

## ICT COMPETENCY FOR SUSTAINABILITY IN INSTRUCTIONAL DELIVERY OF BUSINESS EDUCATION ACADEMIC STAFF

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### Abstract

*This study examined ICT Competency for sustainability in instructional delivery of business education academic staff at Delta State Colleges of Education. Four research questions guided the study. The study employed the descriptive survey research design. The purposive sampling technique was used to select a sample size of 105 business education academic staff out of 1007 academic staff from four colleges of education within Delta State. A questionnaire titled: ICT Competency for Sustainability in Instructional Delivery Questionnaire (ICTCSIDQ), which contained 31 items and designed on a 4 point scale was used to collect data for this study. The instrument was validated by two experts from the Department of Business Education and Department of Educational Foundations via Measurement and Evaluation Unit, Nnamdi Azikiwe University, Awka. Reliability of the instrument was determined through a pilot-test conducted by the researcher on the instrument, selecting 16 academic staff in business education from two colleges of education in Anambra State. The result was found to have a reliability coefficient of 0.69 using the Cronbach alpha coefficient measurement which indicated that the instrument was trustworthy to collect the necessary data for the study. Data was equally analyzed using percentages, mean score at 2.50 rating and standard deviation. Consequently, from the findings of the study, it was recommended among others that: Constant ICT training and retraining programmes should be organized for academic staff by the State Government and COE institutions management as a way to improve their ICT competency level. Also, ICT facilities should be provided for the academic staff in order to improve their competency in the classroom and likewise possess the basic ICT knowledge and skills to teach pedagogy in business education. Leadership at the COEs should adequately provide ICT internet facilities for academic staff to have access and become competent to carry out researches in business education.*

### Introduction

All over the world, technology has played important role in education especially in teaching and learning activities and research. Nowadays, new computer applications through the use of ICT (Information and Communication Technologies) are been utilized in education to replace the traditional method of teaching which is largely teacher-centred approach. Supporting this statement, Dike (2014) opined that teachers had, over years, been teaching Economics with the aid of some teaching materials like charts, recommended texts, meter rule, set-square, and live materials which could be improvised by the teacher to help effectively teach. However recently, new and improved teaching aid had continued to emerge amongst which is information and communication technology. In essence, Amuche and Iyekekolor-Solomon (2014) stated that ICT within the context of ICT teaching in business education should be used to create stimulating and motivating leaning environments and provide a breadth of experiences to both staff and students. Academic staff in business education must therefore provide experiences that clearly demonstrate to students how they too can use ICT in the delivery of ICT to the pupils they teach in the future (Amuche & Iyekekolor-Solomon, 2014).

Again, ICT as the acronym implies simply means information and communication technology. According to Dike (2014), ICT may be defined as that facet of technology which deals with the handling and processing of information, using all

kinds of electronic devices in facilitating communication. Dike citing other scholars also gave broader definition of ICT. Such include: Margaret (2005) who defined ICT as an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning. These electronic systems can be used for broadcasting, telecommunications and all forms of computer-mediated communications including teaching in a classroom. Adoni (2010) also cited in Dike (2014) noted that Information and communication technology centered education covers the use of computers, on-line self-learning packages, interactive CDs, satellites, radio, optical fiber technologies, tele-presence systems and all types of information technology (IT) hardware and software in teaching. This will also involve the use of various ICT applications and computer-assisted programmes such as internet, web browser, multimedia, emails, Microsoft packages (word, spreadsheets, power point, graphics, etc) in teaching and learning. Nevertheless, the use of Information and Communication Technology (ICT) has also made significant impact in various subject areas including business education. For instance, academic staff in teacher education with the aid of ICT can browse over the internet using various websites to gather the necessary information that will improve their instructional delivery. Therefore,

there are a lot of gains in using ICT to deliver instruction in education including in business education. Other researchers have also identified the benefits of ICT in education. Madueke (2011) pointed out that use of improvised materials and teaching aid such as ICT in the art of teaching not only engage both the students' auditory and sensory organs in the art of teaching, but they also help students to remember effectively contents learnt. Similarly, the use of information and communication technology gadgets to teach contents in business education has also proved to be a better teaching aid. Amuche and Iyekekpolor-Solomon (2014) further highlighted that utilizing ICT in teacher education enable trainee teachers to have access to the latest technologies and to give them experience of ICT in a variety of contexts during their industrial training.

