

EXTENT OF UTILIZATION OF AVAILABLE E-LEARNING TECHNOLOGIES BY BUSINESS EDUCATORS IN TERTIARY INSTITUTIONS IN EDO AND DELTA STATES OF NIGERIA

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Abstract

This study was intended to determine the extent of utilization of e-learning technologies by business educators in tertiary institution in Edo and Delta states of Nigeria. Five research questions were raised to guide the study, while three hypotheses were formulated and tested at 0.05 level of significance. Descriptive survey research design was employed for the study. A total of 173 practicing business educators selected from the universities, polytechnic and colleges of education in Edo and delta states were used for the study. The data collection instrument was a 56-item questionnaire that was structured on a five point likert type rating scale. The reliability coefficient of the instrument was further computed using Spearman Brown Prophecy' Formula which yielded the score of 0.50, 0.88, 0.87, 0.73 and 0.86 respectively. The data collected for the study were analyzed using mean and standard deviation for the five research questions, while the t-test and One-way Analysis of Variance (ANOVA) were also used for testing the null hypothesis. The major findings that were gotten from the study include the following:

- Business educators rarely utilize e-learning technologies such as; hard ware, Software and internet technologies in teaching business education courses in tertiary institutions in Edo and Delta States of Nigeria.*
- Gender has no effect on the extent at which business educators in tertiary institutions in Edo Delta of Nigeria utilize internet facilities in teaching business education courses in their various institutions.*
- The extent of utilization of e-learning technologies by business educators in tertiary institutions in Edo and Delta has no significant difference on the institution type and ownership.*

Based on the findings of the study, it was recommended that, the federal and state governments should make adequate budgetary allocation for the provision of computers, internet and other telecommunications technologies in tertiary

institutions in Nigeria. While business educators should as a matter of urgency update their knowledge in e-learning technology. The implication of this is that, inadequate exposure and provision of e-learning equipment and facilities will lead to the production of graduates whom may not likely be practically exposed where skill acquisition is highly demanded. Finally, suggestions for further research were given.

Key works: E-learning Technologies, Tertiary Institutions, Business Educators and Utilization.

1. Introduction

Tertiary education has largely contributed in the development of knowledge by providing an enabling environment for innovation and the building of human capital that is required for a potential future economy. Towards the end of the 20th century and at the dawn of the 21st century. It becomes apparent that national development depends on educational advancement which in turn depends on technological development. This equally led to the introduction of information and communication technologies, which gave room to the new concept called e-learning (Okiki, 2011). E-learning is the systematic integration of modern technologies and equipment; telecommunication and ICT resources to create experiences that seek to improve human beings. Anowor (2011), observes that e-learning encompasses learning at all levels (both formal and informal) that uses ICT and instructional media in form of: hardware and software technologies in the development and transformation of skills and concept-based knowledge.

E-learning technologies have the potentials for revolutionizing the way we teach and learn whether at the lower or at tertiary institutions in Nigeria. However, for the purpose of this research work, the definition of e-learning technology will be restricted to that of Allen and Seaman (2003); Stockley (2003); and Horton (2005), who view e-learning technologies as those electronic learning technologies like the internet, software applications, hardware components and digital technologies that are used to support the teaching and learning processes.

The ever-growing need for ICT for national development led the Nigerian Government in 1998, to enact a policy on computer education. More so, the relevance of this computer education moved the Nigerian Government in its National Policy on Education (FRN, 2004) to state that;

1. The Government will provide basic infrastructure and training on computer at primary school;
 2. Computer education is a pre-vocational elective at the junior secondary school; and that;
 3. Computer education is a vocational elective at the senior secondary school.
- Considerably, at the tertiary education level, computer literacy which is seen

as a compulsory academic program appears to have not resulted in any meaningful change on the fundamentals necessary for teaching and learning. Most faculties of education and schools of business studies in Nigerian tertiary institutions do not have adequate state-of-the-art laboratories for ICT training. Classrooms are not satisfactorily equipped for ICT usage (Marir, 2009B). Thus, teachers' trainers and trainee teachers do not seem to have adequate access to e-learning technologies within their schools. Rather, the few ones available are used for administrative services and dissemination of information among staff.

