

Extent of Utilization of Information and Communication Technology in Business Education: Implication for Effective Instructional Delivery

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ABSTRACT

The study examined the extent of utilization of ICT tools in Business Education and its implication for effective instructional delivery. The study employed the descriptive survey design. Two research questions were raised and one null hypothesis was formulated to guide the study. A population and sample comprised all the one hundred and fifty (150) Lecturers of Business Education in the public tertiary institutions (Colleges of Education, Polytechnics and the University) in Delta State. Data were collected through a ten-item structured questionnaire for each research question with a five point Likert-type rating scale. The questionnaire was duly validated and reliability coefficient was established at 0.83 using Crombach Alpha test. The analysis of data collected was done using mean and standard deviation and analysis of variance (ANOVA) was used at 0.05 level of significance for testing the null hypothesis. The study found out that the extent of utilization of ICTs in teaching business education posed challenges for effective teaching/learning of business education. The finding also shows that Lecturers of business education of our education system are not fully receiving pedagogical and manipulative training in ICT which causes these challenges of poor instructional delivery using ICTs tool as instructional materials. Hence, the study recommends that In-service training should be organized on regular basis for lecturers in Business Education for effective utilization of the tools in instructional delivery.

Keywords: Information and communication technology, Business education, Instructional delivery

INTRODUCTION

The emergence of information and communication technology (ICT) has totally revolutionized the way we access, process, store, retrieve and disseminate information within organizations or across the globe, whether it is in vocal, pictorial, textual numeric, or macro-electric based hence ICT is now a topical issue in Nigeria (Ubulom, Enyekit and Onuekwa, 2011). They further said that, it may not be because it is relatively new in this part of the world, but because ICT encompass a range of technologies and application systems of microprocessors that have had profound impact on the society and its way of life.

Information and communication technology is daily giving rise to new concepts, new ideas and making impact not only in the industries/businesses but also in the education sector. ICT has simplified education through the utilization of electronics media, internet and among others. According Ezeabi and Obeyi (2008), the production and introduction of calculators and computer in the education system worldwide has helped in simplifying teaching and learning in schools, thereby promoting national stability and economic survival.

The entire world has become a global village through information and communication technology. The new wave of Business Education and ICT is a dynamic change cutting

across every country; a change that is being experienced even more in developing countries. ICT, globalization and educational technology cannot be ignored by any nation hence there is need for continued application of ICT in all spheres of educational activities in order to achieve the much desired growth which will enable enhanced technological, social and economic advancement in the developed world (Ibe, 2010).

Business Education revolves round the creation and processing of data and management of information in the system, particularly in office technology and Accounting education. 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 outfits, and ever increasing commercial transactions, it has become imperative that new entrants into the world of work and in particular Business education graduates, should be well prepared.

The convergence of tools of ICT with the education process has brought to the fore emerging competencies which are not present in the various curricula for producing office workers. Emerging technologies under ICTs, such as E-commerce, the internet, peach trees, multimedia system and other digital communication means are positively impacting on the ways of educational instructions. Despite this supposed impact, the products of Nigerian educational systems are not receiving pedagogical and manipulative training through full utilization of ICT in educational instructions. The paucity of resources of ICT in Nigeria educational system appears to make her a poor ICT based educational instruction country.

Business Education graduates may find themselves working in offices where ICT equipment abounds or teach in a school where ICTs are used as instructional materials. Such equipment and their accessories may challenge them. In the light of the above, it is clear that, it is only through the proper implementation of ICT assisted learning that graduates of Business Education would be relevant in fully automated office of today. This has made it necessary for management to rely on the unlimited capacity of ICT. The internet has been described as a global connection of many different types of computer networks linked together. It enables you exchange information with other computer users.

The electronic mail (e-mail) enables one to communicate through electronic means (computer and telephone handsets). Substantial amount of mails are sent through this method. Teleconferencing is another interesting aspect of ICT, which allows the ability of user to converse with others in the actual time, speaking and being seen through their screen. Thus, allowing group of users from different geographical locations to be linked together. In the words of Aguomo (2007), all the technological advancement means are all the processes that integrate computer and communication device with the traditional manual process. According to him, virtually every office function could be automated, thus enhancing the office workers' job.

STATEMENT OF THE PROBLEM

Information and communication technologies are already a vital factor in successful development of education. Education for new emerging societies requires ICT to facilitate more meaningful learning. ICTs knowledge are not simply means of improving society only, but main products of improving efficiency in the office. ICT has become a critical tool for professional training. The sooner learners know how to use products of ICT, the easier they can find their way to capture the newest methods of data acquisition, transformation and utilization to improve knowledge.

The level of development and utilization of modern technologies in different countries is determined not only by their material resources but, to a large extent, by the degree of society's ability to produce, absorb and apply new knowledge. These processes are largely driven by information and communication technologies where scientific knowledge and information increasingly determine new patterns more effectively. The era of new ICTs does not eliminate the most difficult problems that the world of education faces now which have to be solved irrespective of whether the new technologies are adopted or rejected. Nevertheless, training and development, social and professional requirements heavily rely on the introduction of ICT into education. The alternative to the above is to lag behind these developments chronically and consequently fail to meet the challenges of the new world order.

