



ASSESSMENT OF CURRENT CHALLENGES ON THE USE OF NEW TECHNOLOGIES IN TEACHING AND LEARNING OF BUSINESS EDUCATION PROGRAMME IN PUBLIC UNIVERSITIES IN EDO STATE.

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Abstract: The study assessed the current challenges impeding the adoption of the use of new technologies in teaching and learning in public universities in Edo State. Four research questions guided the study. The study adopted a descriptive survey research design. A sample of 19 (nineteen) business education lecturers were used for the study. The instrument was validated by three experts. Cronbach Alpha was used to compute the reliability of the instrument and yielded 0.78. A questionnaire titled Questionnaire on Assessment of Application of New Technologies (QAANT) was administered on the respondents by the researcher. The data collected revealed that low digital fluency among faculty, relative lack of rewards for teaching, competition from models of education and resistance to change influenced the lecturers on the non use of new technologies in teaching business education programme in public universities in Edo State. Based on these findings, it was recommended that deliberate efforts should be made by management, and councils of various public universities in Edo state to encourage lecturers for training and retraining to enhance their efficiency, productivity and effectiveness; there is need for management to meet the genuine demands of business educators to strengthen their motivation, job satisfaction and commitment to minimize attrition rate, among others.

Keywords: Challenges; new technologies; business education lecturers, public universities

Introduction

There is seems to be growing trend in the use of new technologies in teaching and learning in both and developing nations of the world. This assumption is supported by Sife, Lwoga and Sanga (2007) when they stated that developments in Information and Communication Technologies (ICTs) have impacted all sectors of society, including the education sector. In higher education, application of ICTs in form of e-learning is already changing teaching and learning processes. There are many pedagogical and socio-economic factors that have driven higher learning institutions to adopt e-learning. These include greater information access; greater communication via electronic facilities; synchronous learning; increased cooperation and collaboration, cost-effectiveness (for example by reaching different students and in greater numbers) and pedagogical improvement through simulations, virtual experiences, and graphic representations. Both lecturers and students can choose more appropriate applications which are flexible in time, in place, personalized, reusable, adapted to specific domains and more cost-efficient (Fisser, 2001; Pelliccione, 2001). The application of Information and Communication Technologies (ICTs) is already changing the organization and delivery of higher education. The pedagogical and socio-economic forces that have driven the higher learning institutions to adopt and incorporate ICTs in teaching and learning include greater information access; greater communication; synchronous and asynchronous learning; increased cooperation and

collaboration, cost-effectiveness and pedagogical improvement. However, ICTs have not permeated to a great extent in many higher learning institutions in most developing countries due to many socio-economic and technological circumstances.

E-learning refers to the use of ICTs to enhance and support teaching and learning processes. It is the instructional content or learning experiences delivered or enabled by electronic technologies and it incorporates a wide variety of learning strategies and technologies. E-learning ranges from the way students use e-mail and accessing course work online while following a course on campus to programmes offered entirely online (Commission on Technology and Adult Learning, 2001; OECD 2005). It is thus an alternative solution, which enlarges accessibility to training and becomes essential to complement the traditional way of teaching (that is face-to-face). E-learning encompasses a continuum of integrated educational technologies. At one end are applications like PowerPoint, which has little impact on learning and teaching strategies on the organization. At the other end are virtual learning environments (VLEs), and managed learning environments (MLEs), which can have significant impact upon learning and teaching strategies, and upon the organization (OSU, 2003; Julian, 2004). Broadly, OSU (2003) views the continuum of e-learning as the educational technology from the supplemental use of technology in the classroom, through blended or hybrid uses comprising a mix of face-to-face and fully online instruction, to fully online synchronous and asynchronous distance learning environments delivered to remote learners.

In the supplemental use of ICTs to complement traditional learning experiences, the teacher teaches all sessions in the classroom but with the occasional use of technology, such as Web-based activities, multimedia simulations, virtual labs, and/or online testing (Arabasz & Baker, 2003). Blended learning denotes a solution that combines several different delivery methods, such as collaboration software, web-based courses; computer communication practices with traditional face-to-face instructions (Mortera-Gutierrez 2005). On the other hand, distance learning is conducted solely online where interaction may be synchronous or asynchronous (OSU, 2007). Synchronous learning requires the teachers and students to interact at the same time though they may be dispersed geographically. On the other hand, asynchronous learning allows teachers and students to interact and participate in the educational process at different times irrespective of their locations (Chen, 2004). Actually, the use of synchronous with asynchronous activities is determined by the available technology, cost, and maintenance and is adjusted to suit each course, instructor and audience (Graziadei, Gallagher, Brown, & Sasiadek, 1997).

