



Availability and Utilization of Information and Communication Technology in Teaching Business Education Courses in Tertiary Institutions in Rivers State

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ABSTRACT

The study investigated Availability and Utilization of Information and Communication Technology in Teaching Business Education Courses in Tertiary Institutions in Rivers State. Two research questions, two objectives and two null hypotheses guided the study. Descriptive survey design was adopted in the study. The area of the study was Rivers State. A population of 96 Business Education Lecturers comprising 56 males and 40 females from three tertiary institutions in Rivers State were used for the study. Data for the study was obtained from the respondents through the instrument of four-point rating scale questionnaire titled Availability and Utilization of Information and Communication Technology in Teaching Business Education courses in tertiary Institutions in Rivers state. The instrument was validated by three Lecturers in the Department of Business Education, Rivers State University. It contains 40 items derived from the research questions. Test-retest was used to obtain a reliability coefficient of 0.91 using Pearson Product Moment Correlation. The mean and standard deviation was used to analyse the data and the hypotheses were tested using the z-test at 0.05 significant level. The findings were among others, that the extent of Information and Communication Technology availability in teaching Business Education courses in tertiary Institution in Rivers State is relatively low, Utilization of information and communication technology in teaching business education courses in tertiary institutions in Rivers State is also low. Recommendations were made that Information and Communication Technology should be sufficiently provided in all tertiary institutions in Rivers State as much as ensuring optimum utilization.

BACKGROUND OF THE STUDY

Information and Communication Technology is a technological drift that has brought the world into a global village. It is a spectacle in media and telecommunication which has transformed the economy, industry, politics, business and education. It is as old as man, Man from beginning has always sought after means and ways of communicating with his fellow man. The advent of technology that can transmit information in diverse and amazing means in the history of man is sequel to man's quest to develop reliable means of handling information.

The transmission of information from the teacher to the learner is the central business of education. Information and Communication Technology has proven to be a technological innovation with potential to develop quality education, expanded learning opportunities and make education accessible. Information and Communication Technology uses various information super high way like internet, intranet and extranet to operate. According to Ochoyi and Ukumonu (2008), Information and Communication Technology has the capability to produce higher interactive potentials for users to develop individual intellectual and creative ability. Information and Communication Technology are electronic or computerized devices which are assisted by human and interactive materials that can be used for a wide range of teaching and learning as well as for personal use. They also include the channels of processing and sharing of information using different kinds of electronic devices, it is an umbrella term that includes all technologies for communication and dissemination of information (Ofodu, 2007).

Abe & Adu (2007) define Information and Communication Technology as "an umbrella word that includes any communication device or application encompassing, radio, television, cellular phones, computer and network hardware, software, and satellite systems, video conferencing and distance learning. It is a systematic process of gathering, processing, storing, sending and retrieving of information through the print, broadcast, computing and telecommunication media". Information and Communication Technology as the collection, storage, processing, dissemination and use of information. Akawu (2010) defines Information and Communication Technology as "tool for addressing challenges in teaching and learning".

According to Yusuf and Onassanya (2005), information and Communication Technology has impacted on the quality and quantity of teaching and learning through its dynamic interactive and engaging content, "it has provided real opportunities for individualized instruction; it has the potential to accelerate, enrich, deepen skills, motivate and engage students in learning. It helps to relate school experience to work practices. It creates economic viability for workers, contributes to radical changes in school, strengthen teaching and provides opportunities for connection between the school and the world".

Information and Communication Technology provides opportunity for schools to interface with other schools through mailing list, e-mail, chatrooms and so forth. It offers easier and faster access to wide-range of information and is employed to carry out statistical and multiple mathematical calculations. It is a vehicle through which researchers disseminate research reports and findings. Integrating Information and Communication

Technology in teaching Business Education is essential, because it enhances “effective teaching, effective classroom management, course organization, content creation, self-assessment, self-study collaborative learning, task oriented activities and effective communication. Ellis, Goodyear, Calvo and Posser (2008) stated that teaching and learning of Business Education courses has gone beyond the traditional teaching method where the teacher stands in front of a group of students to disseminate information without students adequately involved and participating to a platform where the teacher becomes a guide and facilitator.

With the aid of information and Communication Technology, teachers can take students beyond traditional methods limits, ensure their adequate participation in teaching and learning process and create vital environments to experiment and explore this new development which is a strong indication that the era of teaching without Information and Communication Technology skills are gone (Ajayi, 2008).

