Strategies for Improved Accessibility and Usage of Information and Communication Technology by Business Educators in Tertiary Institutions in Delta State

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ABSTRACT

The study was designed to identify strategies for improved access and use of ICT in business education in tertiary institutions in Delta State. Research questions were raised to guide the study and two null hypotheses were formulated and tested at 0.05 level of significance for the study. A 24-item structured questionnaire was developed and used for the collection of data. The questionnaire was validated by three experts. Ninety-two (92) respondents made up the population and sample for the study from the five tertiary institutions that run business education in Delta State. Eighty-seven (87) copies of the questionnaire were retrieved from the respondents for data analysis. The arithmetic mean analysis was used for answering the research questions while ANOVA statistics was used to test the null hypotheses. The study found out that the problem of inadequate funding of ICT facilities and poor management of ICT tools are critical factors that are working against the accessibility and use of ICT in business education in tertiary institutions in Delta State. Therefore, the researcher recommended among others, that the operators of business education in tertiary institutions in Delta State as a matter of urgency should apply the funding and the management strategies to gain more accessible to ICT tools and facilities for instructional and administrative activities in business education.

Keywords: Strategies, Accessibility, Usage, ICT, Business Education

INTRODUCTION

Information and communication technologies (ICTs) are becoming increasing important in education and training. They are opening up new learning pathways and can provide wider spread access to education and training. However, the access, use and applications of ICTs in business education are still very limited in many parts of the nation.

Howell and Lundall (2000) stated that ICT broadly refers to all forms of technology used to creates, store, process and use information in its various forms (data, voice, image multi-media presentation and which enable, facilitate and support communication. They explained in specific terms that ICT refers to the convergence of micro-electronics, computers and telecommunications which make it possible for data including text video and video to be transmitted anywhere in the world where digital signals can be received. These digital signals include networks such as fixed wireless and satellite telecommunications, broadcasting networks and applications such as the internet, database management system and multi-media tools.

UNESCO (2002) defined ICT as the combination of informatics technology with other related technologies, specifically communication technology. Informatics is the science of dealing with the design, realization, evaluation, use and maintenance of information processing systems which are hardware and the software. Rodriquez and Wilson (2002) also

define ICTs as the set of activities which is facilitated by electronic means for the processing, transmission and display of information.

Economic and Social Commission for Asia and the Pacific (ESCAP, 2000) refers ICTs as technologies people use to share, distribute and gather information and to communicate the information through computers and computer networks. In the context of this study, ICT is an electronic machine that can be utilized by business educators to improve teaching and learning together with the administrative activities and also to update our educational standard in tertiary institutions in Delta State.

Vocational and technical education in the National Policy on Education (FRN, 2013) is defined and used as a comprehensive term referring to those aspects of the educational process involving in addition to general education, the study of technologies and related sciences and the acquisition of skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life. Business education is one of the vocational and technical education programmes offered in tertiary institutions in Delta State.

Business education revolves round the creation and processing of data and management of information in the system, particularly in Office Technology and Accounting Education (Utoware, 2014). Generally, education emancipates man and makes him capable and fit for the world of work. In the words of Osuala (2004), there is no basis for comparison between the knowledge provided through the traditional teaching method and that given through ICT. In the view of the increasing need for effectiveness, efficiency and continuity compared with the rapid expansion of business outfit and ever increasing commercial transactions, it has become imperative that new entrants into the world of work and particularly business education graduate should be well prepared in the area of ICT utilization (Utoware, 2014).

The Federal Government of Nigeria has made some efforts to improve ICT access and used in teaching and learning in her higher institutions of learning. One of such effort is the partnering with Afrihub-Zinox to provide ICT sustainable intervention at tertiary institutions in Nigeria and the commissioned of Digital Awareness Program (DAP) in tertiary institutions in Nigeria (Ndukwe, 2007). These programmes were involved in making provisions of ICT facilities in as many educational institutions as possible across Nigeria. Under the programme, the selected institutions were equipped with computer laboratories fully installed with about 20 computers, furniture and internet facilities. In most locations, these facilities were backed up with structural renovation of buildings and supply of air conditioners and power generators. In addition, the programme provides basic training for the teachers and students to enable them effectively use the facilities provided.