The introduction of modern electronic technologies into education has transformed the totality of the educational industry. The e-learning technologies, such as computer hardware, digital, software applications and internet facilities (like search engine, and Modem) have been an indispensable ingredient for execution of research works, preparation of lesson notes and presentation of instruction by business educators. Indeed the use of e-learning technologies for teaching business education courses help in generating a friendly atmosphere to empower teachers to meet with the challenges of accelerating technological advancement in education. Business education is that aspect of vocational education programme that provides its recipients with the requisite skills that will enable them to function effectively in the competitive business environment. According to the National Policy on Education (FRN, 2004), business education is considered as a veritable instrument for preparing students for the enterprise as employees, employers, entrepreneurs and self-employed. It also provides knowledge in the special areas of human activities including methodologies in instruction; it equips individuals with saleable and functional skills, knowledge, values and attitudes relevant to the business environment. For business education to meet the mission of preparing business education graduates in the 21st century world of work. Information and communication Technology (ICT) must be embraced in training students

2. Statement of the Problem

The federal government policy on computer education (Federal Republic of Nigeria, 2004) provides that government would provide the necessary infrastructure on computer or Information Technology (IT) with the aim of institutionalizing Information and Communication Technology (ICT) in the educational system. This presupposes that computer assisted hardware and software facilities would be available for the education and training of teachers in both lower and higher education in Nigeria. In relation to business education programme, the need for adequate knowledge and skills for appropriate utilization of e – learning facilities, such as those related to internet and other telecommunication technologies can

hardly be emphasised. In fact, at this point of our technological development. It is expected that business education teachers, particularly those in tertiary institutions would be well-place to make adequate and good use of the various computer aided electronic learning facilities to aid their instruction. However, in view of the fact that studies on the extent of availability and utilization of e – learning facilities in teaching of business education courses in Nigeria higher institution is not well know; this study, consequently seeks to investigate the availability, and specifically the extent of utilization of e – learning technologies for the teaching of business education courses in tertiary institutions in Edo and Delta States of Nigeria.

3. Purpose of the Study

The major concern of this study is to assess the extent of utilization of available e-learning technologies by business educators in tertiary institutions in Edo and Delta States for the teaching business courses. Specifically, this study sought to:

1. Ascertain the extent to which business educators in tertiary institutions in Edo and Delta States utilize available hardware technologies in teaching business education courses.
2. Determine the extent to which business educators in tertiary institutions in Edo and Delta States utilize available software technologies in teaching business education courses.
3. Determine the extent to which business educators in tertiary institutions in Edo and Delta States utilize available internet facilities in teaching business education courses.

4. Research Questions

The following research questions guided the study:

1. To what extent do business educators in tertiary institutions in Edo and Delta States utilize available hardware technologies in teaching business education courses in their institutions?
2. To what extent do business educators in tertiary institutions in Edo and Delta States utilize available software technologies in teaching business education courses in their institutions?
3. To what extent do business educators in tertiary institutions in Edo and Delta States utilize internet facilities in teaching business education courses in their institutions?

5. Research Hypotheses

The following null hypotheses were formulated to guide the study and were tested

at 0.05 level of significance.

1. Business educators in universities, polytechnics and colleges of education in Edo and Delta States of Nigeria do not differ significantly in their mean ratings of the level of utilization of hardware technologies in teaching business education courses
2. Business educators in private, state and federal government tertiary institutions in Edo and Delta States of Nigeria do not differ significantly in their mean ratings of the level of utilization of software technologies in teaching business education courses.
3. Business educators in tertiary institutions in Edo and Delta States of Nigeria do not differ significantly in their mean ratings of the level of utilization of internet technologies in teaching business education courses as a result of gender (male and female).