Any classroom teacher with adequate and professional skills in Information and Communication Technology utilization will definitely have his students perform better in classroom learning. Ajayi, (2008) explained further, that these Information and Communication Technology involves methods which include systematized feed back, computer-based operation/ network, audio-conferencing, internet world wide web and computer assisted instruction. The effective use of the various methods of information and Communication Technology in teaching and learning depends on the competency of teachers and students in using them.

The importance of Information and Communication Technology is quite numerous; it is on this note that the Nigeria educational reforms placed emphasis on computer technology in schools during 32 ministerial council meeting of the National Council on Education in 1987 (FRN, 2004); similarly, the Federal Government of Nigeria in National Policy on education (FRN, Revised 2014) acknowledges information and Communication Technology as a product of Technological change and as an innovative factor in education. In this view computer education was introduced as an integral part of Information and Communication Technology in Nigeria educational system. The purpose of this was for the accession of computer literacy and skills which are needed in all aspects of life in the 21st century.

Most progress has been made in recent years in raising Business Education lecturers positive attitude towards Information and Communication Technology by realizing its value for learning through experience and embedded uses. Lecturers of Business Education have been increasingly using information and Communication Technology to prepare their work and to prepare lesson note (Ajayi & Ekundayo, 2007).

Lecturers estimate high impact of Information and Communication Technology in lesson delivery outcome; their perceived impact on teaching methodologies is seen to be much moderate. information and Communication Technology resources capable of being used in teaching and learning include “radio, radio-cassette recorders, televisions, computer, multi-media projectors, fax machines, optic fibers, CD-Rom, internet, electronic notice boards, interactive white boards, slides and slide projectors, overhead projectors, video players and VIDS etc”.

According to Hennessey *et al* (2010) in Kiptalam and Rodriguess (2011), the integration of technology into education is highly dependent on the availability and accessibility of the resources in schools. (Ngwu, 2014) opined that most Information and Communication Technology resources are not adequately available in schools. This therefore lowers the effectiveness of the teachers’ use of Information and Communication Technology resources. Mungai, (2010) pointed the following as reasons of lack of application of information and Communication Technology resources in schools as: lack of qualified teachers to use the facilities, inadequate computers, breakdown of computers, high prices for procurement of these facilities, computer phobia etc.

Egomo, Enyi and Tah. (2012) in their research revealed that the availability of Information and Communication Technology facilities in most Nigerian universities for effective instructional delivery is very low, except for laptops multi-media projectors and internet facilities. They explained that this affects the quality of graduate produced by the various institutions. Teachers from all disciplines have widely integrated Information and communication Technology to improve their style of teaching Donnelly, McGarr and O’Reaily (2011). Thus, the effective use information and Communication Technology significantly contributes to emergence of reforms in teaching and learning processes in all sectors of education.

Integration of Information and communication Technology in teaching has very important significance on “learning attitude of students, creativity, knowledge constructions, learning environment teaching strategies, problem solving skills and understanding concepts using various tools. By the use of Information and communication Technology in teaching teachers can enhance their competency and effectiveness in classroom teaching” (Lei, 2010). Teachers have to recognize and set up classroom settings for assignment in way so that information and communication Technology tools must be integral part of teaching methodology (Wang, 2008). “

Pedagogy, social interaction and technology are three key components of a technology enhanced learning environment, and a sound design of these components should enable teachers to integrate Information and Communication Technology into teaching and learning in an effective way. The use of Information and Communication Technology in education has reshaped the conventional teaching approaches and have provided innovative methods in teaching and learning process .Information and Communication Technology contributes to an increase in a variety of student outcomes and teaching practices. Teaching and learning and learning is improved day by day with integrating of information and Communication Technology in education”.

Statement of the Problem

The relevance of information and communication technology in teaching Business Education is dependent on the availability and utilization of Information and Communication Technology as well as lecturer’s competency in using the available facilities. Ntukidem and Jega (2011), stated that university lecturers do not utilize Information and Communication Technology in the course of lesson delivery because they do not have the required skills, even when the opportunities occur for them to acquire the skills, they do not embrace it.

According to Aginan (2006), the quality of lecturers’ instructional services delivery cannot be divorced from their utilization of Information and Communication Technology facilities in our universities. Aginan explained further that most Nigerian universities have no facilities for cyber cafes,

computer equipped classrooms or high speed internet, and this is one reason of not utilizing the facilities. Egomo, Enyi, and Tah (2012) explained that Information and Communication Technology facilities in most Nigerian Universities is very low except for laptops, multi-media projectors and internet facilities. Ngwu, (2014) also noted that utilization of available Information and Communication Technology is low in tertiary Institutions in Cross Rivers State.

