APPRAISAL OF VERSATILITY LEVELS IN E-LEARNING AMONG COLLEGES OF EDUCATION LECTURERS IN SOUTH-WEST, NIGERIA

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ABSTRACT

Historically, strong connections exist between education delivery and the technology of the era, thus, as, technology evolved, so did delivery methods. Information and Communication Technology (ICT) therefore, have affected the way people learn. E-learning adoption is driven by stakeholders' versatility level, e-learning facilities among others; hence, the need to examine COE lecturers' versatility levels in e-learning in southwest, Nigeria. The objectives of this study were to investigate the colleges of education lecturers' versatility levels in e-learning, and influence of gender. The research adopted a descriptive survey method, with sample drawn from 11colleges of education in South-west, Nigeria. Respondents were 1,088 lecturers. A researcher designed questionnaire titled colleges of education lecturers' versatility levels in e-learning was used for data gathering. The instrument was validated by experts and the reliability index was determined using Cronbach Alpha, the value was 0.93. Mean score was used to answer research question while independent t-test was used to test hypothesis. Findings showed that lecturers' versatility level in e-learning was low with mean score of 1.06 out of the benchmark of 2.00 and that no significant difference was observed between male and female COE lecturers' versatility levels in e-learning. It was recommended among others, that College management should allocate both financial and material resources in such a way as to promote professional development of lecturers thereby providing sustainable overall institutional development of technical skills and versatility needed for e-learning.

Keywords: Versatility level, ICT, and colleges of education**.**

INTRODUCTION

Information and Communication Technology (ICT) has been the issue of the moment in global social and economic affairs. It has become so important that every nation, organization or institution, no matter how highly or lowly placed, wants to identify and embrace it. The world is currently knowledge-driven and information age has taken the centre stage in all sphere of life. Utilization of Information and Communication Technology facilities is, therefore, a necessity for effective instructional service delivery in higher institutions of learning (Ebo, 2013).

Advances in ICT have redefined tertiary education in many ways; for example, widening access to higher education, improving the availability of instructional resources, and facilitating meaningful interaction among learners (McClelland, 2001). Exploring the power of ICT has become an essential strategy among institutions desirous to offer an affordable, efficient, and flexible learning environment for fast growing and diverse communities of learners.

Certainly, ICT has improved the quality and quantity of teaching, learning, and research in traditional and distance education institutions around the globe (Yusuf, 2007). In concrete terms, ICT literacy has enhanced teaching and learning through its dynamic, interactive, and engaging content; and has provided real opportunities for individualized learning (Nwana, 2008). There is no doubt that Information and Communication Technology (ICT) has found its rightful place in Education (Mba, 2013). Developments in the Education sector in developed and developing countries attest to the fact that ICT has become a central focus of many countries' educational policies and as such, its use and implementation have become widespread in the various school systems (Jerome, Christopher, & Patricia, 2012). The increasing trend of the utilization of ICT in classroom work across the globe has been facilitated by these three major factors according to Liu, Tao, and Nee (2008),new technological tools are being utilized to prepare the present generation of youth for the future; ICT tools make schools more effective in the teaching and learning process and lastly used to redefine teaching and learning.

Internet is not only an access to websites, but also there is knowledge and information on every aspect of the education over the internet (Rogers, 2003). The development of network technologies coupled with advancement in Information and Communication Technology (ICT) provide a framework for which a solid foundation is built for e-learning. The term e-learning is ambiguous and appeals to people differently. In most universities, e-learning is defined as a specific mode to deliver course content online.

In the context of this study, e-learning is a general term that refers to computer-enhanced learning. It involves the use of mobile technologies (Jegede,2009). It is also known as internet-based teaching system. Some scholars such as Damar, (2015); Jegede, (2009) regard distance learning as an e-learning system but research has further shown that it is part of e-learning. E-learning includes numerous types of media that deliver text, audio, images, animation, and streaming video, and includes technology applications and processes such as audio or video tape, satellite TV, CD-ROM, and computer-based learning, as well as local intranet/extranet and web-based learning. Information and communication systems, whether free-standing or based on either local networks or the Internet in networked learning, underlie many e-learning processes (Rosenberg, 2001). E-learning can occur in or out of the classroom. It can be self-paced, asynchronous learning or may be instructor-led, synchronous learning. E-learning is suited to distance learning and flexible learning, but it can also be used in conjunction with face-to-face teaching, in which case the term blended learning is commonly used.

The College of Education system is one of the tripods of tertiary education in Nigeria and it has the primary role of training teachers who will be awarded the

minimum teaching qualification of Nigeria Certificate in Education (NCE) (NCCE, 2015). This certificate qualifies one to teach in Junior Secondary Schools and Technical Colleges in Nigeria and it takes three years to complete. The National Commission for Colleges of Education (NCCE) was established to see to the needs of teacher education and teacher production. NCCE has made the acquisition of basic ICT skills part of national minimum standards for teacher education at NCE (Njoku, 2006). As a result of this, NCCE launched a new curriculum in 2010 which mandated all students in colleges of education to be ICT compliant. However, the National Commission for Colleges of Education (NCCE) recognizes lecturers in the colleges of education as a key player in developing ICT skills in students. ICT has been made compulsory for all lecturers in Nigeria colleges of education since 2004/2005 academic session (NCCE, 2005). Hence, lecturers in these colleges are required to integrate ICT into their classroom activities.