Functionally, e-learning includes a wide variety of learning strategies and ICT applications for exchanging information and gaining knowledge. Such ICT applications include television and radio; Compact Discs (CDs) and Digital Versatile Discs (DVDs); video conferencing; mobile technologies; web-based technologies; and electronic learning platforms. Television (TV) refers to a receiver that displays visual images of stationary or moving objects both live or pre-recorded and mostly accompanied by sound which is electronically captured, processed and re-displayed. Likewise, this applies to the term radio – both live generated sound as well as pre-recorded sound. Both TV and radio can improve teaching and learning process in different ways such as by showing processes and activities that may not otherwise be available to the learner. However, digitalization has taken over analog audio and video systems. Compact Discs (CDs) and Digital Versatile Discs (DVDs) are based upon laser technologies for writing and reading data. They provide a way in which a large amount of multimedia training material can be stored and made available to end-users: CD-ROM can store up to 1GB while DVD can store up to 17 GB. CD-ROM and DVD-based products can be linked with online information sources. This hybrid approach provides the user with access to media-rich up-to-date information.

Video conferencing is a system where two or more participants, based in different physical locations, can see and hear each other in real time (that is live) using special equipment. It is a method of performing interactive video communications over a regular high-speed Internet connection. A videoconference can be either two-way (point-to-point) or multipoint, linking three or more sites with sound and video. It can also include data sharing such as an electronic white-board where participants can draw on, or text based real time 'chat'. Interactive whiteboard is simply a surface onto which a computer screen can be displayed, via a projector (Department for Education and Skill, 2004).

Mobile e-Learning (sometimes called 'm-Learning') is a new way to learn using small, portable computers such as personal digital assistants (PDAs), handheld computers, two-way messaging pagers, Internet-

enabled cell phones, as well as hybrid devices that combine two or more of these devices into one (Hunsinger, 2005). These technologies have enormous potential as learning tools.

World Wide Web (WWW) is set of software tools and standards that allow users to obtain and distribute information stored on a server and connected to Internet. WWW is a decentralized information system, in which anyone can add new information whenever he/she wants. Lecture notes and other teaching materials are placed on the WWW and linking useful websites to these resources for students to access. In the recent years, web and Internet technologies have matured significantly by providing a uniform access media for both asynchronous and synchronous learning. This phenomenon has significantly increased the popularity of on-line learning (Chen, KInshuk, Koh, & Lin, 2004). The usage of web technologies in e-learning are further enhanced with the web 2.0, which is a set of economic, social, and technology trends that facilitate a more socially connected Web where everyone is able to add to and edit the information space (Anderson, 2007). These include blogs, wikis, multimedia sharing services, content syndication, podcasting and content tagging services (Anderson, 2007).

E-learning platforms (sometimes called learning management systems (LMS)) are applications used for delivery of learning content and facilitation of learning process. They are developed for administration and teaching in tertiary education. This software enables the administrators and lecturers to treat enrolment data electronically, offer electronic access to course materials and carry out assessments (OECD, 2005). The activities managed by the LMS vary from instructor led classroom training to educational seminars to Web-based online training. In addition to managing the administrative functions of online learning, some systems helps create, reuse, locate, deliver, manage, and improve learning content. These systems are called Learning Content Management Systems (LCMS) (Rengarajan, 2001). LCMS actually provide tools to deliver instructor-led synchronous and asynchronous online training. The LCMS provides tools for authoring content as well as virtual spaces for learner interaction (such as discussion forums and live chat rooms). Rengarajan (2001) emphasizes the importance of integrating both LMS and LCMS because they share different levels of administrative interests in the same entities. Lack of smooth integration between the products results in a broken solution with administrative conflicts.

Many e-learning platforms (both LMS and LCMS) currently available are based on either

Proprietary e-learning software (PES), or open source e-learning software (OSS). OSS usage in implementing e-learning systems is more emphasized in developing world due to the challenges

faced when implementing the PES. Coppola (2005) describes two characteristics of PES that make it ill-suited: (1) the rapidly escalating cost of proprietary software leaves too little of an institution's ICT budget available for creative exploration, once the software has been installed and minimally supported; (2) reduced flexibility to adapt to institutional culture, teaching practices, and disciplinary uniqueness occurs when software development is driven by mass market economics.