6. Method

The design adopted for the study is survey as recommended by Osuala (2001) for studies aimed at exploring opinions of a given population or its representative sample on existing practices and conditions. The study was carried out in tertiary institutions in Edo and Delta States of Nigeria. Both states were formally known as Bended state. The population of the study comprises 173 practicing business Educators in the thirteen tertiary institutions in the states chosen for the study. The entire population was studied without sampling due to its size. A structured questionnaire containing 52 items in five sections A, B, C, D and E was used for the data collection. The research instrument was subjected to face and content validation. Two experts from the Department of Vocational Education, Nnadi Azikiwe University, Awka and another two from Delta State University (ICT specialist) validated the instrument. Split half method was used to establish the reliability of the instrument, the reliability coefficient of the instrument was further computed using the Spearman Brown's prophency formula which yield the score of 0.50, 0.88, 0.87, 0.73 and 0.86 respectively. One hundred and seventy three questions were administered personally by the researcher with the help of his professional colleagues in the institutions. This equally assisted to achieve a hundred percent response rate as all the copies were duly completed and retrieved. Data collected for the study were analysed with arithmetic mean and standard deviation statistics, to answer the research questions, the statistical tools of t-test and One way Analysis of Variance (ANOVA) were used to test the three hypotheses formulated for the study at 0.05 level of significance. Items with 3.50 and above are taken as high extent by the expert while items with mean scores below 3.50 are

regarded as low extent. For the hypotheses, if the calculated t-value of 0.05 level of significance is equal or greater than the t-table for a given degree of freedom, then the null hypothesis is rejected but if the calculated t-value is less than the table t-value, the null hypothesis is upheld. Also the hypothesis of no significant difference is accepted at 0.05 level of significance when F-calculated is less than the table value otherwise the null hypothesis is rejected

7. Results

7.1. Research Question 1

To what extent do business educators in tertiary institutions in Edo and Delta States utilize hardware technologies in teaching business education courses?

Table 1

Mean scores and standard deviation on the extent of utilization of hardware technologies for teaching business education courses.

| S/NO | Items on Hardware Technologies | \bar{X} | SD | Remark |
|------|---------------------------------------------------|-----------|-------|-------------|
| 1 | Computer simulation | 2.00 | 1.01 | Low extent. |
| 2 | Instructional television | 2.86 | 1.26 | " |
| 3 | Passing of instruction via Telephone (cell phone) | 3.93 | 1.39 | High extent |
| 4 | Radio player for listen to educational programmes | 1.74 | 0.69 | Low extent |
| 5 | Tape recorders for shorthand classes | 2.62 | 1.21 | Low extent |
| 6 | Flash drive for storing instruction materials | 3.80 | 1.31 | High extent |
| 7 | Printer for producing hardcopies | 4.02 | 1.60 | " |
| 8 | Video for recording teaching activities | 1.95 | 1.17 | Low extent |
| 9 | Computer laboratory | 3.06 | 1.30 | " |
| 10 | CD-ROM containing prepared lessons materials. | 3.62 | 1.81 | High extent |
| 11 | Laptops | 2.06 | 1.021 | " |
| 12 | Scanner | 2.46 | 1.26 | " |
| 13 | Transparencies | 1.71 | 1.02 | " |
| 14 | Slide projectors. | 1.83 | 1.50 | " |

The data in table 1 indicates that business educators utilize cell phone, flash drive, printer, and CD-ROM for teaching business education courses. While the other items identified in the table 1 are not used to a very high extent by the respondents for teaching business education courses.

7.2. Research Question 2

To what extent do business educators in tertiary institutions in Edo and Delta States utilize software technologies in teaching business education courses?

To answer research question 2, the mean and standard deviation were computed and the result of the computation is shown in Table 2

Table 2: **Mean scores and standard deviation on the extent of utilization of software technologies for teaching business education courses.**

| S/N | Items on Software Technologies | \bar{X} | SD | Remark |
|-----|------------------------------------------------|-----------|------|-------------|
| 15 | Word processing software | 3.51 | 1.82 | High Extent |
| 16 | Design and graphic software | 2.09 | 0.72 | Low Extent |
| 17 | Data Base Software | 3.04 | 1.60 | " |
| 18 | Typing software (mavis beacon, and ultra key) | 3.11 | 1.58 | " |
| 19 | Power point software for lecture presentation. | 3.02 | 1.61 | " |
| 20 | Spreadsheet (excel) software | 2.41 | 1.01 | " |
| 21 | Accounting software | 1.71 | 0.81 | " |
| 22 | Statistical Analysis and forecasting software | 1.61 | 0.35 | " |
| 23 | E-books software | 2.12 | 0.78 | " |
| 24 | Internet browsing software | 1.41 | 0.31 | " |
| 25 | Desktop publishing software | 2.41 | 0.56 | " |

The data in Table 2 indicates that the mean responses of business educators falls within the range of 1.41-3.11, except for word processing software that had the mean score of 3.51. By the provision of this study, it implies that the software technologies are utilized at a very low extent by business educators in tertiary institutions in Edo and Delta States.

