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E-Learning: A Veritable Tool for Preparing Business Education Teachers in Tertiary Institutions in Anambra State *(Pp. 260-276)*

Okolocha, Chimezie Comfort **-** Department of Vocational Education, Faculty of Education, Nnamdi Azikiwe University, Awka

Abstract
This study was carried out to determine business teacher educators' perceptions of e-learning as a veritable tool for preparing business education teachers in tertiary institutions. Sixty three business teacher educators drawn from the four tertiary institutions that offer business education in Anambra State constituted the population and sample for the study. The study was guided by two research questions and two hypotheses. The study utilized a validated four point structured questionnaire with reliability co-efficient of 0.80 using Crombach's Alpha reliability test. Mean and standard deviation were used to analyze data collected in order to answer the research questions while the null hypotheses were tested at 0.05 level of significance using Z-test statistics. It was found out that all the 21 item-statements on relevance of e-learning in preparing business teachers were perceived as relevant while factors inhibiting e-learning implementation were identified. It was recommended among others that business teacher educators and students must change their mindset by seeing knowledge about e-technology as learning that cannot be avoided if they must fit in and survive in the current e-technology race.

Introduction

Education is the natural response of the early civilization to the struggle for survival as a culture in which individuals acquire knowledge and skills needed to cope with existing trends which are passed on to young ones and

adults. Wikipedia (2008) sees education as encompassing teaching and learning specific skills and imparting knowledge, positive judgement and well developed wisdom which help to draw out, facilitate realization of self potentials and latent talents in individuals. Education could also be seen as phenomena which depend on the general conditions of the school within the community of practice; an action and activity that involve life-long learning which uses scientific approach in its delivery.

The use of scientific approach in education delivery has increased exponentially in the 21st century due to innovations in information and communication technology (ICT). French in Nworgu (2007) sees ICT as a broad based technology including its methods, management and application that supports the creation, storage, manipulation and communication of information. ICT could also be seen as the study of digital technologies and application of techniques used to communicate information in teaching and learning. The digital form of ICT has altered everything about education, causing many commonly practiced methods and techniques of teaching and learning to be replaced with technology oriented methods. In line with this, Ikelegbe (2007) noted that education in Nigeria cannot be relevant without effective preparation of new generation of pupils and students to effectively use the new information and communication technology in their professional practices. Barlow (1996) asserts that in the absence of the old content, almost everything we think we know about information is wrong and must be re-learning.

The 21st Century ICT has become key tool with revolutionary effect on the quality and quantity of teaching, learning and research and this has given rise to technology buzz word tagged e-era which comprised e-government, e-banking; e-commerce, e-mail, e-library; e-learning and a host of others.

E-learning which is the thrust of this paper could be seen as electronic means of imparting and acquiring information, knowledge and skills using computer via internet and other ICT tools which may not necessarily involve physical contact between the teacher and the student. Agomuo (2007) citing Ezugwu (2007) sees it as the use of network technology to design, deliver, select, administer and extend learning. E-learning according to De Cubber (2004) is a form of learning that uses electronic carrier which brings the right information (content) to the right individual or group at the right time. It is associated with computer-based learning, tele-learning and tele-conferencing

(Osuala, 2004); computer-based teaching and computer assisted instruction (Soa, Koki and Change, 2005)

