				
36	Ability to create object in a presentation	Male	27	2.85	0.86	51	-0.14	2.00	Accept
		Female	26	2.88	0.82				
37	Ability to print out slides	Male	27	2.96	0.81	51	0.01	2.00	Accept
		Female	26	2.96	0.82				
38	Ability to store slide presentation	Male	27	2.96	0.81	51	-0.17	2.00	Accept
		Female	26	3.00	0.75				
39	Ability to make a presentation using slides and projectors	Male	27	3.04	0.76	51	-0.19	2.00	Accept
		Female	26	3.08	0.74				
40	Ability to edit a presentation using a template	Male	27	2.93	0.87	51	-0.15	2.00	Accept
		Female	26	2.96	0.87				

The data on table 9 indicates that the t-cal values in items thirty one to forty (31-40) were less than the t-critical values. Hence, the null hypothesis was accepted that there is no significant difference between the mean rating of male and female lecturers on power point competencies required by Business Education teachers in Colleges of Education.

Table 10: T-test of Independent on the mean rating of lecturers based on length of service on spreadsheet competencies required by Business Education teachers

S/N	Spreadsheet competencies	Experience	N	Mean	SD	DF	t-cal	t-crit	Decision
41	Ability to open a spreadsheet application software	Low experience	27	2.96	0.85	51	-0.17	2.00	Accept
		High experience	26	3.00	0.75				
42	Ability to plan a spreadsheet	Low experience	27	3.26	0.66	51	0.16	2.00	Accept
		High experience	26	3.23	0.65				
43	Ability to use columns and rows	Low experience	27	3.11	0.80	51	-0.39	2.00	Accept
		High experience	26	3.19	0.69				
44	Ability to move from cell to cell in Ms-Excel	Low experience	27	3.07	0.78	51	-0.19	2.00	Accept
		High experience	26	3.12	0.77				
45	Ability to change spreadsheet look	Low experience	27	2.85	0.99	51	0.02	2.00	Accept
		High experience	26	2.85	0.97				
46	Ability to manipulate data	Low experience	27	2.93	0.10	51	-0.14	2.00	Accept
		High experience	26	2.96	0.92				
47	Ability to produce basic spreadsheet	Low experience	27	3.00	0.68	51	-0.45	2.00	Accept
		High experience	26	3.08	0.56				
48	Ability to create an arithmetic formulae	Low experience	27	2.93	0.92	51	-0.15	2.00	Accept
		High experience	26	2.96	0.82				
49	Ability to use common excel functions	Low experience	27	2.93	0.92	51	-0.15	2.00	Accept
		High experience	26	2.96	0.82				
50	Ability to fill formulae automatically	Low experience	27	2.93	0.83	51	-0.16	2.00	Accept
		High experience	26	2.96	0.82				

Data on table 10 shows that the t-cal values in items forty one to fifty (41 – 50) indicated there is no significant difference between the mean rating of lecturers based on length of service on spreadsheet competencies required by Business Education teachers in Colleges of Education.

Conclusion

The study showed that the ICT competencies required by Business Education lecturers are Microsoft word, internet, PowerPoint, Spreadsheet and Database amongst others. The knowledge of these ICT competencies is highly required for effective teaching and learning of Business Education as a Subject in Colleges of Education. Therefore there is need for every Business Education Lecturer to acquire the knowledge of these ICT competencies. This will enhance the interest rate in the study of Business Education and as well the aspiration in teaching and learning will be encouraged.

Recommendations

The following recommendations were made based on the findings and conclusion of the study.

- 1 Lecturers should be encouraged to go for in service training to enable self-paced learning through e-learning as well as by fostering a live contact between teachers and learners through e-mail, chalk session, web based learning including the use of internet.
2. The school management through TETFUND should enable all Business Education lecturers acquire a good personal computer (Laptops). This will enable them acquire more teacher pedagogical practices and reasoning. This assertion is true because if practices are inadequate or inappropriate, then teachers will not be sufficiently prepared and confident enough to make full use of ICT in and out of the classroom.

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