The methods used to deliver ICT through ICT by academic staff should enable trainee teachers to integrate ICT within their teaching and provide opportunities for them to use the technologies they will encounter in school. Academic staff's, in order to provide for the need of their trainees, need to also be aware of the current thinking about good practice, in which their competency in ICT counts. They should also have knowledge and understanding of relevant research using ICT so that they can support the needs of the trainees. On this premise, ministries of education (both at Federal and States levels) and various educational organizations see the need for teacher education students to develop understandings and proficiencies in using ICT in appropriate ways to support learning and to develop appropriate technology knowledge, skills, and dispositions for the 21st century.

For this to occur, standards need to be determined at the colleges of education and likewise academic staff need to become highly competent in the use of ICT in order to help guide them as they design learning that uses and integrates technology (Amuche & Iyekekpolor-Solomon, 2014). On the other hand, competency according to Dike (2014) is practical and functional skills which the teacher needs to demonstrate if the teacher is to effectively teach (e.g business education) using ICT facilities. Competency is a specific practical ability possessed by someone to do a given task. Ojukwu & Ojukwu (2004) viewed competencies as knowledge; skills and behaviour that will enable a teacher meet established performance criteria. It involves the ability to do something well, measured against a standard, especially ability acquired through experience or training. Virginia Career Resource Network (2006) stated that when consistently demonstrated, competencies make employees particularly effective in their work. Academic staff ICT competency therefore in this study, means, lecturers' ability to use various ICT applications and gadgets to deliver instructions in their respective subject areas in business education. Sustainability

of instructional delivery in business education on the other hand can be viewed as maintaining well-being over a long, perhaps even an indefinite period. It is also defined as a state of affairs where the sum of natural and man-made resources remains at least constant for the foreseeable future, in order that the well-being of future generations does not decline. It also means meeting the present needs of learners without compromising the ability of future generations to meet their own needs (Kuhlman & Farrington, 2010). It is therefore believed that academic staff effectiveness and competency in the use of ICT will aid sustainability in instructional delivery in business education and this has equally necessitated this study. Although there are still yet some challenges affecting the use of ICT in business education at the colleges of education. Noeth & Volkov, (2004) pointed out that such factors like attitude of leadership around technology use, sustained and intensive professional development, provision of adequate technology resources in the schools, and evaluation means that enables school leaders and teachers to determine whether they are realizing their goals and to help them adjust their practice to better meet those goals; can hinder the use of ICTs in the school. Notwithstanding, Osuala (2004) defines business education as the education for and about business. It includes education for office occupations, distribution and marketing occupations, business teaching, business administration and economic understandings. Onyesom & Onajite (2013), further described business education as the intellectual and vocational preparation of people for earning a living in the contemporary industrial and business environment. It is also education for acquisition and development of skills and competencies, attitudes and attributes which are necessary for efficiency of the economic system. In general, business education encompasses education for office occupation and practices, book keeping, recording, economic understanding, accounting, commerce and industry, and entrepreneurship (Onyesom & Onajite, 2013).

Business education academic staff's at the colleges of education are the lecturers who had undergone some training on business studies education in either a recognized university or any other degree awarding higher institution in Nigeria. They are expected to teach students in the teacher education institution and equip them with basic knowledge and functional skills that will help them become proficient teachers in respective areas in business education. In this regards, the subjects taught in business education by lecturers contain both practical and theoretical aspects taught which need high degree of competency. Academic staff needs to explore ICT in teaching business education and this is highly dependent on their level of competencies. But observations for several studies show that many teachers including lecturers are not competent in the use of ICT in the classroom and this have been

responsible for poor students academic performances and teaching ineffectiveness. Ololube (2006) and Tella (2011) observed that many Nigerian teachers have been unable to find effective ways to use technology in their classrooms or any other aspect of their teaching and learning life.