E-learning which has to do with ICT tools and internet facilities can make teaching and learning more efficient and productive by engendering a variety of tools to enhance and facilitate teachers professional activities through the effective use of internet, intranet, extranet, video tape, power point, overhead projector and a host of others. The most obvious benefit from internet education is convenience. It promotes asynchronous learning when properly done with very low marginal cost; very good for automated types of tasks where it might be expensive to pay teachers to simply cover the same repetitive lesson over and over again (Goolsbee, 2000). It enhances interactivity (Urdan and Weggan, 2000) between students. E-learning is flexible and. It also provides easy access to information gathering and downloading of learning materials at any time and distance. Access to instruction through internet according to Dabesaki (2005) ensures broad viability and availability of educational opportunities as learning materials can be accessed irrespective of time and space. It provides integrated experiences which vary from concrete to the abstract and has the characteristics of holding the attention of students. It helps the students to think creatively thereby helping themselves even when the teacher is not in the classroom. E-learning implementation will help to change the old pedagogical approach of the learning and changes the teachers from a knowledge transmitter to a knowledge facilitator. This implies that the old pedagogy where students expect knowledge to be poured on them by their teachers has shown its limitations in a time when rapid changes require adaptation capacities and competence to think of creative solutions to concrete problems. Reformulation of national educational goals or formal change of the content of the programmes may not positively improve education standard without changing the way teachers teach and the way students learn. E-learning tools reinforce learning and make for the application of knowledge gained and fosters longer retention of information. E-learning devices have been in use in many developed and few developing countries of the world for individual instructions in and out of school. Some of these devices which use computer (Agomuo, 2007) include internet, the World Wide Web (WWW), the electronic mail (e-mail), satellites, the handsets and fax. Whatley (2004) citing Ferneley and Berney (1999) state that in the field of e-learning, software agents have been developed with its potential to help online learners improve the effectiveness of searching. It

helps to bring together students with similar interest or needs into a discussion area where they can receive help on particular problems (Vassilera & Deters, 2001). Emphasizing on e-learning, Nijholt (2001), averred that there are agents for guiding students in completing tasks. Students are offered tutorial help in completing their work using an avator or character to guide their actions. Aylette (2001) says that software agents may be used to help teach the learner by causing it to simulate some of the roles of the tutor using virtual environment to portray an example scenario. In support of this, Whatley (2004) states that pedagogical agents can monitor progress, give instructions when needed, help to organize students work and provide feedback for tutors. An agent according to Wooldridge and Jennings (1994) is a self-contained, concurrently executing software process, which encapsulates the current state in terms of knowledge and is able to communicate with other agents through message passing.

The Nigerian government recognises the importance of e-learning in improving the quality and quantity of education when she articulated the e-education (e-learning) initiatives with the objective of, among others (Agomuo, 2007 citing FME, 2004).

- Enhancing access to quality education for all learners
- Improving the education delivery system using ICT tools in the teaching/ learning processes
- Ensuring global competitive educational system using ICT as delivery system as being radicalized in developed and developing countries.

The foregoing shows that Nigeria is making frantic effort to be ICT compliant since the trend has revolutionalized all business related activities and the employment sector. The education industry of which business education is a part is not left out of the change arena. Business education is an education programme that prepares its learners to acquire skills and competencies needed for entry level employment, setting up businesses and advancement in other related businesses of today This implies that institutions of higher learning through business education teachers (who are the major education stakeholders and pervuyours of knowledge) must ensure quality teaching in line with the current global technological changes.

Despite the Nigerian government's effort to be ICT compliant, emphasis on e-education initiative, and the global emphasis on e-learning, it is unfortunate that most business teacher educators especially at the tertiary level, still rely only on lectures and chalkboard methods for delivering their lessons to students even when learning topics are suitable for e-learning approach. Hence, the need to find out if actually e-learning has any relevance in teaching and the factors inhibiting its applicability in preparing business teachers in tertiary institutions in Anambra State.

Research Questions

1. What is the relevance of e-learning in preparing business education teachers in tertiary institutions in Anambra State?
2. What factors inhibit the adoption of e-learning in preparing business education teachers in tertiary institutions in Anambra State?

Null Hypothesis

1. The mean scores of business educators in universities do not differ significantly from their counterparts in colleges of education on the relevance of e-learning as a tool for preparing business teachers in tertiary institutions in Anambra State.
2. The mean scores of male and female business teacher educators in the universities, and colleges of education do not differ significantly on the factors inhibiting the adoption of e-learning in preparing business teachers in tertiary institutions in Anambra State.