However, tertiary institutions in Delta State were not beneficiaries of these programmes, therefore, still lack access to ICT facilities in the instruction delivery and administrative activities in business education. Wherefore, the clarion call for strategies needed for aggressive campaign to improve business educators' access and use of ICT in tertiary institutions in Delta State. Funding is one of the strategies that can improve access and use of ICT by business educators in tertiary institutions in Delta State. Government and private sector at all levels should make ICT a matter of priority to provide special funds specifically needed for the training of business educators in ICT skills acquisitions and for the provision ICT facilities for the teaching of students the knowledge and skills of ICT to prepared for world work (Kwache, 2002). Management strategy is also required to enhance the access and use of ICT in business education because it entails planning, controlling and organizing workshop that will help the staff and students to efficiently manage and handle ICT tools in the instruction delivery which will the usage of ICT facilities by business educators.

STATEMENT OF PROBLEM

Business educators are expected to have access to ICT facilities and be able to use them in their administrative activities and also in the teaching and learning process. They are expected to use ICT facilities for instructional delivery to enables learners to have the knowledge of ICT as an important tools to meet their information and learning needs. Challenges to access and use of ICT in business education instructional delivery and administrative work include lack of funds to provide infrastructure, facilities and tools, poor implementation of curriculum development and design, lack of personnel development, among others. Therefore, the problem posed by the study is: what are the strategies for improved access and use of ICT in business education in administrative activities and instructional delivery in tertiary institutions in Delta State.

PURPOSE OF THE STUDY

The main purpose of this study was to examine strategies for improved access and use of ICT in tertiary institutions in Delta State. Specifically, the study sought to:

1. Identify funding strategies that can improve access and usage of ICT facilities in business education in tertiary institutions in Delta State.

2. Examine management strategies that can improve access and usage of ICT facilities in business education in tertiary institutions in Delta State.

RESEARCH QUESTIONS

The following research questions were raised to guide the study:

1. What are the funding strategies to facilitate improved access and usage of ICT in business education in tertiary institutions in Delta State?

2. What management strategies should be used to improve access and usage of ICT in business education in tertiary institutions in Delta State?

HYPOTHESES

The following null hypotheses were formulated and tested at 0.05 level of significance:

1. There is no significant difference between the responses among business education lecturers in the five tertiary institutions in Delta State on the funding strategies to facilitate improved access and use of ICTs in business education.

2. There is no significant difference between the responses among business education lecturers in the five tertiary institutions in Delta State on what management strategies should be used to improve access and use of ICTs in business education.

METHODOLOGY

A survey research design was adopted for the study. The area of the study was Delta State and the study was conducted in the five tertiary institutions that run business education programmes. The population and sample for the study comprised all the ninety-two business education lecturers in the five tertiary institutions. As gathered from the various institutions; 8 business education lecturers in Delta State University, Abraka, 20 business education lecturers in College of Education, Warri, 24 business education lecturers in College of Education, Agbor, 14 business education lecturers in College of Physical Education, Warri, and 26 business education lecturers in Federal College of Education (Technical), Asaba. The

data collection instrument was a 24-item structured questionnaire divided into two sections for each of the research questions. Data collected were analyzed by using arithmetic mean to answer the research questions while analysis of variance (ANOVA) was used to test the null hypotheses at 0.05 level of significance. The responses scale was a five point Likert scale of Strongly Agree (SA) 5 points, Agree (A) 4 points, Undecided (UD) 3 points, Disagree (D) 2 points and Strongly Disagree (SD) 1 point. The respondents were expected to check the appropriate point on the scale to register the extent of their agreement with a particular statement made in the questionnaire.

The questionnaire was validated by three experts, two in business education and one in measurement and evaluation department from Nnamdi Azikiwe University, Awka, Anambra State, Nigeria. Their recommendations were integrated to produce the final copy. The reliability of the questionnaire was established through a pilot testing using 15 business educators of Nnamdi Azikiwe University, Awka, Anambra State and 0.83 coefficients was obtained using Cronbach Alpha analysis. The questionnaire was administered by the researcher with the help of four research assistants after due orientation. The decision rule for accepting or rejecting, was to reject the null hypothesis if the F-calculated value was greater than the F-critical value or otherwise accept.