The possible explanation for this lack of success by teachers is not only that the use of technology in the classroom has not been encouraging and teachers are not well trained to become highly competent in using ICTs in teaching as a means for educational sustainability (Ololube, 2006), but the level of the educators' exposure to the tool of ICT (the computer) has been very minimal notwithstanding the specifications in the National Policy of Education by the Federal Government of Nigeria (2004). Yusuf (2005) study cited in Tella (2011) which investigated teachers' self-efficacy in implementing of computer education in Nigerian secondary school found that: most teachers in Federal Government Colleges in Nigeria do not have the needed experience and competence in the use of computers either for educational or industrial purposes. A majority of male and female teachers in Federal Government Colleges do not have needed competence in basic computer operations.

Most of the teachers in Federal Government Colleges do not have needed skills and knowledge in the use of common computer software. Could this be the same situation with business education academic staff (lecturers) at the colleges of education? In considering the prominent role played by the teacher in the classroom, it then becomes important that academic staff in business education at the colleges of education must be competent in ICT; which has necessitated this present study. Examining the ability of business education lecturers in using ICT for sustainability in instructional delivery at the colleges of education in Delta State is the main focus of the present study as effective use of these gadgets is believed to translate into better performances in business education and generally add to achieving the goals of the Nigerian education policy as stated by Dike (2014).

### **Statement of the Problem**

Promoting quality education in the Nigerian education system especially at the colleges of education through effective integration and use of ICT facilities has become a matter of serious concern for education stakeholders. Current observations show that teaching and learning in lots of colleges and schools still depend so much on the traditional method without consideration on adopting new means of teaching, which can be through the information and communication technology system as pointed out by Tella (2011). This equally has influenced teachers' competencies in the classroom. However, utilizing ICT in business education have great impact in academic staff

effectiveness in the classroom owing to the fact that ICT aids to boost teachings, instructional delivery, research and students' learning. Citing instances, Idris and Murtala (2013) reported that ICT package which provide internet facilities such as the: e-mail, file transfer protocol (FTP), World Wide Web (www), google, Telnet, Usenet, mailing list, can be used to enhance teaching and research. With such facilities, an academic staff can be able to have up-to-date information, know what is happening in his field of research somewhere around the globe, and share information with colleagues using the mailing list facility of the internet. But this is yet to be realized in the colleges of education as a result of some challenges. The poor academic performances of student teachers in business education have continued to raise doubt and concern about the method of teaching at the colleges. This has equally raised questions on academic staff competences and abilities in the use of ICT facilities.

Therefore, a research gap exists which sought to be addressed to examine ICT Competency of Academic Staff in Business Education for Sustainability in Instructional Delivery at Delta State Colleges of Education and this stands to be the problem of this present study. The research work is necessary at this particular period due to the need of re-orienting teacher education for sustainable development in Nigeria; which could also be accomplished through teachers' competencies in effective use of ICT in the classroom.

### **Purpose of the Study**

The purpose of this study was to examine ICT Competency for sustainability in instructional delivery of business education academic staff focusing on Delta State Colleges of Education. Specifically, the study aimed at the examining:

1. How academic staff rated their ICT competency level for sustainability in instructional delivery at Delta State colleges of education.
2. ICT self-competency of academic staff in possessing the basic ICT knowledge and skills to teach pedagogy in business education for sustainability in instructional delivery at Delta State colleges of education.
3. The competency of academic staff in business education in using ICT internet facilities for research in business education for sustainability in instructional delivery at Delta State colleges of education.
4. The competency of academic staff in business education in using ICT facilities to guide learners in searching for information for sustainability in instructional delivery at Delta State colleges of education.

### **Research Questions**

The following research questions guided the study:

1. How does academic staff rate their ICT competency level for sustainability in instructional delivery at Delta State colleges of education?

2. What is the self-competency of academic staff in possessing the basic ICT knowledge and skills to teach pedagogy in business education for sustainability in instructional delivery at Delta State colleges of education?
3. What is the competency of academic staff in business education in using ICT internet facilities for research in business education for sustainability in instructional delivery at Delta State colleges of education?
4. What is the competency of academic staff in business education in using ICT facilities to guide learners in searching for information for sustainability in instructional delivery at Delta State colleges of education?