Method

Survey research design was adopted for the study. Business educators from four tertiary institutions in Anambra State that offer business education programme formed the population of the study. The population was made up of 63 business educators. No sample was taken. The instrument for data collection was a structured questionnaire containing 36 item-statements measured on four point scale. The consistency and reliability of the instrument was tested using Cronbach Alpha reliability test which yielded reliability co-efficient of 0.80. Data collected were analyzed using mean and Z-test. Results are presented in tables 1-4.

Results

Research Question 1

What is the relevance of e-learning in preparing business teachers in tertiary institutions in Anambra State?

Table 1 shows the mean responses in descending order. All the possible areas of relevance of E-learning to business teacher preparation listed were endorsed as relevant by the respondents. Of the 21 areas of relevance listed, respondents endorsed "facilitates information gathering and downloading through world wide web" as the most relevant aspect of e-learning in the preparing of business teachers while "facilitates teachers" use of computer software like MS word, Spreadsheet etc in teaching/learning" was second in relevance. On the other hand, e-learning's capacity to enhance interactivity among students was the least rated in relevance in the preparation of business teachers.

Research Question 2

What factors inhibit the adoption of e-learning in preparing business education teacher in tertiary institution in Anambra State?

Results presented in Table 2 show that, on the average, the respondents endorsed "lack of requisite skills in e-learning implementation" with a mean score of 3.41 as the highest factor inhibiting the adoption of e-learning in the preparation of business teachers. This was followed by "lack of funds to procure necessary technology for e-learning" and "lack of requisite e-leaning infrastructure and ICT tools" with mean scores of 3.38 and 3.33 respectively. The respondents perceived "Teachers' inability to adapt to constant changes", "Lack of specific curriculum benefits or resources for teachers" and "Lack of well designed e-learning syllabus" as the three least factors inhabiting the adoption of e-learning in preparing business teachers. These have lower mean scores of 2.73, 2.89 and 2.93 respectively.

Hypothesis Testing

Hypothesis I

The mean scores of business educators in universities do not differ significantly from their counterparts in colleges of education on the relevance of e-learning as a tool for preparing business teachers in tertiary institution in Anambra State.

Using Z-test, there was no significant difference between university teachers and teachers in colleges of education on the relevance of e-learning in preparing business teachers. The calculated Z values of 19 out of the 21 items on relevance of e-learning were higher and found to be less than Z-

critical value of 1.96. The null hypothesis of no significant difference was therefore not rejected. This is an indication that both university and college of education business teachers are unanimous in their perception of the relevance of e-learning to the preparation of business teachers.

Hypothesis 2

The mean scores of male and female business educators in the universities and colleges of education do not differ significantly on the factors inhibiting the adoption of e-learning in preparing business teachers in tertiary institutions in Anambra State.

Using Z-test, there was no significant difference between male and female business education teachers on the factors inhibiting the adoption of e-learning in preparing business teachers. The calculated Z values of 11 out of 15 factors were less than the Z-critical value of 1.96. The null hypothesis of no significant difference was therefore not rejected (See table 4)

Discussion

The result of the analysis in Table 1 revealed that all the 21 items listed attracted mean scores above 2.50 which proved that e-learning is a veritable tool for preparing business education teachers especially now that businesses, industries, and offices are going online. The item which state that e-learning facilitates information gathering and downloading attracted the highest mean response followed by that on facilitating teachers use of computer software in teaching and learning. The findings corroborate the views of Ikelegbe (2000) who noted that education in Nigeria cannot be relevant without effective preparations of new generation of pupils and students to effectively use the new information and communication technologies in their professional practices. Dabesaki (2005) is also of the opinion that e-learning ensures broad viability and availability of educational opportunities and that learning materials can be accessed irrespective of time and space. The item which states that e-learning enhances interactivity among students was the least rated with the mean score of 2.81. This might be because of the low level of ICT competency skills and usage in Nigeria, coupled with high poverty level. However, the item was accepted which is in agreement with the views of Urban and Wegsan (2000).