7.3. Research Question 3

To what extent do business educators in tertiary institutions in Edo and Delta States utilize internet technologies in teaching business education courses?

To answer research question 3, the mean and standard deviation were computed and the result of the computation is shown in Table 3.

Table 3: Mean scores and standard deviation on the extent of utilization of internet technologies for teaching business education courses.

| S/N | Items on Internet Technologies | \bar{X} | SD | Remark |
|-----|----------------------------------------------------|-----------|------|------------|
| 26 | Electronic mail (e-mail) | 2.91 | 1.62 | Low Extent |
| 27 | Interactive Website (www) | 1.02 | 0.32 | " |
| 28 | Cyber café | 1.56 | 0.41 | " |
| 29 | Search engine (e.g. Google. Com) | 1.43 | 0.91 | " |
| 30 | Web camera | 1.44 | 0.33 | " |
| 31 | Chartrooms (face book, You Tube, twitter, and 2go) | 2.91 | 1.20 | " |
| 32 | Modems | 2.81 | 1.15 | " |

The data in table 3 indicates that the mean responses of (business educators) used for this study falls within the range of 1.02-2.91. By the provision of this study, it implies that the internet technologies are utilized at a very low extent by business educators in teaching business education course in tertiary institutions in Edo and Delta States.

8. Hypothesis Testing

The null hypotheses were tested at 0.05 level of significance.

8.1. Hypothesis 1

Business educators in universities, polytechnics, and colleges of education in Edo and Delta States do not differ significantly in their mean ratings of utilization of hardware technologies in teaching business education courses.

The test of this hypothesis is presented in Table 7. Questionnaire items 1-14, identified for the study helped in providing data for reliable analysis.

Table 4: One – way Analysis of Variance (ANOVA) for the mean difference between business educators in Universities, Polytechnics and Colleges of Education in Edo and Delta States in their utilization of hardware technologies in teaching business education courses

| Sources of variance | SS | Df | MS | F-cal. | F-crit. | Level of significance | Inference |
|---------------------|------|----|------|--------|---------|-----------------------|-----------|
| Between group | 0.56 | 2 | 0.28 | 0.06 | 3.24 | 0.05 | Accepted |
| Within groups | 8.8 | 39 | 0.22 | | | | |
| Total | 9.36 | | | | | | |

With 2 and 39 degree of freedom at 0.05 level of significance from the ANOVA statistical table, the F-Critical is 3.24. Guided by the decision rule not to accept, the null hypothesis if F-calculated is greater than the F-Critical value or otherwise accept it, and considering the fact that F-calculated of 0.06 is less than the F-Critical of 3.24, the null hypothesis is accepted. It can therefore be concluded that business educators in universities, polytechnics and colleges of education in Edo and Delta States do not differ significantly in their utilization of hardware technologies in teaching business education courses.

8.2. Hypothesis 2

Business educators in private, state and federal government tertiary institutions in Edo and Delta States do not differ significantly in their utilization of software technologies in teaching business education courses.

To test this hypothesis, the data collected through questionnaire items 15-25, identified for the study assisted in providing data for reliable analysis.

TABLE 5:One-way Analysis of Variance (ANOVA) for the mean difference between business educators in private, states, federal government tertiary institutions in Edo and Delta States in their utilization of software technologies in teaching business education courses .

| Sources of variance | SS | Df | MS | F-cal. | F-crit. | Level of significance | inference |
|---------------------|------|----|------|--------|---------|-----------------------|-----------|
| Between groups | 0.05 | 2 | 0.03 | 0.11 | 3.32 | 0.05 | Accepted |
| Within groups | 8.43 | 30 | 0.28 | | | | |
| Total | 8.48 | | | | | | |

With 2 and 30 degree of freedom at 0.05 level of significant from the ANOVA statistical table, the F-crit. is 3.32, guided by the decision rule not to accept the null hypothesis if F-cal. is greater than F-crit. value or otherwise accept it and considering the fact that F-cal. Of 0.11 is less than the F-cal. Of 3.32, the null hypothesis is to accept. It can therefore be concluded that business educators in private, states, and federal government tertiary institutions in Edo and Delta States do not differ significantly in their utilization of software technologies in teaching business education courses.