## Method Design

The descriptive survey design was adopted for the study, which sought to collect data on the opinions of the participants (academic staff) with a view to examine their ICT competency level for sustainability in instructional delivery at Delta State colleges of education.

## Population

The study population involved all academic staff within four colleges of education in Delta State whose total population comprised 1007 teaching staff (i.e FCE (T) Asaba – 348 academic staff, Agbor College of Education – 280 academic staff, College of Education Morsoga – 130 and COE Warri - 249). Due to the nature of the study and for its best interest, it was convenient for the researcher to sample all the academic staff of business education in the four colleges whose population was small. Therefore, the sample size for this study was made up of 105 business education academic staff (i.e FCE (T) Asaba – 35 business education academic staff, Agbor College of Education – 30 business education academic staff, College of Education Morsoga – 15 business education academic staff, and COE Warri - 25) selected through a purposive sampling technique. The sample represents 10% of the participants from the entire population of the study.

## Instrumentation

A questionnaire titled: ICT Competency for Sustainability in Instructional Delivery Questionnaire (ICTCSIDQ) was used as the primary source and main instrument for data collection. The instrument which contained 31 items was personally developed by the researcher; also designed on 4-point scale of: (a) Very Highly Competent – VHC (4), Highly Competent – HC (3), Less Competent – LC (2), Not Competent – NC (1), for answering research questions 2 to 4. The research instrument tagged “ICT Competency for Sustainability in Instructional Delivery Questionnaire (ICTCSIDQ)” comprised four (4) sections. Section A consisted of five (5) items eliciting information relating to academic staff rating of ICT competence. These items required an “Agreement” or “Disagreement” answer. Section B,

C and D which contained statements relating to research questions 2 to 4 had a total of twenty-six (26) items measured in 4-point scale. Some portions of these three sections were also adapted and culled from the instrument of Dike (2014).

The research instrument was validated by two experts from the Department of Business Education and Department of Educational Foundations via Measurement and Evaluation Unit, Nnamdi Azikiwe University, Awka, to establish the face and content validity in line with the purpose of the study. The corrections and modifications made by the experts on the instrument to ensure its validity were incorporated in the final correction of the instrument.

Reliability of the instrument was determined through a pilot-test conducted by the researcher on the instrument, selecting 16 academic staff in business education from two colleges of education in Anambra State. The result was found to have a reliability coefficient of 0.69 using the Cronbach alpha coefficient measurement which indicated that the instrument was trustworthy to collect the necessary data for the study.

This further affirmed that the instrument was reliable for the study. The research instrument was finally administered and collected by the researcher with the help of two research assistants who received briefings on how to administer the instrument on the participants. Method of data collection also involved a personal, hand delivery and face to face contact with all the participants.

An on the spot method was employed in order to collect the research instrument where applicable, if not such participant was given extra one day to fill the instrument. Method of data analysis involved using percentages, mean scores and standard deviation. Any mean that rated above the bench mark of 2.50 was regarded as agree while mean rated below the bench mark (2.50) was regarded as disagree.

## Results

**Table 1:** Percentage Scores on academic staff rating of ICT competency level

N= 105

S/N	Items	Frequency (N)	Percentages (%)
1.	I am very highly efficient in use of all ICT applications and packages.	7	6.7%
2.	My competency in use of all ICT applications and packages is at a high level.	14	13.3%
3.	My competency in use of ICT is at a moderate level.	23	22.0%
4.	My ICT competency is at a low level.	40	38.1%
5.	My competency in use of various ICT applications and packages is at a very low level.	21	20.0%
<b>Total</b>	<b>=</b>	<b>105</b>	<b>100%</b>

Academic staff rating of ICT competency level as shown in Table 1 indicates that only 7 (6.7%) of aca

demetic staff at the COEs in Delta State have very high rating of ICT competency level. Those with high level rating of ICT competency level were 14 (13.3%). Those whose competency rated at a moderate level were 23 (22.0%); while the majority 40 (38.1%) rated their ICT competency as low. Those with very low level rating of ICT competency level were 21 (20.0%). This result indicate that majority of academic staff in business education were not competent to utilize ICT for sustainability

in instructional delivery in the classrooms at Delta State colleges of education. Their competency level was low.

