

Comparative Analysis on Utilization of ICT Equipment in Teaching of Business Education Courses Among Federal and States Universities in Nigerian

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Abstract

This research was conducted to ascertain the level of utilization of information and communication technology equipment in teaching of business education courses in the Department of Business Education in Universities in Nigeria. A population of 117 business education lecturers in seven federal and state universities of south-south geo-political zone of Nigeria was used. The instrument for data collection was a four point scale questionnaire. Two research questions were answered using mean (\bar{x}) and standard deviation. Hypotheses 1-2 were tested using t-test statistics. All the hypotheses were tested at 0.05 level of significance. The results shows that Federal universities and state universities differ significantly in the mean (\bar{x}) ratings of utilization of ICT equipment for teaching accounting education courses. The federal universities had a higher proportion of the utilization of ICT equipment compared to the state universities for teaching accounting education courses. The null hypothesis was retained because the critical t-value was greater than the calculated t-value. This is because federal universities and state universities do not differ significantly in their mean (\bar{x}) ratings of utilization of ICT equipment for teaching marketing education courses. The null hypothesis was rejected because the calculated t-value was greater than critical t-value. Conclusion and recommendations were made.

Keywords

Utilization, Teaching, University, Communication, State, Federal, Information

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1. Introduction

Comparative analysis is a process whereby two items are being examined with a view to determine or ascertain the similarities, differences as well as which among them is more utilized or preferred. In the case of this research, the author intends to find out by using a parameter to ascertain which among federal and states universities utilize Information and Communication Technology (ICT) equipment more often than others.

It is however very important and necessary to compare both

federal and state universities level of utilization of information and communication technology. Hence United Nations Educational, Scientific and Cultural Organization [2014] stated that the UNESCO Institute for Statistics (UIS), is the United Nation's repository for statistics on education, science and technology, and culture and communication, that is mandated to administer international data collections on the availability, use and impact of ICT in education. Through the establishment of internationally-comparable and policy-relevant indicators, the UIS contributes significantly towards international benchmarking and monitoring of the integration of and access to ICT in education, which are fundamental for

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policymakers to select priorities and adopt and develop policies. For instance, policymakers may use UIS data to inform decisions related to:

- i) national capacity and/or infrastructure levels (e.g. electricity, Internet, broadband) for integrating new ICT tools in schools;
- ii) the types of ICT currently being neglected and/or emphasized in relation to concerns of usability and affordability (e.g. radio-versus computer-assisted instruction);
- iii) whether ICT-assisted strategies are evenly distributed nationwide;
- iv) whether girls and boys have equal access; v) the types of support mechanisms currently in place or the lack thereof; and vi) the relative level of teacher training provided in relation to the demands placed on them to teach and/or use ICT in the classroom.

According to Yusuf [2005] ICT utilization is the presentation and distribution of instructional content through web environment (e-teaching) or systems offering on integrated range of tools (stand alone computer instruction, CD ROM amongst others) to support learning and communication.

The federal universities are owned and funded by the federal government of Nigeria while the state universities are owned and funded by their respective state governments.

According to Azih [2010] many students are interested in the programme of business education amidst insufficient provision of few instructional facilities and lecturers available for practical work. Again, there is continuous transformation on the office equipment used due to the continuous changes in the office duties performed by business education graduates hence technological advancement is directly boosting the functions of business education graduates as office educators, accounting educators, distributive educators, office educators etc.

According to Ajayi [2008] the effective utilization of ICT in teaching and learning depends on the availability of these facilities and teachers competence in using them. Observation has shown that there are no functional ICT facilities in most technical colleges in Yobe state and this hampers the teacher ability to use them for teaching and learning. Also lack of adequate computer literate teachers, irregular power supply and inadequate funding are another set of obstacle militating against effective utilization of ICT facilities in teaching and learning of vocational and technical education in Yobe state technical colleges. Therefore there is need to address such problems by providing adequate ICT facilities and training needs of the teachers to effectively utilize it in teaching and learning process.

According to Ali [2004] experiences have shown that using the old traditional face-to-face and teacher-dominated classroom interaction alone can no longer maximize teaching and learning experiences. Many countries of the world have recognized the adopted information and communication technology as a driving force for an improved education delivery system. Information and communication technology is the physical structure of network of computer-based systems (hardware, software and media) for purposes of organizing, processing, communicating, accessing, presenting, storing, retrieving and simplifying information, when needed and in the format it is needed.

Kwacha [2007] and Etonyeaku [2009] affirmed that business education has a formidable force that will equip individuals with appropriate skills, knowledge, abilities and competencies that will enable them to be self-employed and self-reliant which lead to sustainable economic development.