The results in Table 2 indicated lack of requisite skills in e-learning implementation, lack of funds to procure necessary technology for e-learning and lack of requisite e-learning as factor inhibiting the adoption of e-learning by business teacher educators. The findings are in agreement with the results

of a study carried out by Clarkson (2000) in Goolsbee (2000) and United State Department of Education (U.S.D.O.E.) (2006). The report indicated that most teachers are novices or completely inexperienced in the use of computer and internet for classroom instruction while only one third of teachers studied (as reported by U.S.D.O.E) indicated that they were prepared to use computer and internet. The report of World Bank (2005) also proved that teachers' inability to get access to ICT infrastructure at a reduced price inhibit the adoption of e-learning in teaching. Item by item test of hypotheses in Tables 3 and 4 revealed that business educators in universities and colleges of education as well as male and female business teachers educators do not differ significantly on the relevance of e-learning as well as factors inhibiting the adoption of e-learning in preparing business teachers.

Conclusion

Based on the findings, it is concluded that the promotion of business education in general and effective acquisition of appropriate e-skills by business education teachers require the use of appropriate e-learning facilities in preparing business education teachers. Business education programme through business teacher educators can only achieve its mission and vision statements of preparing its recipients for office work of today and tomorrow as well as ensuring that its recipients establish, survive and remain in business of their choice, only when business educators follow the current societal trend by adopting e-learning in preparing teachers especially now that virtually everything we claim we know is going online globally.

Recommendations

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

1. For effective adoption of e-learning to prevail, business teacher educators and students must change their mindset by viewing knowledge about e-technology as learning that cannot be avoided if they must fit in and survive in the current e-technology race.
2. Computer and internet studies need to be properly integrated into the curriculum of business education so that both teachers and students will see it as a serious business.
3. Business educators need to embark on self training in order to acquire relevant skills and knowledge needed in e-learning implementation since they cannot effectively join the e-era race without "e" knowledge and implementation.

4. The heads of department of business education programmes should laise with the management of their respective institutions to ensure that appropriate e-learning facilities for efficient teaching and learning of business courses are provided.
5. The accreditation agency (Nigerian University Commission and the National Commission for Colleges of Education) should include in their accreditation requirements internet connectivity for institutions. This will help to pave way for e-learning implementation.
6. The government should fund education as and when due. That will help the institutional heads to procure all the necessary ICT facilities needed in the education of the young ones.

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Table 1: Mean Responses of Business Teacher Educators on the Relevance of E- learning in Preparing Business Teachers

	Relevance of e-learning	**Mean**	**SD**
1.	Facilitates information gathering and downloading through internet world wide web.	3.65	0.57
2.	Facilitates teachers use of computer software like Ms-word, Spreadsheet etc in teaching and learning.	3.54	0.62
3.	Facilitates the creation of effective online delivery of lecture	3.44	0.67
4.	Facilitates students' individualized learning.	3.44	0.67
5.	Provides real opportunity for independent study and instructions.	3.41	0.56
6.	Makes learning more enjoyable and practicable.	3.40	0.71
7.	Facilitates communication through the use of Local Area Network(LAN)	3.40	0.64
8.	Helps in developing business teacher skills and competencies needed in today's business and office tasks.	3.40	0.81
9.	Facilitates teachers design and explanations of lecture topic by making it clearer through the use of slide show.	3.37	0.66
10.	Bears the potentials of widening access to education by diversifying ways to access education content	3.35	0.70
11.	Make teaching and leaning convenient to both teachers and students	3.33	0.82
12.	Helps students to receive online feedback to their assignment through e-mail, view	3.30	0.71
13.	Encourages teachers to give online assisgemtn to the students	3.29	0.68
14.	Facilitates teacher awareness and utilization of computer user oriented language (Basic Cobol, Fortran etc).	3.29	0.75
15.	Encourages students to work in a dynamic learning environments which	3.27	0.83