FINDINGS OF THE STUDY

This section is designed to present the data collected for ease of analysis and interpretation. Research question 1 and 2 were answered using arithmetic mean while the null hypotheses was tested using a one way analysis of variance (ANOVA)

Research Question 1

What are the funding strategies to facilitate improved access and usage of ICT in business education in tertiary institutions in Delta State?

Table 1. Mean Responses of Respondents on the Funding Strategies to Facilitate Improved Access and Usage of ICT in Business Education in Tertiary Institutions in Delta State

S/N	Funding Strategies Items	Mean	Decision
1	Establishing ICT Trust Fund	3.81	Agree
2	Increase direct financing of tertiary institutions	3.43	Agree
3	Sourcing fund from philanthropists	3.66	Agree
4	Sourcing fund from businesses and social organizations	3.69	Agree
5	Mandatory contributions from students and staff	3.76	Agree
6	Borrowing money from the bank in form of loan	3.85	Agree
7	Engaging in short term trading in stock exchange market	3.54	Agree
8	Sourcing fund from international organizations	3.88	Agree
9	Donations from alumni associations	3.60	Agree
10	Donations from industries	3.98	Agree
11	Grant from international agencies	3.70	Agree
12	Sourcing fund from Educational Tax Fund	3.80	Agree

Table 1 showed that all the funding strategies to facilitate improved access and use of ICT in business education in tertiary institutions in Delta state were affirmatively agreed by all respondents to be strategies to enhance the access and use of ICT in business education.

Research Question 2

What management strategies should be used to improve access and usage of ICT in business education in tertiary institutions in Delta State?

Table 2. Mean Responses of Respondents on what Management Strategies should be used to Improve Access and Usage of ICT in Business Education in Tertiary Institutions in Delta State

S/N	Management Strategies Items	Mean	Decision
1	Planning the use of ICT facilities in terms of preparing for and predicting future	4.03	Agree
2	Organizing ICT tools and facilities well by employing an expert who will assist the staff and students	3.74	Agree
3	Coordinating every aspect of ICT facilities using management information system	3.59	Agree
4	Planning and budgeting for ICT facilities maintenance	3.55	Agree
5	Staffing should be based on merit	3.97	Agree
6	Providing appropriate training to all staff involve in ICTs usage	3.85	Agree
7	Establishing learning resource centre of ICT	3.64	Agree
8	Allocating adequate fund for ICT management	4.51	Agree
9	Evaluation of the activities of ICT usage in the institutions	3.72	Agree
10	Having an ICT induction manual to help staff and students to know what system are in place	3.91	Agree
11	Operational personnel should use proprietary skills	3.75	Agree
12	Workshops and seminars should be organized on the training of information networks management	3.98	Agree

Table 2 also showed that all respondents agreed on the listed items of management strategies that should be used to improve access and use of ICT in business education in tertiary institutions in Delta state.

Hypotheses Testing

Hypothesis One

There is no significant difference between the responses among business education lecturers in the five tertiary institutions in Delta State on the funding strategies to facilitate improved access and use of ICTs in business education.

Table 3. Analysis of Variance of Difference between the Mean Responses of Respondents on the Funding Strategies to Facilitate Improved Access and Use of ICTs in Business Education

Source of Variance	Sum of Square	Degree of Freedom	Mean of Square	F- Calculated	F- Critical
Between Group	1.67	5	0.84		
Within Group	22.40	82	0.16	0.27	2.33
Total	*24.07*	*87*			

Guided by the decision rule to reject the null hypothesis if F-calculated was greater than the F-critical value or otherwise do not reject it; and considering the fact that from the analysis of variance, F-calculated of 0.27 was less than the F-critical value of 2.33, the null hypothesis was **Accepted**. It can, therefore, be concluded that there was no significant difference between the responses among business education lecturers in the five tertiary institutions in Delta State on the funding strategies to facilitate improved access and use of ICTs in business education

Hypothesis Two

There is no significant difference between the responses among business education lecturers in the five tertiary institutions in Delta State on what management strategies should be use to improve access and use of ICTs in business education.