Open source software offers the potential to reduce the cost of the software while providing the universities greater control over its destiny. Elimination or reduction of license leaves more budgets available to invest in adapting and managing the software; offers reliability, performance and security over proprietary software due to the availability of the source code, which allows vulnerabilities to be identified and resolved by third parties and it is easy to customize (Wheeler 2003; Coppola, 2005). Some of the widely used open-source e-learning software programmes are the Claroline and Moodle.

On the other hand, there are a number of challenges that face universities in developing countries as they seek to implement the e-learning systems. AAU (2001) asserts that African universities which should be in the forefront of ensuring Africa's participation in the ICT revolution, they are themselves unable and ill-prepared to play such a leadership role. This is because of the information infrastructure of African universities which is poorly developed and inequitably distributed. Parr (2014) identified six challenges on the use of new technologies in teaching and learning. They include, low digital fluency among faculty, relative lack of rewards of teaching, competition from new models of education, scaling teaching innovations, expanding access and keeping education relevant. In a related development, Nagel (2013) identified professional development, resistance to change, massive open online course and other new models for schooling, delivering informal learning, failures of personalized learning, and failure to use technologies to deliver effective formative assessments as challenges facing the use of new technologies in teaching and learning in universities.

The application of new technologies toward successful teaching of business education programme in public universities is considered as a new trend. Johnson (2009) defined new technologies as the modern equipment

useful in solving problems. The author further submitted that business education lecturers in tertiary institutions would achieve the goals of teaching if such modern technological teaching aids like electronic typewriter, computers, television sets, radio, projectors to mention, but a few are adequately provided and utilized. Oladeji and Ojewale (2011) observed that many teachers handling business education courses in universities are not competent enough to use computer and other machines in teaching while some schools are not provided with these equipment and this resulting to poor preparation and delivery of lessons by teachers. The worry of the researcher is the seemingly ineffectiveness of business education lecturers in teaching despite huge amount of money expended by government in paying lecturers' salaries, in-training and retraining of lecturers and supply of various teaching equipment to schools. What could be responsible for the inabilities of lecturers to use these new technologies in teaching and learning?

Purpose of the Study

The main purpose of the study was to assess of current challenges on the use of new technologies in teaching and learning business education in public universities in Edo State. Specifically, the study assessed:

1. The extent low digital fluency among faculty influences the use of new technologies in public universities in Edo state?
2. The extent relative lack of rewards for teaching influence the use of new technologies in public universities in Edo State
3. The extent competition from new models of education influence the use of new technologies in public universities in Edo State
4. The extent resistance to change influences the use of new technologies in public universities in Edo State.

Research Questions

The following research questions guided the study.

1. To what extent will low digital fluency among faculty influence the use of new technologies in public universities in Edo state?
2. To what extent will relative lack of rewards for teaching influence the use of new technologies in public universities in Edo State?
3. To what extent will competition from new models of education influence the use of new technologies in public universities in Edo State?
4. To what extent will resistance to change influence the use of new technologies in public universities in Edo State?

Methodology

The study adopted descriptive survey design which permitted the use of questionnaire to obtain relevant from respondents to describe existence conditions and other phenomena. According to Leary (2010) a survey uses questionnaire and interview to collect information about people's attitudes, beliefs, and feelings, behaviours of particular population in a systematic and accurate fashion.

The population of the study consisted of all business education lecturers in public universities in Edo State numbering 19, made up of 9 from university of Benin, Benin City and 10 from Ambrose Alli University, Ekpoma.

The instrument titled Questionnaire on the assessment of application of new technologies (QAANT) in teaching and learning business education programme was used for the study. The instrument was divided into two sections. Section A sought information on bio-data of the respondents, while section B sought information on questions raised from the research questions. The respondents made their responses from Very High Extent (VHE), High Extent (HE), Low Extent (LE) and Very Low Extent (VLE). The instrument was validated by three experts in Vocational and Technical Education, University of Benin.

Cronbach Alpha measurement instrument was used to establish the reliability of the instrument and yielded a coefficient of .78. Administration of the instrument was carried out by the researcher.

Data collected were answered using mean and standard deviation. The decision rule was based on real limit of numbers.

Decision Rule

To determine the extent of use of new technologies in teaching and learning of business education programme in public universities in Edo State, a decision rule was taken as very high extent with real limits of number rating of 3.50-4.49, high extent with a rating of 2.50-3.49, low extent with a rating of 1.50-2.49, and very low extent with a rating of 0.50-1.49.

Data Presentation and Analysis

This section presented data presentation and analysis collected in respect of the study. Tables were used in the presentation and in accordance with the four research questions raised for the study.