Subsequently, the Association of African Universities (2008) and Yusuf (2005) identified some constraints in application of Information and Communication Technology in teaching in most Nigerian universities which include: inability to provide basic computer literacy, inability to provide basic computer literacy skills relevant to respective academic disciplines, inability to improve students' motivation, inability to collaborate in online teaching and learning with other faculties and students from around the world.

Purpose of the Study

The main purpose of this study was to determine the extent of Information and Communication Technology Availability and Utilization in teaching Business Education Courses in Tertiary Institutions in Rivers State. Specifically, the study sought to:

1. Find out the extent of Information and Communication Technology availability in teaching Business Education courses in tertiary Institutions in Rivers State.
2. Determine the extent of Information and Communication Technology Utilization in teaching Business Education courses in tertiary institutions in Rivers State.

Research Questions

The following research questions were posed for the study.

1. To what extent are Information and Communication Technology available for teaching Business Education courses in Tertiary Institutions in Rivers State?
2. To what extent are Information and Communication Technology utilized in teaching Business Education courses in tertiary institutions in Rivers State.

Research Hypotheses

The following hypotheses were formulated for the study.

- Ho₁: There is no significant difference in the mean responses of male and female Business Education lecturers on the extent of Information and Communication Technology availability in teaching business education courses in tertiary institutions in Rivers State.
- Ho₂: There is no significant difference in the mean responses of Male and Female Business Education Lecturers on extent of Information and Communication Technology utilization in teaching Business Education Courses in Tertiary Institutions in Rivers State.

METHODOLOGY

The descriptive survey research design was adopted for the study with a population of ninety six (96) Business Education Lecturers in tertiary institutions in Rivers State, namely Rivers State University (11), Ignatius Ajuru University of Education (60) and Federal College of Education (Technical) Omoku (25). A total of ninety six lectures of Business Education, fifty six (56) male and forty (40) female were used for the study.

Since the population is small, the entire population was used for the study. The instrument for data collection was a self-structured questionnaire titled Information and Communication Technology Availability and Utilization in teaching Business Education Questionnaire (ICTAUTBEQ). The instrument was designed using the four points modified likert rating scale response pattern of Very High Extent (VHE) = 4 points, High Extent (HE) = 3 points, Low Extent (LE) = 2 points, Very Low Extent (VLE) = 1 point.

The reliability co-efficient of 0.91 was considered adequate for the study by the researcher. This was appropriate for the study because it permitted the researcher to evaluate the stability of the instrument across time. The total of 96 copies of the questionnaire was administered to Lecturers of the three tertiary institutions in Rivers State. All the copies were filled correctly and retrieved representing 100% retrieval rate.

The data for this study were analysed using the mean and standard deviation to answer the research questions, while z-test statistics was used to test the hypotheses at 5 percent level of significance. Any mean item of 2.50 and above was considered as accepted while any item with a mean value below 2.50 was considered as not accepted.

The condition for accepting the hypotheses was if the z-calculated is less than the z-critical at 5 percent level of significance. Significant difference will not be found, but would be found if the z-calculated is greater than the z-critical. This means that the null hypotheses will be rejected.

RESULTS

Research Question 1

To what extent is Information and Communication Technology available for teaching Business Education courses in tertiary institutions in Rivers State?

Table 1: Mean Ratings of Respondents on ICT Availability in Teaching Business Education Courses.

Business Education Lecturers N=96							
S/No	Description	Male = 56			Female =40		
		\bar{X}	SD	Remark	\bar{X}	SD	Remark
1	Sets of Computers	2.19	1.83	L. Ext.	2.55	1.67	H. Ext.
2	Internet Connection	2.19	1.65	L. Ext.	2.12	1.62	L. Ext.
3	Projector Screen	2.12	1.67	L. Ext.	2.00	1.82	L. Ext.
4	Electronic White Board	1.28	0.59	V.L. Ext.	1.97	1.30	V.L. Ext.
5	Electronic Notice Board	2.05	1.31	L. Ext.	1.60	0.88	V.L. Ext.
6	Multi-Media Projectors	1.60	1.59	V.L. Ext.	1.92	1.44	V.L. Ext.
7	Cellular Phone	2.00	1.63	L. Ext.	2.20	1.61	L. Ext.
8	Audio/Video Conferencing	1.94	1.57	V.L. Ext.	1.77	1.54	V.L. Ext.
9	Interactive White Board	2.07	1.51	L. Ext.	2.02	1.60	L. Ext.
10	Digital Camera	2.07	1.79	L. Ext.	1.97	0.98	V.L. Ext.
Total Mean and Standard Deviation		20.22	14.87		19.82	14.46	
Grand Mean and Standard Deviation		2.02	1.48		1.98	1.44	

Source: Field Survey 2018.