According to World Bank, 2000 as cited in Ohiwèrèi, Azih and Okoli [2013] empirical studies have indicated that even teachers who have competence in the use of information and communication technology do not integrate them in their teaching. Problems of quality and lack of resources are compounded by the new realities faced by higher education institutions battle to cope with every increasing student's numbers. Not only have higher education systems expanded worldwide, the nature of the institution within these systems has also been shifting, through a process of differentiation. Pelgrum [2001] opined that obstacles for information and communication technology implementation include the following: Insufficient number of computers, teachers' lack of information and communication technology knowledge/skills, difficult to integrate information and communication technology to instruction, scheduling computer time, insufficient peripherals, not enough copies of software, insufficient teacher time, not enough simultaneous access, not enough supervision staff and lack of technical assistance. Similarly, Lewis and Smith [2002] summarized these barriers as limited equipment, inadequate skills, minimal support, time constraints and the teacher's own lack of interest or knowledge about computer. Kwacha [2007] also noted that the most common problems associated with the effective implementation of information and communication technology are lack of qualified information and communication technology personnel, cost of equipment, management attitudes, inconsistent electric power supply, inadequate telephone lines, particularly in rural areas and non inclusion of ICT programmes in teacher's training curricula and at the basic levels of education.

Information and communication technology equipment are the necessary facilities needed for the effective teaching and learning of business education courses in Nigerian

universities. Unfortunately there is insufficient information and communication technology equipment for this purpose. Hence, Okwudishu [2005] indicated that unavailability of some information and communication technology components in schools hampers teachers' use of it. Azih and Nwosu [2012] noted that tertiary institutions offering business education courses in Ebonyi State of Nigeria do not have enough facilities for the adoption of e-learning in their tertiary institutions.

Aliyu [2006] and Njuku [2006] opined that business education is education aimed at the acquisition and development of suitable skills, competencies knowledge attitude and values which are necessary for entrepreneurship development with emphasis on information and communication technology skills. Ololube [2006] reveals that many universities are not information and communication technology oriented even at this stage of development. The problem therefore would be as a result of inadequate funding by the government, weak infrastructure in place, lack of skilled personnel to instruct, lack of relevant teaching software and also limited access to the internet. These problems have made teaching and learning (pedagogy) especially in the 21st century inadequate.

Webanywhere [2017] stated When technology is integrated into lessons, students are expected to be more interested in the subjects they are studying. Technology provides different opportunities to make learning more fun and enjoyable in terms of teaching same things in new ways. For instance, delivering teaching through taking students on virtual field trips and using other online learning resources. What is more, technology can encourage a more active participation in the learning process which can be hard to achieve through a traditional lecture environment. Students who are engaged and interested in things they are studying, are expected to have a better knowledge retention. As mentioned before, technology can help to encourage active participation in the classroom which also is a very important factor for increased knowledge retention. Different forms of technology can be used to experiment with and decide what works best for students in terms of retaining their knowledge.

Webanywhere [2017] stated further that by using technology in the classroom, both teachers and students can develop skills essential for the 21st century. Students can gain the skills they will need to be successful in the future. Modern learning is about collaborating with others, solving complex problems, critical thinking, developing different forms of communication and leadership skills, and improving motivation and productivity. What is more, technology can help develop many practical skills, including creating presentations, learning to differentiate reliable from unreliable sources on the Internet, maintaining proper online

etiquette, and writing emails. These are very important skills that can be developed in the classroom.

With countless online resources, technology can help improve teaching. Teachers can use different apps or trusted online resources to enhance the traditional ways of teaching and to keep students more engaged. Virtual lesson plans, grading software and online assessments can help teachers save a lot time. This valuable time can be used for working with students who are struggling. What is more, having virtual learning environments in schools enhances collaboration and knowledge sharing between teachers.

The purpose of this study is to determine the level of utilization of information and communication technology in Business Education Departments in both federal and states universities in Nigeria. Specifically, the study will;

- (a) Ascertain the level of utilization of information and communication technology equipment for teaching Accounting Education courses in business education departments between Federal and States Universities in Nigeria.
- (b) Determine the level of utilization of information and communication technology equipment for teaching Marketing Education courses in business education departments in Federal and States universities in Nigeria.

The findings of this study will be of immense benefit to the stakeholders; government, education planners, lecturers, students, researchers and general public. Also the findings of this research will be beneficial to the government and education planners on the issue of policy formulation and implementation. This will make the government to be more committed to the provision of funds, information and communication technology facilities and equipment, personnel resources for effective utilization of information and communication technology in Nigerian universities.

2. Research Questions

- (a) What is the level of utilization of information and communication technology equipment available for teaching Accounting Education courses between Federal and State Universities in Nigeria?
- (b) What is the level of utilization of information and communication technology equipment available for teaching Marketing Education courses between Federal and State Universities in Nigeria?

3. Research Hypotheses

The following hypotheses have been formulated and were

tested at 0.05 alpha levels of significance.

HO₁: The responses of business educators in the level of utilization of information and communication technology equipment for Accounting Education will not differ significantly between Federal and State Universities;

HO₂: The responses of business educators in the level of utilization of information and communication technology equipment for Marketing Education will not differ significantly between Federal and State Universities;

The research aims at the level of utilization of information and communication technology of all universities where business education courses are offered in Nigeria. Specifically all the options in Business education namely; Accounting Education and Marketing Education were covered.