8.3. Hypothesis 3

Business educators in tertiary institutions in Edo and Delta States do not

differ significantly in their mean ratings of utilization of internet technologies in teaching business education courses as a result of gender (male and female) To test this hypothesis, the data collected through questionnaire items 26-32 Identified for the study assisted in providing data for proper analytical decision.

Table6:The t-test analysis for business educators in tertiary institutions inEdo and Delta States in their utilization of internet technologies in teaching business education courses as a result of gender (male and female)

| Gender | No. of subjects | X | SD | DF | Level of significance | t-cal | t-crit | Inference |
|--------|-----------------|------|------|-----|-----------------------|-------|--------|-----------|
| Male | 131 | 2.52 | 1.32 | 171 | 0.05 | 0.66 | 1.960 | Accepted |
| Female | 42 | 2.67 | 1.28 | | | | | |

Data contained in table 9 of the t-test analysis, the t-cal. Value of 0.66 is less than the t-crit. value of 1.960 at 0.05 levels of significance and 171 degree of freedom. Hence, the null hypothesis is accepted. This implies that business educators in tertiary institutions in Edo and Delta States do not differ significantly in their utilization of internet technologies in teaching business education courses as result of gender (male and female).

9. Discussion of Results

The discussion of results obtained from the presentation and analysis of data for the study are presented below:

Business Educators' Utilization of Hardware Technologies

The result of the findings in Table 2 revealed that business educators do not utilize hardware technologies such as tape recorder, laptop, slide projectors, transparencies and computer laboratory for purposeful teaching of business education courses. The test of the first hypothesis revealed that there is no significant difference between business educators in universities, polytechnics and colleges of education as a result of institution types. The outcome of this study tends to agree with previous findings of Nwanewezi & Isifeh-Okpokwu (2010), who observed that there was little or no utilization of ICT facilities by business educators for instructional delivery. The data gathered revealed that some of these technologies are used; but not extensively for proper teaching of business education courses by business educators in tertiary institution. Epileptic power supply, lack of adequate e-learning technologies and funding constitute the constraint to the use of the hardware technologies for teaching business education course in tertiary institutions in Edo and Delta States. Agreeing with these facts, Obikeze and Onyechi

(2011) observed that poor communication facilities, inadequate skill and expertise among others are the problems of rare utilization of e-learning technologies in Nigeria.

In spite of these constraints as revealed above, software technologies are often used by secretaries in business offices for recording of business transactions and storing of relevant information needed for decision making. Still, as a result of technological advancement, organizations now require that every employee from the top manager down must possess ICT competencies as a prerequisite for gaining employment (Okiki, 2011).

Against this background, there is therefore, the need for adequate provision of e-learning technologies at every level of educational system. This will help business education to expose their students to technological practical skills. Moreover, there is the need for business educators in universities, polytechnics and colleges of education in Edo and Delta States to acquire ICT-skills and competencies relatively considered vital for the effective utilization of hardware technologies for teaching business education courses. As failure to utilize these e-learning technologies will eventually lead to the production of half-baked business education graduates who cannot function proficiently in automated business offices (Omeje, 2008).

Business Educators Utilization of Software Technologies

The findings of this study in table 3 revealed that only word processing software is being utilized effectively by business educators in tertiary institutions for teaching business education courses. The test of the second hypothesis indicated that the utilization of software technologies by business educators in tertiary institution in Edo and Delta States as a result of institution ownership do not differ significantly. This study is in agreement with the findings of (Nwanewezi & Isifeh-Okpokwu (2010), they observed that the use of ICT has not been fully integrated into our educational system. However, the rare utilization of hardware technologies by business educators has subsequently led to the little or no utilization of software technologies listed in table 3 of chapter four, were not utilized by business educators for instructional delivery. Thus, this could be as a result of lack of ICT skills and competencies possessed by business educators.