	facilitate knowledge construction		
16.	Helps to provide facilities for learners to operate at multi-level learning modes that promote autonomy, initiative spirit and team work.	3.25	0.82
17.	Sharpens the learners' senses in understanding the topic of discussion	3.22	0.71
18.	Provides opportunity for students to be reflective and thoughtful in their topic discussions.	3.16	0.75
19.	Helps the teacher to select and utilize suitable technique for online assessment of students performance.	3.14	0.82
20	Offers great opportunity to provide more training to more students at more places.	3.13	0.87
21.	Enhance interactivity among students	2.81	1.06

Table 2: Mean Responses of Business Teacher Educators on factors inhibiting the Adoption of E-learning in Preparing Business Education Teachers

	Factors Inhibiting the adoption of e-learning	**Mean**	**SD**
1.	Lack of requisite skills in e-learning implementation.	3.41	0.73
2.	Lack of funds to procure necessary technology for e-learning	3.38	0.83
3.	Lack of requisite e-learning infrastructure and ICt tools	3.33	0.86
4.	Non-availability of automated laboratory	3.32	0.91
5.	Lack of requite skills to access information online	3.32	0.77
6.	Individual's economic crisis inhibits them from acquiring internet resources for e-learning.	3.24	0.82
7.	Lack of in-service training to prepare teachers for e-learning implementation	3.19	0.84
8.	Deficient pre-service preparation of teachers in technology.	3.16	0.83
9.	Lack of requisite skills to select and use appropriate evaluation technique for students online assignment assessment.	3.14	0.95
10.	Lack of willingness by administration to realign school budgets to include computational technology.	3.14	0.91
11.	Non-availability of internet connectivity	3.14	0.93

12.	Lack of policy statement by the institution on the adoption of e-learning	3.03	0.84
13.	Lack of well-designed e-learning syllabus.	2.94	0.01
14.	Lack of specific curriculum benefits or resources for teachers	2.89	0.95
15.	Teachers inability to adapt to constant changes	2.73	1.00

Table 3: Z-test comparison of Mean Responses of University and Colleges of Education Business Teachers on the Relevance of E-learning for preparing Business Teachers

S/N	Relevance of e-learning	Institution	Mean	SD	z-cal	Z-crit	Decision
1	Facilitates information gathering and downloading through world wide web	University College of Education	3.64 3.65	0.50 0.60	-.065	1.96	NS
2	Facilitates teachers use of computer software like MS word, Spreadsheet etc in teaching and learning	University College of Education	3.57 3.53	0.51 0.65	.246	1.96	NS
3	Facilitates the creation of effective online delivery of lecture	University College of Education	3.36 3.47	1.50 0.71	-.672	1.96	NS
4	Facilitates students' individualized Learning	University [a] College of Education [b]	3.57 3.41	0.51 0.70	161	1.96	NS
5	Provides real opportunity for independent study and instructions	University College of Education	3.36 3.42	0.50 0.58	.457	1.95	NS
6	Makes learning more enjoyable and practicable	University College of Education	3.36 3.41	0.50 0.76	-.298	1.96	NS
7	Facilitates communication through the use of Local Area	University College of	3.50 3.37	0.52 0.69	.789	1.96	NS

	Network (LAN)	Education					
8	Helps in developing business teachers' skills and competencies needed in today's business and office tasks	University College of Education	3.07 3.49	0.99 0.74	-1.459	1.96	NS
9	Facilitates teachers design and explanations of lecture topics by making it clearer through the use of slide show	University College of Education	3.07 3.45	0.27 0.71	-3.048	1.96	S*
10	Bears the potentials of widening access to education by diversifying ways to access education content	University College of Education	3.14 3.14	0.86 0.64	-1.067	1.96	NS
11	Makes teaching and learning convenient to both teachers and students	University College of Education	3.36 3.33	1.50 0.90	.166	1.96	NS
12	Helps students to receive online feedback to their assignment through e-mail, view	University College of Education	3.36 3.29	1.50 0.76	.054	1.96	NS
13	Encourages teachers to give online assignment to the students	University College of Education	3.29 3.29	0.47 0.74	.000	1.96	NS
14	Facilitates teacher awareness and utilisation of computer user oriented language (Basic, Cobol, Fortran etc)	University College of education	3.36 3.27	0.93 0.70	.343	1.96	NS
15	Encourages students to work in a dynamic leaning environment which facilitates knowledge construction	University College of Education	3.21 3.20	0.70 0.76	-.100	1.96	NS