**Table 2:** Mean Scores and Standard Deviation on ICT self-competency of academic staff in possessing the basic ICT knowledge and skills to teach pedagogy in business education for sustainability in instructional delivery at Delta State colleges of education.

N= 105

S/ N	Items	VHC	HC	LC	NC	Total	(X)	SD	Decision	
6.	Ability to use word processor in teaching topics in business education.	10	19	37	39	105	2.00	0.97	Incompetent	
7.	Accuracy in use of video conferencing.	11	23	35	36	105	2.09	0.99	Incompetent	
8.	Ability to draw graph using Microsoft excel	15	21	31	38	105	2.12	1.06	Incompetent	
9.	Accuracy in teaching topics involving arithmetic and calculations in business education using Microsoft spread sheet.	9	16	35	45	105	1.90	0.96	Incompetent	
10.	Ability to slide through pages on a computer screen while explaining concepts in business education.	12	13	28	52	105	1.86	1.03	Incompetent	
11.	Accuracy in presenting lessons on business education in the classroom using power point.	10	17	32	46	105	1.91	0.99	Incompetent	
12.	Precision in fixing a projector to a computer device and connecting it for usage in teaching business education contents.	7	15	40	43	105	1.87	0.90	Incompetent	
13.	Ability to browse using various website to find and download information relating to business education.	3	8	39	55	105	1.61	0.75	Incompetent	
14.	Use of other digital resources to support teaching in the classroom.	8	22	34	41	105	1.97	0.95	Incompetent	
15.	Accuracy in use of microphones to support students' learning in the classroom.	27	30	29	19	105	2.62	1.05	Competent	
16.	Precision in preparing lesson plan in business education using computer.	13	18	39	35	105	2.09	1.00	Incompetent	
17.	Accuracy in use of mobile phone browsing as search engines to gather information.	30	37	18	20	105	2.73	1.07	Competent	
<b>Grand mean and standard deviation</b>		=					<b>2.06</b>	<b>1.02</b>	<b>t</b>	<b>Incompetent</b>

Result from Table 2 has shown that only items 15 and 17 rated above the acceptable mean score of 2.50, indicating agreement with the statements. All other items from 6 to 14 and item 16 rated below the acceptable mean score, indicating disagreement with the statements. The grand mean and standard deviation of 2.06 and 1.02 indicate that there were

strong negative reactions from the academic staff on the statements. This result indicated that majority of academic staff in business education did not possess the ICT self-competency of the basic ICT knowledge and skills to teach pedagogy in business education for sustainability in instructional delivery.

**Table 3:** Mean Scores and Standard Deviation on the competency of academic staff in business education in using ICT internet facilities for research in business education for sustainability in instructional delivery at Delta State colleges of education.

N= 105

S/ N	Items	VHC	HC	LC	NC	Total	(X)	SD	Decision	
18.	Consistency in use of google site as search engines to assist in teaching topics in business education.	20	24	36	25	105	2.37	1.04	Incompetent	
19.	Accuracy in use of world wide web to download information on business education.	19	27	31	28	105	2.35	1.06	Incompetent	
20.	Precision in use of facebook to form academic group and gather information relating to business education from other colleagues elsewhere.	12	21	40	32	105	2.12	0.97	Incompetent	
21.	Ability to retrieve and save information from e-journal in business education.	14	25	38	28	105	2.24	0.99	Incompetent	
22.	Accuracy in the use of file transfer protocol (FTP) for research and to download files on business education into a computer from another computer in the Internet.	18	20	34	33	105	2.22	1.07	Incompetent	
23.	Accuracy in use of e-mails for communication.	11	23	39	32	105	2.12	0.96	Incompetent	
24.	Accuracy in use of mailing list to form professional group for discussions in business education.	13	16	36	40	105	2.02	1.01	Incompetent	
<b>Grand mean and standard deviation</b>		=					<b>2.21</b>	<b>1.02</b>	<b>t</b>	<b>Incompetent</b>