4. Methodology

This study utilized a descriptive survey research design. This is because it seeks the opinion and perceptions of the respondents. The aim of this type of design used for the study has earlier been recommended by Asika [1991], Ali [2006] and Uzoagulu [1998]. The research was carried out in the south-south geo-political zone of Nigeria. This zone comprises Akwa-Ibom, Bayelsa, Rivers, Delta, Edo and Cross-River States. There are six (6) state universities and six (6) federal universities in this zone. Of this number, seven Universities offer Business Education as a programme.

The population of this study comprised all the 117 lecturers of business education in the seven affected universities in the south-south zone of Nigeria. In view of the fact that the population of this study is small, the researcher used all the population. The main instrument for collection of data is a questionnaire titled “Utilization of Information and Communication Technology in Business Education in

Nigeria” (UICBTEN). It is a structured questionnaire which contained items designed to help in the level of utilization of information and communication technology. The questionnaire contained 100 items which elicited data on the level of utilization of information and communication technology in business education in Nigerian universities.

The instrument was subjected to face and content validation by business education experts. These experts were presented with the instrument, purpose of the study, research questions and hypotheses. They all offered their criticism on the face and content validation of the instrument by observing; suggesting and the necessary corrections were effected in the final instrument.

In an attempt to establish the reliability of the instrument, test-retest method was carried out. The result of the test-retest was correlated using the Pearson’s product moment correlation coefficient to obtain the reliability co-efficient of 0.77. According to Osuala [2001] the instrument is acceptable. The instrument was administered on 117 respondents by the researcher with the assistance of trained research assistants from the south-south geo-political zone of Nigeria.

5. Method of Data Analysis

The researcher used simple descriptive statistics to analyze the data gathered from the questionnaire. Mean and standard deviation were used to determine the degree of relevance.

The two directional null hypotheses Ho₁ Ho₂ formulated for the study were tested at 0.05 level of significance using t-test. The SPSS was utilized for the analysis.

For hypotheses 1-2 a null hypothesis was retained when the calculated t-value is less than the critical t-value and rejected when calculated t-value is greater than or equal to the t-critical value.

Table 1. T-test Comparison between States and Federal Universities on Utilization of Information and Communication Technology Equipment for Teaching Accounting Education Courses in Business Education Departments.

Variables	N	\bar{x}	SD	t-cal.	Df	t-tab.	Dec.
Utilization of ICT equipment for Teaching Accounting Education Courses	117						
Federal Universities	57	2.04	0.33	3.386	115	1.960	Rejected
State Universities	60	1.77	0.52				

• P<.05

Table 1 shows the mean (\bar{x}) ratings of utilization of information and communication technology equipment for teaching accounting education courses in federal universities as 2.04 and state universities as 1.77. The calculated t-value is 3.386 and the critical t-value is 1.960. The null hypothesis is rejected because the critical t-value is greater than the calculated t-value. Federal universities and state universities

differ significantly in the mean (\bar{x}) ratings of utilization of information and communication technology equipment for teaching accounting education courses. The federal universities had a higher proportion of the utilization of information and communication technology equipment compared to the state universities.

Table 2. T-test Comparison between States and Federal Universities on Utilization of Information and Communication Technology Equipment for Teaching Marketing Education Courses in Business Education Departments.

Variables	N	\bar{x}	SD	t-cal.	Df	t-tab.	Dec.
Utilization of ICT equipment for Teaching Marketing Education Courses	117						
Federal Universities	57	1.80	0.39	1.263	115	1.960	Retained
State Universities	60	1.70	0.47				

• $P < .05$

Table 2 shows utilization of ICT equipment for teaching marketing education courses in federal universities mean (\bar{x}) score as 1.80 and mean (\bar{x}) for the state universities as 1.70. The calculated t-value is 1.263 and the critical t-value is 1.960. The null hypothesis is retained because the critical t-value is greater than the calculated t-value. This is because federal universities and state universities do not differ significantly in their mean (\bar{x}) ratings of utilization of information and communication technology equipment for teaching marketing education courses.

6. Conclusion

In the light of the findings of this study, the following conclusions were drawn:

The study reveals that federal universities and state universities differ significantly in the mean ratings of utilization of information and communication technology equipment for teaching accounting education courses. The federal universities had a higher proportion of the utilization of information and communication technology equipment compared to the state universities. There is significant difference in the mean ratings of utilization of ICT equipment for teaching marketing education courses.

7. Recommendations

In the light of the above findings and conclusion of the study, the following are therefore recommended.

- Federal and state government should improve student's motivation by providing both desktops and laptops for them;
- University authorities' especially state universities should collaborate in online teaching and learning with others faculty and students from around the world;
- State university authorities should recruit qualified business education information and communication technology teachers;
- Government and university authorities should provide internet facilities in school for teaching and learning process.

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