According to Nwanewezi (2010), the availability and utilization of ICT in the teaching and learning have generated serious concerns. ICT, despite its numerous uses in the teaching and learning process could be lagging in several tertiary institutions for the teaching/learning of Business Education courses. This is because there might still be a large number of lecturers who still have to fully appreciate the importance of ICT in realizing their teaching objectives, while many may find themselves incompetent to handle ICT as instructional delivery tool. Therefore, the problem of this study is to determine the extent of utilization of ICT as instructional delivery media and consequently the availability of ICT tools for instructional delivery.

PURPOSE OF THE STUDY

The purpose of this study is to examine the inter-dependency between the extent of utilization of ICT tools in Business Education and its implication for effective teaching and learning. Specifically, the study shall:

1. Determine the extent of availability of the required ICT tools for instructional delivery in the institutions offering Business Education.
2. Examine the extent Lecturers of business education utilize ICT tools for instructional delivery.

RESEARCH QUESTIONS

For the purpose of carrying out this study, two research questions were generated to guide the study:

1. To what extent are the required ICT tools for effective instructional delivery available in the institutions offering Business Education?
2. To what extent do Business Education lecturers utilize ICT tools for effective instructional delivery?

HYPOTHESIS

H₀: There is no significant difference between the mean responses of Business Education lecturers in the University, Polytechnics and Colleges of Education in Delta State regarding the extent of utilization of ICT tools as effective instructional delivery medium of Business Education courses.

METHODOLOGY

Descriptive survey design was adopted for the study. The population and sample for the study comprised all the one hundred and fifty (150) lecturers of business education in the eight (8) public tertiary institutions (one University, three Polytechnics and four Colleges of

Education) in Delta State. As gathered from the various institutions, 14 lecturers in the University, 55 lecturers in the Polytechnics and 81 lecturers in the Colleges of Education. The data collection instrument was a ten-item structured questionnaire for each of the research question and was analyzed by using mean and standard deviation while analysis of variance (ANOVA) was used to test the null hypothesis at 0.05 level of significance.

A 5-point Likert-type rating scale was used to elicit the rating responses of respondents as: very high extent (5), high extent (4), moderate extent (3), low extent (2) and very low extent (1) for research question two, while; very much available (5), much available (4), averagely available (3), little available (2) and very little available was used for research question one. 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 on how Lecturers of business education utilize ICT tools for instructional delivery and the extent of the availability of the needed ICT tools for instructional delivery in the institutions offering Business Education.

The questionnaire was validated by three experts, one each in business education, ICT and measurement and evaluation 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 ten lecturers of business education of the Federal College of Education (Technical), Umueze, Anambra State and 0.83 coefficients was obtained using Crombach alpha analysis. The questionnaire was administered by the researcher with the help of two 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 1-2 were answered using mean and standard deviation while the null hypothesis was answered using a one way analysis of variance (ANOVA).

Research Question 1

To what extent are the required ICT tools for effective instructional delivery available in the institutions offering Business Education?

Table 1. Respondents' Mean Distribution for the Availability of Required ICT Tools for Instructional Delivery

<i>ICT Instructional Delivery Media</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Decision</i>
Internet	1.25	0.43	VLA
Multi-media Projector	3.70	0.69	AA
E-mail	3.76	0.42	AA
Interactive Radio	1.32	0.33	VLA
Teleconferencing	3.07	1.04	AA
Audiotapes	4.80	0.30	MA
Computers	4.75	0.44	MA
Photocopier	4.88	0.34	MA
Fax Machine	1.34	0.22	VLA
Dictating Machine	4.38	0.49	MA

Keys: LA (Very Little Available), AA (Averagely Available), MA (Much Available)

Table 1, shows that of all listed ICT tools required for instructional delivery, only audiotapes, computers, photocopiers and dictating machine were much available, multi-media projectors, e-mail and teleconferencing were averagely available while internet, interactive radio and fax machine were very little available.

Research Question 2

To what extent do Lecturers of business education utilize ICT tools for effective instructional delivery?

Table 2. Respondents' Mean Distribution of their Extent of Utilization of ICT Tools for Instructional Delivery

<i>ICT Instructional Delivery Media</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Decision</i>
Internet	1.13	0.35	VLE
Multi-Media Projector	2.98	1.14	LE
E-Mail	1.75	0.22	VLE
Interactive Radio	1.75	0.44	VLE
Teleconferencing	1.00	0.84	VLE
Audiotapes	3.08	1.05	ME
Computers	4.58	0.36	HE
Photocopier	4.40	0.59	HE
Fax Machine	1.25	0.44	VLE
Dictating Machine	1.78	0.42	VLE

KEY: VLE (Very Low Extent), LE (Low Extent), ME (Moderate Extent), HE (High Extent)

Table 2, shows that computers and photocopiers were the most utilized ICT tools for instructional delivery medium, while Audiotapes were the next most utilized ICT instructional media. Unfortunately, the internet, e-mail and multi-media projector which were supposed to be the core ICT tools for effective instructional delivery for today's education were not being utilized.