Research Question 1

1. To what extent will low digital fluency among faculty influence the use of new technologies in public universities in Edo state?

Data collected in respect of this research question are shown in Table 1.

Table 1: Respondents' Mean Responses on low digital fluency on use of new technologies

N=19

S/N	Aspects of low digital fluency	Mean	S.D	Remark
1.	The rare use of supporting skills and techniques in Business education programme	2.89	1.09	HE
2.	The non use of digital literacy skills across the curriculum by limiting their students	2.64	1.06	HE
3.	The seemingly lack of formal training for teaching staff	3.10	0.71	HE
4.	The seemingly less tools and more about thinking	3.42	0.81	HE
5.	The development of digital literacy for staff and students	3.11	0.61	HE
Grand Mean		3.03	0.86	HE

The data shown in Table 1 revealed that the mean values of the respondents ranged from 2.64 to 3.42. It equally revealed that the standard deviation of the items on the table ranged from .61 to 1.09, with a grand mean of 3.03

The mean values show that various business education lecturers maintained that digital fluency among faculty influenced their non use of new technologies in teaching to high extent, while standard deviation show that their responses were not relatively far from the mean values. The grand mean of 3.06 revealed that business lecturers are averse to the use new technologies in teaching business education programme to a high extent.

Research Question 2

To what extent will relative lack of rewards for teaching influence the use of new technologies in public universities in Edo State?

Data collected in respect of this research question are shown in Table 2.

Table 2: Respondents' Mean Responses on Relative Lack of Rewards

N=19

S/N	Aspects of Lack of Rewards	Mean	S.D	Remark
6.	The notion research first while teaching is an obligation that must be performed	3.55	0.49	VHE
7.	The way of thinking that teaching-only contracts are seen as lower status and unpopular	3.64	0.48	VHE
8.	The knowledge of the professors that teaching is not a priority	3.39	0.87	HE
9.	Universities authorities of requiring doctoral and graduates students to train before getting work	3.46	0.53	HE
Grand Mean		3.51	0.59	VHE

The data shown in Table 2 revealed that the mean rating of the respondents ranged from 3.39 to 3.64. It further revealed that the standard deviation ranged from .48 to .87, with a grand mean of 3.51.

In the table show business educators expressed relative lack of reward for teaching that influenced their non use of new technologies in teaching business education programme to a very high extent, while some business education lecturers expressed their lack of reward to high extent that influenced their use of new technologies. The grand mean of 3.51 conclusively reveal that business educators expressed their unwillingness to use new technologies to a very extent as a result of lack of reward for teaching.

Research Question 3

To what extent will competition from new models of education influence the use of new technologies in public universities in Edo State?

Table 3: Respondents' Mean Responses on Competition from Models of Education

N=19

S/N	Aspects of Competition	Mean	S.D	Remark
10.	The new approaches to teaching	3.20	0.46	HE
11.	Looking for ways to provide a high quality of service and more technologically enhanced learning opportunities	3.57	0.85	VHE
12.	The rising cost of maintaining universities	3.71	1.08	VHE
13.	The difficult way to design massive open online courses	3.74	1.31	VHE
Grand Mean		4.00	0.93	VHE

The data shown in Table 3 revealed that the mean rating of the respondents ranged from 3.20 to 3.74. It further revealed that the standard deviation ranged from .46 to 1.31, with a grand mean of 4.0

All the items on the table except item 10 show that all business educators expressed competition from models of education as the reason for non use of new technologies in teaching business education programme. The grand mean of 4.0 conclusively reveal that business educators agreed that competition from models of education is responsible for non use of new technologies in teaching business education programme.

Research Question 4

To what extent will resistance to change influence the use of new technologies in public universities in Edo State?

Table 4: Respondents' Mean Responses on Resistance to Change

N=19

S/N	Aspects of Resistance to Change	Mean	S.D	Remark
14.	The resistance to change	3.37	0.89	HE
15.	The comfort with status quo	3.28	0.96	HE
16.	The researchers, teachers see experimentation as outside the scope of their job descriptions	3.10	1.00	HE
Grand Mean		3.25	0.95	HE

The data shown in Table 4 revealed that the mean rating of the respondents ranged from 3.10 to 3.37. It further revealed that the standard deviation ranged from .89 to 1.00, with a grand mean of 3.25.

All the items on the table show that all business educators expressed that resistance to change new technologies in teaching business education programme. The grand mean of 3.25 conclusively reveal that business educators maintained that resistance to change is responsible for their non use of new technologies in teaching business education programme in public universities.