From table 1, it is evident that there is low availability of information and communication technology in the tertiary institutions in Rivers State. The grand mean of 2.02 and 1.98 proved that availability of information and communication technology in teaching Business Education Courses in the tertiary institutions in Rivers State are relatively low.

Research Question 2

To what extent is information and communication technology Utilized in teaching Business Education courses in tertiary institutions in Rivers State?

Table 2: Mean Ratings of Respondents on Extent of ICT Utilization in Teaching Business Education Courses.

Business Education Lecturers N=96							
S/No	Description	Male = 56			Female =40		
		\bar{X}	SD	Remark	\bar{X}	SD	Remark
1	Sets of Computers	2.00	1.33	L. Ext.	2.12	1.62	L. Ext.
2	Internet Connection	2.07	1.42	L. Ext.	1.60	0.88	V. L. Ext
3	Projector Screen	2.03	1.72	L. Ext.	2.12	1.81	L. Ext
4	Electronic White Board	1.39	0.62	V.L. Ext.	1.77	1.42	V. L. Ext
5	Electronic Notice Board	1.96	1.17	V.L. Ext.	1.87	1.41	V. L. Ext
6	Multi-Media Projectors	1.85	0.37	V.L. Ext.	1.72	1.09	V. L. Ext
7	Cellular Phone	2.60	1.64	H. Ext.	1.92	1.44	V. L. Ext
8	Audio/Video Conferencing	2.05	1.90	L. Ext.	1.77	0.81	V. L. Ext
9	Interactive White Board	2.00	1.53	L. Ext.	1.65	1.78	V. L. Ext
10	Digital Camera	2.28	1.21	L. Ext.	1.87	1.41	V. L. Ext
Total Mean and Standard Deviation		20.23	12.91		18.41	13.67	
Grand Mean and Standard Deviation		2.02	1.21		1.84	1.37	

Source: Field Survey 2018.

From table 2, mean responses of the respondents on information and communication technology utilization in teaching Business Education courses in tertiary institutions in Rivers State, the result showed low extent of utilization. The grand mean of 2.02 and 1.84 indicates that the extent of information and communication technology utilization in tertiary institutions in Rivers State is low.

Hypotheses 1

There is no significant difference in the mean responses of male and female Business Education lecturers on the extent of Information and Communication Technology availability in teaching business education courses in tertiary institutions in Rivers State.

Table 3: Z-test Analysis of Respondents on Extent of ICT Availability in Teaching Business Education Courses

Lecturers	N	\bar{X}	SD	Df	Z-cal	Z-crit	Decision
Female	56	2.02	1.48	94	1.53	1.96	Accepted
Male	40	1.98	1.44				

Significant at 0.05

Data in table 3 indicated that z-cal (1.53) is less than z-crit (1.96) at 0.05 level of significance at 94 degree of freedom. Therefore the null hypothesis is accepted. There is no significant difference in the mean responses of the male and female lecturers on the availability of information and communication technology in teaching Business Education courses in tertiary institutions in Rivers State.

Hypotheses 2

There is no significant difference in the mean responses of Male and Female Business Education Lecturers on extent of Information and Communication Technology utilization in teaching Business Education Courses in Tertiary Institutions in Rivers State.

Table 4: Z-test Analysis of Respondents on Extent of ICT Utilization in Teaching Business Education Courses .

Lecturers	N		\bar{X}	SD	df	Z-cal	Z-crit	Decision
Male	56	~	2.02	1.29	94	2.18	1.96	Rejected
Female	40	96	1.84	1.37				

Significant at 0.05

In table 4, the calculated value (2.18) is greater than the z-critical value (1.96) at 0.05 level of significant at 94 degree of freedom. Therefore, the null hypotheses is rejected. There is a significant difference in the mean responses of the male and female Business Education lecturers on extent of information and communication technology utilization in teaching Business Education courses in tertiary institutions in Rivers State.

DISCUSSION OF FINDINGS

The study on Availability of Information and Communication Technology in teaching Business Education courses in tertiary institutions in Rivers State revealed that information and communication technology usually used in the teaching and learning process like computers, internet connection, projectors, electronic whiteboard, electronic notice board, multimedia projectors, audio and video conferencing, interactive white board and digital camera are not adequately in use due to non-availability of these facilities, which is in conformity with Aginan (2006) who affirmed that information and communication technology facilities are not available in most tertiary institutions in Nigeria. Also Ngwu (2014) opined that most information and communication technology resources are not adequately available in schools.