Agreeing with this fact, Obikeze and Onyechi (2011), reveals that lack of fund and inadequate ICT competencies are the major hindrances that have prohibited students and teachers from utilizing e-learning technologies for educational purpose. In the light of this, there is therefore, the need for adequate provision of ICT facilities and funds which will help to promote the use of e-learning technologies for curriculum delivery by business educators.

Business Educators Utilization of Internet Technologies

The findings of this study showed that business educators in tertiary institution in Edo and Delta States do not utilize internet technologies in teaching business education courses. The data collected revealed that some of the technologies are utilized but at a minimal rate. Supporting these findings (Nwanewezi & Isifeh-Okpokwu, (2010), revealed that most teachers whose schools were supplied with internet facilities do not utilize the internet facilities for educational purpose. Moreover the inability of teachers to utilize internet technologies for teaching could be as a result of lack of ICT competencies in business educators, coupled with the fact that integration of ICT facilities in tertiary institutions in developing nations' school curriculum is at its infancy state. However, the importance of internet technologies to teachers for curriculum delivery cannot be overemphasized. Williams (2004) proposed that the integration of internet technologies into classroom activities can promote good instructional practices in many ways. Internet provides structure and guidance for the students and instructors.

To buttress this fact, Okiki (2011), remarks that internet technologies has the potentials to motivate, and increase students' confidence and allows them to gain access to learning experience anytime and anywhere. But, it has been shown in this study that epileptic power supply, inadequate funding among others, is conspicuously the reason why the accruing benefits of internet technologies have not been explored at these levels of educational system. The findings is in consonance with the observations of Obikeze and Onyechi (2011), who revealed that poor communication facilities, epileptic power supply, and lack of fund among others are the problem of rare utilization of e-learning technologies. However, considering the plethora of information that can be accessed at a limited time by teachers and how this information can be of help to students' learning in this era of technological advancement. Still, adequate provision of e-learning technologies for instruction delivery will be of huge help to the growth and development of educational system. At this juncture, the researcher is of the opinion that adequate and constant funding should be encouraged in the provision of e-learning technologies in schools.

10. Conclusion

Maximizing the potentials of e-learning in education requires that business educators actually use it for instructional and curriculum delivery. The findings of the study have shown that many business educators in tertiary institutions in Edo and Delta states of Nigeria do not utilize e-learning technologies either for professional or academic purposes. There is the need to improve on the use of e-

learning, not only because e-learning brings a new mix of professional and instructional knowledge advantages to teachers, but it is consistent with the modern education life and global practices of 21st century. In view of the above, there is the need for a content-based educational curriculum with planners that would understand the interplay and interface between technology and mankind.

11. Recommendations

Based on the findings of the study, the following recommendations were made.

- 1 In service training programme such as seminars, conferences, in service courses and workshop should be organized by ICT-compliant business educators on regular bases to train and retain serving business educators in tertiary institutions on the effective utilization of e-learning technologies/applications in lesson preparation and curriculum delivery.
- 2 ICT manufacturing companies, employers of labour and international community should support business education programme in Nigeria by providing internet, computers and other telecommunication technologies as well as sponsors in service training courses for business educators.
- 3 Business educators should try as much as possible to make effective utilization of the available e-learning technologies and improvise their own for uses were necessary. Also business education should endeavour to update their knowledge and skills in the use of e-learning technologies for effective instructional communication.
- 4 The federal and state governments should make adequate budgetary allocation for the provision of hardware, software, internet and other telecommunication technologies in the tertiary institution for the improvement of instruction.
- 5 The federal government of Nigeria should review the power and telecommunication sector in the country so as to have uninterrupted power supply and a functional telecommunication network.
- 6 Skills and competencies needed for the utilization of e-learning technologies in teaching and learning of business education course should be encouraged and included in the methodology of business teacher education program.
- 7 University managements should promote the use of e-learning technologies as an aid to effective curriculum delivery by making it compulsory for every teacher to utilize it in teaching.

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