Table 4. Analysis of Variance of Difference between the Mean Responses of Respondents on what Management Strategies should be Use to Improve Access and Use of ICTs in Business Education

Source of Variance	Sum of Square	Degree of Freedom	Mean of Square	F- Calculated	F- Critical
Between Group	0.24	5	0.99		
Within Group	161.97	82	1.15	0.87	2.33
Total	*163.17*	*87*			

Guided by the decision rule to reject the null hypothesis if F-calculated was greater than the F-critical value or otherwise do not reject it; and considering the fact that from the analysis of variance, F-calculated of 0.87 was less than the F-critical value of 2.33, the null hypothesis was **Accepted**. It can, therefore, be concluded that there was no significant difference between the responses among business education lecturers in the five tertiary institutions in Delta State on what management strategies should be use to improve access and use of ICTs in business education.

DISCUSSION OF FINDINGS

Table 1, revealed funding strategies to enhance access and use of ICT in business education and all respondents were in agreement with all the items to be strategies to enhance the access and use of ICT in business education. It is also showed that trust development fund should establish and administer by telecommunication regulators to finance the expansion of universal access to ICT in tertiary institutions. This finding is in line with Mudhai (2004) who revealed that one way of becoming more familiar and influence the policy process is to ensure that educational board and ICT advocates should involved in the process to establish Trust Development Fund policies and implementation plans.

Table 2, showed the analysis of management strategies to gain more access and use to ICT in business education. All respondents agreed on the listed items of management strategies that should be used to improve access and use of ICT in business education in tertiary institutions in Delta state. The findings of the management strategies was supported by the findings of Nwachukwu (1996) that says planning is the first and perhaps the most important function of ICT management which enhances access and use of ICT in tertiary institutions.

Table 3, showed the result of the analysis of variance of difference between the responses among business education lecturers in the five tertiary institutions in Delta State on the funding strategies to facilitate improved access and use of ICTs in business education. It was

found out that there was no significant difference in the responses among business education lecturers on the funding strategies for improved access and use of ICT in business education. Therefore, the null hypothesis was accepted, implies that advocating for and developing governmental funding programme enhances access and use of ICT in tertiary institutions. This was in line with the view of Kozoma (2000) who found out that implementing government reforms policies on ICT use and access in tertiary institutions will enhance the accessibility and use of ICT in tertiary institutions.

Table 4, also showed the analysis of variance of difference between the responses among business education lecturers in the five tertiary institutions in Delta State on what management strategies should be used to get more access and use to ICT tools and facilities in business education. It was also found out that there was no significant difference in the responses among business education lecturers on what management strategies should be used to improve access and use of ICTs in business education. Therefore, the null hypothesis was accepted. This revealed that organizing ICT tools and facilities well will keep the institutions accessible to and use of ICT. This is supported by the view of Ndu and Ocho (1997) which says that maintaining the ICT tools and facilities can be a process of keeping the institutions sustainable and suitable for better access and use of ICT.

The entire findings of this study agree with the view of Osuala (2004) who described budgeting for information technologies equipment as a means of access to the use of ICT in business education. He revealed that budgeting helps an institution to perform its operations more effectively and also assist management in maintaining a programme of cost effectiveness with regard to the institutional operations. Jorge (2005) was also of the view that controlling ICT activities help to enhances access and use of ICT tools, which is in support of this present study.

CONCLUSION

The findings of this study revealed that business education lecturers in tertiary institutions in Delta State do not have access to ICT tools and facilities and equally do not make use of these ICT tools and facilities due to poor funding and poor management of the little available ICT tools. Therefore, the study concluded that, the operators of business education should ensure that lecturers have equitable use and accessibility to ICT facilities and lecturers should be knowledgeable about the ICT tools and facilities to enable them adapt maintenance culture to sustain the available ones.

RECOMMENDATIONS

Based on the findings and conclusion of this study, the following recommendations are made:

1. Administrators of business education should, as a matter of urgency, adopt funding strategies to provide ICT infrastructure to tertiary institutions of their operations in Delta State.

2. The administration of tertiary institutions in Delta State should spend more of their budgeting allocation to the acquisition of ICT infrastructure to better equip the lecturers.

3. Given the present poor management culture of our tertiary institutions, the administration of tertiary institutions in Delta State should encourage the lecturers on maintenance culture to sustain the few ones provided.

4.   Government should ensure the growth of ICT from primary to tertiary education level through the development of relevant ICT curricula for each level of education.

5.   Government should concentrate on ICT policies in the provision of ICT tools and facilities in tertiary institutions in the State.

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