16	Helps to provide facilities for learners to operate at multi-level learning modes that promote autonomy, initiative and team work	University College of Education	3.07 3.31	0.83 0.82	-.937	1.96	NS
17	Sharpens the learners' senses in understanding the topic of discussion	University College of Education	3.43 3.16	0.51 0.75	1.531	1.96	NS
18	Provide opportunity for students to be reflective and thoughtful in their topic discussion	University College of Education	3.00 3.20	0.68 0.76	-973	1.96	NS
19	Helps the teacher to select and utilize suitable technique for online assessment of students performance	University College of Education	3.50 3.04	0.52 0.87	2.491	1.96	S*
20	Offer greater opportunity to provide more training to more students at more places	University College of Education	2.79 3.22	0.80 0.87	-1.770	1.96	NS
21	Enhances interactivity among students	University College of Education	2.86 2.30	1.95 1.10	.205	1.96	NS

[a]N = 14, [b]N; * Significant

Table 4: Z-test comparison of Mean Responses of Male and Female Business Teachers on the Factors Inhibiting the Adoption of E-learning in Preparing Business Teachers

S/N	Factors Inhibiting the adoption of e-learning	Institution	Mean	SD	z-cal	Z-crit	Decision
1	Lack of requisite skills in e-learning implementation	Male[a] Female[b]	3.45 3.40	0.76 0.73	.041	1.96	NS
2	Non-availability of automated laboratory	Male Female	3.55 3.21	0.69 0.99	1.735	1.96	NS
3	Non-availability of internet connectivity	Male Female	3.00 3.21	1.31 0.89	0.636	1.96	NS
4	Lack of funds to procure necessary technology for e-learning	Male Female	3.50 3.33	0.76 0.87	.837	1.96	NS
5	Individual's economic crisis inhibits them from acquiring internet resources for e-learning	Male Female	3.50 3.12	0.51 0.91	1.961	1.96	S*
6	Lack of in-service training to prepare teachers for e-learning implementation	Male Female	3.20 3.19	0.77 0.88	.122	1.96	NS
7	Lack of willingness by administration to realign school budgets to include computational technology	Male Female	3.15 3.14	1.04 .86	.195	1.96	NS
8	Lack of specific curriculum benefits or resources for teachers	Male Female	3.00 2.84	0.96 0.95	.623	1.96	NS
9	Deficient pre-service preparation of teachers in technology	Male Female	3.35 3.06	0.81 .83	1.346	1.96	NS
10	Lack of policy statement by the institution on the adoption of e-learning	Male Female	3.10 3.00	0.85 0.85	. 535	1.96	NS

11	Lack of requisite skills to access information online	Male Female	3.60 3.12	0.60 0.80	2.744	1.96	S*
12	Lack of requisite e-learning infrastructure and ICT tools	Male Female	3.25 3.37	0.85	-3.89	1.96	S*
13	Teachers inability to adapt to constant changes	Male Female	2.85 2.67	1.18 0.92	.633	1.96	NS
14	Lack of well designed e-learning syllabus	Male Female	2.90 2.95	1.07 1.00	-.093	1.96	NS
15	Lack of requisite skills to select and use appropriate evaluation technique for students online assignment assessment	Male Female	3.50 2.98	0.69 1.01	2.473	1.96	S*

[a] N = 20, [b]N; * Significant