Hypothesis

There is no significant difference between the mean responses of Business Education lecturers in the University, Polytechnics and Colleges of Education in Delta State regarding the extents of utilization of ICT tools as effective instructional delivery medium of Business Education courses.

Table 3. Analysis of Variance of Difference between the Mean Responses of Respondents on Extent of Utilization of ICT Tools for Instructional Delivery

<i>Source of Variance</i>	<i>Sum of Square</i>	<i>Degree of Freedom</i>	<i>Mean of Square</i>	<i>F- Calculated</i>	<i>F- Critical</i>
Between Group	0.10	2	0.05		
Within Group	6.50	147	0.04	1.25	3.06
<i>Total</i>	<i>6.60</i>	<i>149</i>			

Guided by the decision rule to reject the null hypothesis if F-calculated is greater than the F-critical value or otherwise do not reject it; and considering the fact that from the analysis of variance, F-calculated is less than the F-critical value, the null hypothesis is not rejected. It can therefore be concluded that there is no significant difference in the opinion of lecturers of business education on their extent of utilization of ICT tools for instructional delivery.

DISCUSSION OF FINDINGS

In Table 1, the respondents' responses on the availability of the required ICT tools for instructional delivery were indicated. The result showed that out of all the listed ICT tools that are required for effective instructional delivery; audiotapes, computers, photocopiers and dictating machines were much available. This result has therefore, indicated that most of the essential ICT tools are still average or very little available in most of our institutions of higher learning offering Business Education programmes.

The result in Table 2 shows the responses of Lecturers of business education on their extent of utilization of ICT tools for instructional delivery. The analysis of the result based on research Question 2, showed that the computer and photocopiers were the most utilized ICT tools for instructional delivery medium with a mean rating of 4.58 and 4.40 respectively with standard deviation of 0.36 and 0.59 respectively while audiotapes and multi-media projectors respectively were the next most utilized ICT instructional delivery media. Unfortunately, the internet and e-mail which were supposed to be the core ICT tools instructional delivery for today's education were not being utilized.

Using the analysis of variance (ANOVA) to check the significant difference between the mean responses of respondents on the extent of utilization of ICT tools for instructional delivery, it was found that there was no significant difference in the opinion of lecturers of business education on their extent of utilization of ICT tools for the instructional delivery. Therefore the null hypothesis was accepted.

The entire findings of this study agrees with the opinion of Ilori and Ogundari (2008), which stated that emerging technologies such as E-commerce, the internet and other ICT tools are positively imparting on the ways we carry out our daily activities; yet the products of our education system are not fully receiving pedagogical and manipulative training in ICT.

Ohakwe and Okwuanaso (2006) contented that the knowledge of computer application software such as spreadsheet, excel, computer – aided design, and database are important skills in teaching and such skills should be impacted. On the recipients of business education, these would make them to compete favorably in their education endeavors. The above study supported this current study on the importance of ICT in teaching-learning process. Umaru (2003) in Nworgu (2008) in their studies asserted that computer aided instruction is a programme of instruction or package presented in software for instructional purpose. They further stated that ICT made the teaching and learning process efficient, most effective easier and less cumbersome. Nworgu (2008) further cited Ezeliora (2000) that the use of computer aided instruction provides the learner with different background and characteristic.

Nevertheless, Oladeji (2007) in his study also viewed that, there is no basis for comparison between the knowledge provided through the traditional teaching method and that given through information and communication technology. In view of the increasing need for effectiveness, efficiency and continuity, compared with rapid expansion of education and ever increasing need for new technologies, it has become imperative that new entrants into the world of work and in particular office technology graduates, should be well prepared.

CONCLUSION

The analysis of data in this study has led to certain findings from which the following useful conclusions are drawn:

The utilization of ICT for instructional delivery will, no doubt, improve the teaching and learning of Business Education in tertiary institutions in Delta State and since the use of ICT for instruction is not yet in full force in the tertiary institutions in Delta State, there is the need for in-service training of all lecturers in the area of ICT to bring about improved awareness on the benefits of ICT assisted learning.

RECOMMENDATIONS

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

1. In-service training should be organized on regular basis for lecturers in Business Education for effective utilization of tools in teaching.
2. Government should sponsor the re-training of business education lecturers on the utilization of ICT in education.
3. In view of the fact that the utilization of ICT instructional delivery will motivate teachers and students, it is recommended that lecturers in Business Education should move beyond mere awareness and fully embrace the use of ICT in the delivery of their lessons in the classroom.
4. Government low-level investment in ICT should be reversed through the provision of enabling environment for the full utilization of ICT for instructional delivery in all tertiary institutions in the country.

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