Result from the above Table 3 has shown that none of the items rated above the acceptable mean score of 2.50, to show agreement with the statements. All the items from 18 to 24 rated below the acceptable mean score, indicating disagreement with the statements. The grand mean and standard deviation of 2.21 and 1.02 indicate that there were

strong negative reactions from the academic staff concerning the statements. This result indicated that academic staff in business education did not use ICT internet facilities for research in business education for sustainability in instructional delivery.

**Table 4:** Mean Scores and Standard Deviation on the competency of academic staff in business education in using ICT facilities to guide learners in searching for information for sustainability in instructional delivery at Delta State colleges of education.

N= 105

S/ N	Items	VHC	HC	LC	NC	Total	(X)	SD	Decision	
25.	Ability to organize students into working groups and give them assignments to solve online using a computer system.	8	16	39	42	105	1.90	0.92	Incompetent	
26.	Ability to assign students' to carry out project and task to support their thinking and social interaction using ICT tool.	10	18	41	36	105	2.02	0.95	Incompetent	
27.	Ability to set up local networking system for business education class.	8	22	35	40	105	1.98	0.95	Incompetent	
28.	Precision in sharing topics to students on business education to source for and develop write-ups using the internet.	11	23	28	43	105	2.02	1.02	Incompetent	
29.	Using subject specific application to support students' collaborations for learning.	13	17	33	42	105	2.01	1.03	Incompetent	
30.	Use of ICT for formative and summative assessment in business education.	7	18	43	37	105	1.95	0.89	Incompetent	
31.	Ability to supervise students' project online using ICT tool.	10	24	29	42	105	2.02	1.00	Incompetent	
<b>Grand mean and standard deviation</b>		=					<b>1.99</b>	<b>0.97</b>	<b>t</b>	<b>Incompetent</b>

Result from Table 4 has also shown that none of the items rated above the acceptable mean score of 2.50, to show agreement with the statements. All the items

from 25 to 31 rated below the acceptable mean score, indicating disagreement with the statements. The grand mean and standard deviation of 1.99 and 0.97 indicate that there were strong negative reactions from the academic staff concerning the statements. This result indicated that academic staff in business education did not use ICT facilities to guide learners in searching for information for sustainability in instructional delivery.

### **Discussion of Findings**

The findings of this study indicated that the ICT competency level of academic staff in the COEs was at a low level (minimal). The result findings also generally revealed that academic staff in business studies did have ICT competency required for Sustainability in Instructional Delivery at the COEs. This included: academic staff possession of ICT self-competency of the basic ICT knowledge and skills to teach pedagogy in business education; their competency in use of ICT internet facilities for research in business education; and competency to use ICT facilities to guide learners in searching for information. All these have been pointed out previously in tables.

The result finding from Table 1 indicate that majority of academic staff in business education were not competent to utilize ICT for sustainability in instructional delivery in the classrooms at Delta State colleges of education. This finding is in agreement with Ololube (2006) and Tella (2011) studies which reported that many Nigerian teachers have been unable to find effective ways to use technology in their classrooms or any other aspect of their teaching and learning life. This includes that teachers are not well trained to become highly competent in using ICTs in teaching as a means for educational sustainability and also the level of the educators' exposure to the tool of ICT (the computer) has been very minimal. Supporting the above, Amuche and Iyekekpolor-Solomon (2014) study also reported that majority of the teachers rated their ICT competence as low. This indicates that FUC teachers are not sufficiently equipped to integrate ICT into the school system.