Major Findings

1. Low digital fluency among faculty influenced the non use of new technologies in teaching business education programme in public universities in Edo State.
2. Relative lack of rewards for teaching influenced the non use of new technologies in teaching business education programme in public universities in Edo State.
3. Competition from models of education influenced the non use of new technologies in teaching business education programme in public universities in Edo State.
4. Resistance to change influenced the non use of new technologies in teaching business education programme in public universities in Edo State.

Discussion of Results

The discussions of the results obtained in this study were organized according to research questions that guided the study.

Extent of Low Digital Fluency among Faculty

The development needs of ICT in teaching and learning is more complex than increasing educators' technical literacy more especially in training on how to use web browsers. The issue is building teachers' knowledge and skills in alternative types of pedagogy and content, and such an increase in human capabilities requires substantial funding that will be unavailable if almost all resources are put into hardware.

The findings in table one showed that business education lecturers maintained that low digital fluency among faculty influenced their non use of new technologies to a high extent. This position was supported by Parr (2014) that reported that training in the supporting skills and techniques is rare in teacher education and non-existent in the preparation of faculty. It further maintained that academics are beginning to realise that they are limiting their students by not helping them to develop and use digital media literacy skills across the curriculum, a problem that is exacerbated by a lack of formal training for teaching staff.

Extent of Relative Lack of Rewards for Teachers

Many managers and practitioners including lecturers who work in the governmental or the private sectors believe that the magical way to increase job satisfaction is to raise the salaries and financial benefits. The utility or well being of employees does not only depend on the absolute amount of their wages but also on wage increases, because people judge their utility with respect to a certain reference point or aspiration level, which is argued to be their wage of the prior period.

The findings in table two showed that business education lecturers maintained that relative lack of rewards for teachers influenced their non use of new technologies in teaching business education programmes. This position is in consonance with Parr (2014) that the way of thinking, that research first, while teaching is an obligation is stymieing efforts to implement effective pedagogies. It also maintained that because teaching-only contracts are seen as lower status and unpopular, students are forced to accept outdated teaching styles from researchers, rather than benefiting from more forward-thinking, potentially technologically enabled pedagogy.

Extent of Competition from New Models of Education

Business organizations especially tertiary institutions are passing through competitive environments that workers are moving away from one organization to another with educational sector inclusive in the spirit of competitiveness. The basic purpose of the human resource and labor management is to enhance the confidence or to improve the employee's attitude towards job in a well manner. Employees are supposed to be more satisfied when they feel happiness in their jobs. Main reason behind this is that satisfied employees are less likely to run away from job and have low absenteeism rate and have more output than others. Training and development is to help people in their organizations with the process of learning, unlearning and relearning. People need to learn individually as well as a team and as an organization. The organizations that learn faster than the competition can stay ahead of their competition. Changes such as increasing competition and evolving customer demands, slower economic growth, globalization, rising product innovation and the

impact of advanced forms of information technology have put pressure on organizations to constantly innovate and invent.

The findings in table three revealed that business education lecturers agreed that competition from new models of education influenced their non use of new technologies. This is in agreement with Parr (2014) that maintained that new approaches have brought unprecedented competition for traditional models of higher education. It further maintained that institutions are looking for ways to provide a high quality of service and more technologically-enhanced learning opportunities, with massive open online courses (Moocs)., enabling students to supplement their education and experiences at brick-and-mortar institutions with increasingly rich, and often free, online offerings.

Extent of Resistance to Change

The findings in table four revealed that business education lecturers agreed that resistance to change has influenced their inability to use new technologies in teaching and learning. This is in agreement with Iweajunwa and Lekwa (2010) what stated that despite the excitements the new technologies have brought, lecturers do not accept change easily. They continued, questions are being asked in many quarters as to the adequacy of the curriculum content, the career prospects and progression for graduates of business education programme. They concluded that some institutions are still claiming ignorance of the existence of the new technologies; hence they have done nothing to implement it.

Conclusion

In the light of the findings of the study therefore, it could be concluded that business education lecturers in public universities in Edo State offering business education programmes are unable to use new technologies in the teaching of business education programme as a result of a number of factors. Other factors including scaling teaching innovations, expanding access, keeping education relevant, professional development, delivering informal learning, among others were not considered for consideration.

Therefore, efforts should be made by relevant authorities to provide adequate incentives to ensure retention of business educators in public universities offering business education programmes in Edo State.

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