The study on extent of information and communication technology utilization in teaching Business Education courses in tertiary institutions in Rivers State revealed that utilization of information and communication technology facilities is low. The result is in conformity with Ngwu (2014), Enyi and Tah (2012) who examined the availability and utilization of information and communication tools for effective instructional delivery in tertiary institutions in Cross River State. It revealed that utilization of information and communication technology facilities are low. Also Ezenwa (2014) examined availability and utilization of information and communication technology as effective management of education in Ebonyi State public secondary schools and it revealed that information and communication technology is available but bedeviled by low utilization.

CONCLUSION

Based on the findings of the study, it is deduced that information and communication technology facilities are not adequately available and utilized by Business Education lecturers and students in the tertiary institutions in Rivers State. However, information and communication technology utilization has good impact in teaching Business Education courses. Utilization of information and communication technology is constrained by some factors such as lack of computers, un-qualified personnel to handle the facilities, no internet connectivity, epileptic power supply, lack of fund etc.

Recommendations

In view of the findings of the study, the following recommendations were made.

1. Information and communication technology facilities should be made available to all tertiary institutions in Rivers State.
2. Business Education lecturers should ensure they utilize information and communication technology in teaching and learning process.

REFERENCES

1. Abe, T.O. & Adu, E.T. (2007). Impact of Information and Communication Technology (ICT) on Teacher Education in Ikere. *Journal of Education, Ikere-Ekiti*, 5, 169 – 175.
2. Aginam, E. (2006). Nigeria Higher Education has Less 5% information and communication Technology Application. Retrieved from File <http://www.Vanguardng.com/article/hmt> retrieved 5th February, 2018.
3. Ajayi, I.A. (2008). Towards Effective Use of Information and Communication Technology for Teaching in Nigeria Colleges of Education. *Asian Journal of Information Technology*, 7(5), 210 – 214.
4. Akawu, A.B. (2010). *Educational Communication Technology Media and Utilization*. Calabar: University of Calabar Printing Press.
5. Donnelly, D. McGarr O, Reailly J (2011). A Frame from Teachers' Integration of Information and Communication Technology into their Classroom practices *comput. Educ.* 57 (2): 1469-1483.
6. Egomo, J.E., Enyi, B. & Tah, M.M. (2012). Availability and Utilization of Information and Communication Technology Tools for Effective Instructional Delivery in Tertiary Institutions. *Global Advanced Research Journal of Educational Research and Review*, 1(8), 190 – 195.
7. Ellis R. A, Goodyear, P, Calvo, RA Prosser M.(2008) Engineering students conceptions of Approaches to Learning through Discussions in Face-to- Face and online contexts. *Learning and Instruction* 18(3): 267-282.

8. Federal Republic of Nigeria (2014). National Policy on Education 4th Ed. Lagos: Nigeria Educational Research and Development Council.
9. Kiptalam, G.K. & Rodrigues, A.J. (2011). Accessibility and Utilization of Information and Communication Technology's among Secondary School Teachers in Kenya. *Computers and Education*, 246 – 263.
10. Lei, (2010). Quantity versus Quality: A New Approach to Examine The Relationship between technology use and student outcomes. *Br J. Edu. Technol.* 41(3):455-472.
11. Mungai, M. (2011). Challenges Facing Computer Education in Kenya Schools. Retrieved March 10 2015.
12. Ngwu, O.G. (2014). Assessment of Availability and Utilization of information and communication Technology Resources in Teaching in F.C.E. Enugu: Eha-Amufu Enugu, Nigeria.
13. Ochoyi, U.I. & Ukumonu, A. (2011). Accessibility and Utilization of Information and Communication Technology's among Secondary School Teachers in Kenya. Retrieved from tpjlcit.rnakccir 20th August, 2012.
14. Ofodu, G.O. (2007). Nigeria Literacy Educators and their Technological Needs in a Digital Age. *Educational Focus*, 1(1), 22 – 30.
15. Wang, (2008)., Job competencies expected of NCE secretaries. *Business education . J. Assoc. Business . Education. Nig.* 1 (8), 151-155
16. Yusuf, M.O. (2005). and Onassanya, A. (2004). Integrating Information and Communication Technology's in Nigeria Tertiary Education: The African Symposium. *An Online Journal of African Educational Research Networks*, 5(2), 43 – 50.