It was also found in the present study under Table 2 that majority of academic staff in business education did not possess the ICT self-competency of the basic ICT knowledge and skills to teach pedagogy in business education for sustainability in instructional delivery at the COEs. This means that academic staff in business education did not possess ICT self-competency (i.e abilities, accuracy and precision) of the basic ICT knowledge and skills to teach pedagogy in business education for sustainability in instructional delivery and such included: using word processor in teaching topics in business education; using video conferencing; using Microsoft excel to draw graphs and teach arithmetic and calculations in business education; use of slides through pages on computer screen and power point for presentations and explaining concepts in the classroom; fixing a projector to a computer; web browsing using various website to find and download information relating to business education; use of other digital resources to support teaching; and preparing lesson plan in business education using computer.

This finding concurs and agrees with Yusuf (2005) study which found that: most teachers in Federal Government Colleges in Nigeria do not have the needed experience and competence in the use of computers either for educational or industrial purposes. A majority of male and female teachers in Federal Government Colleges do not have needed competence in basic computer operations. Most of the teachers in Federal Government Colleges do not have needed skills and knowledge in the use of common computer software. One of the findings from Table 3 also revealed that academic staff in business education did not use ICT internet facilities for research in business education for sustainability in instructional delivery at COEs. This means that academic staff lacked ICT competency: in consistent use of google site as search engines to assist in teaching topics in business education; in use of World Wide Web to download information on business education; in use of facebook to form academic group and gather information relating to business education from other colleagues elsewhere; to retrieve and save information from e-journal in business education; in use of file transfer protocol (FTP) for research and to download files on business education into a computer from another computer in the Internet; and in use of mailing list to form professional group for discussions in business education. This finding

agrees with Amuche and Iyekekpolor-Solomon (2014) study whose results indicated that a greater number of teachers have no access to internet within the college. Dike (2014) study also reported that most of the teachers' cannot effectively use web search engines like Ask Javees, Google, Maama etc, to search for new information and create new knowledge. This situation is a sad one for the students who need to be well abreast with various and current sources of information for references, researches and wider access to knowledge.

The findings under Table 4 revealed that academic staff in business education did not use ICT facilities to guide learners in searching for information for sustainability in instructional delivery at Delta State colleges of education. This means that academic staff in business education lacked competency in the ability to: organize students into working groups and give them assignments to solve online using a computer system; assign students' to carry out project and task to support their thinking and social interaction using ICT tool; set up local networking system for business education class; share topics to students on business education to source for and develop write-ups using the internet; use subject specific application to support students' collaborations for learning; use ICT for formative and summative assessment in business education; and likewise supervise students' project online using ICT tool. This finding agrees with Dike (2014) study which showed that the respondents are not competent in using basic ICT facilities to guide learners to search for new knowledge and information. Dike result statistics further showed that the teachers' with no competence on how to guide students in using ICT facilities to create new knowledge are fifty six percent of the total sample respondents while only five percent of the teachers can guide students on how to use ICT facilities to create new knowledge.

### Conclusion

The information and communication technology can play a great and important role in promoting sustainability in instructional delivery not only in education but likewise in business education. The findings of this study revealed that academic staff ICT competency rated low and incompetent showing their ineffectiveness in the use of ICT in business education as regards to their ICT competency in possessing the basic ICT knowledge and skills to teach pedagogy in

business education; competency in using ICT internet facilities for research in business education; and in using ICT facilities to guide learners in searching for information. Given the present role of ICT throughout the world today and failure to solve this problem, this situation has great consequences on the academic staff of colleges of education in providing quality education for the future generations not only in business education but also other course of study. Based on all the above findings, call on education stakeholders to focus attention on academic staff in COEs to build their ICT competences for sustainability in instructional delivery. On this benchmark, some recommendations have been proffered below.

### Recommendations

1. Constant ICT training and retraining programmes should be organized for academic staff by the State Government and COE institutions management as a way to improve their ICT competency level.
2. Also, ICT facilities should be provided for the academic staff in order to improve their competency in the classroom and likewise possess the basic ICT knowledge and skills to teach pedagogy in business education.
3. Leadership at the COEs should adequately provide ICT internet facilities for academic staff to have access and become competent to carry out researches in business education.
4. Institution management at the COEs in collaborations with the State Government should encourage academic staff ICT competency to guide learners in searching for information for sustainability in instructional delivery by rendering financial assistance for procurement of ICT facilities.

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