E-learning versatility level is the ability of lecturers to use ICT competently to access, manage, integrate and evaluate information, develop new understanding and communicate effectively in the society. Versatility is an act of performing many things competently. It can equally be defined as having varied uses or serving many functions. One's versatility will make one to adapt to required 21st century skills which is to be ICT compliant. It implies that one's versatility on e-learning means that one can navigate on the internet or make use of technologies for instructional purposes, which can be measured by very versatile, versatile, fairly versatile and not versatile (NITDA, 2010).

The idea of blended learning appears more in some policy texts. The versatility level in e-learning by college of education lecturers is precursor for effective integration of ICT in teaching and learning. Good policy becomes a fertile ground for good infrastructure while good infrastructure stands the chance of determining e-learning conception then e-learning conception is most likely to result in institutional strategies that will bring about capacity building for lecturers which will invariably change the lecturers' versatility levels necessitated by gender.

Gender issues also have been linked with versatility level of lecturers in e-learning adoption. A number of studies have been conducted to investigate and evaluate the impact of ICT on male and female students and lecturers in education. Some findings by scholars like (Colley, 2003; Copper, & Weaver, 2003) revealed that males were more exhaustive in the internet usage; they enjoy more competitive forms of e-learning and encounter different problems while using ICT than females. Looker and Thiessen (2003) in their study looking at gender differences and computer use among school students in Canada have found that male students used computers more frequently than female students.

However, Marwan (2008) reported in his findings that there is a difference of frequency of computer use between male and female students where the male students use computers more often than their female counterparts. The findings of Abimbade and Egunjobi (2003) showed that males are more technologically inclined than their female counterparts most especially in terms of computer orientation. Also, researchers like

(Olumorin, 2008; Onasanya, Shehu, Oduwaiye, &Shehu, (2010) could not find any gender influence on male female use of e-learning and ICT in general. Generally, females experienced a less equitable environment in ICT for learning purpose because the medium requires some technical skills and that the learning environment supported a male domination in online communication patterns that effectively silenced females.

Statement of the Problem

Arising from the policies and standards set out by both national and international regulatory agencies on the need for innovative teaching and learning processes, Thus, the federal government directive on ICT literacy as stated in the National Policy on Education (FRN, 2013), National Policy on ICT in Education (FRN, 2010) and NCCE Circular (2003) on ICT compliance by all academic staff in colleges of education were the bases for this study, colleges of education lecturers versatility levels in e-learning in South-west, Nigeria. For the successful implementation of ICT policies, programmes and instructional use of ICT in Nigerian schools especially in colleges of education, one cannot think of ICT integration and use in instructional delivery without determining whether the teachers/lecturers are acquainted with the operational skills of the e-learning components.

So far, it has not been well ascertained if considerable numbers of the lecturers are competent to carry on with this great task of integrating ICT into instructional delivery as there are few records. The trend of record of low use of ICT in teaching and learning processes by teachers is not limited to secondary schools alone but rampart among lecturers of higher institutions of learning. This has been the subject of major concern to educational planners, administrators, stakeholders in education and teachers themselves. In support of this, Yusuf and Balogun (2011) revealed that there was wide gap between policy development and implementation in the Nigeria schools as regards computer education. Researchers such as Nwana (2012) studied the challenges in the application of e-learning by secondary school teachers in Anambra State and concluded that inadequacy of e-learning infrastructure posed a major challenge for teachers' none use of e-learning in classroom and that the available ones are not utilized because the teachers lack the knowledge and skills of computer application. It is on this basis that this researcher investigated colleges of education lecturers' versatility level in e-learning where a significant number of these teachers are trained in Nigeria.

Research question
1. What is the college of education lecturers' versatility level on e-learning skills in South-west, Nigeria?

Research Hypothesis
1. Ho_1. There is no significant difference between female and male lecturers on e-learning versatility level in colleges of education in South-west, Nigeria.

METHODOLOGY

The study specifically focused on the versatility levels in e-learning among lecturers in colleges of education in South-west, Nigeria. Hence, a descriptive survey research design was adopted. The study was carried out in eleven

government owned Colleges of Education in the South-west, Nigeria. There are seven State Colleges of Education and four Federal

Colleges of Education making up eleven government-owned Colleges of Education which were examined for this study. As at the time of this study, lecturers in all government owned Colleges of Education in Southwest States of Nigeria were 4,650 out of which 35% were selected for the study. Multi-stage sampling technique was used to select the samples. In stage one, purposive sampling technique was used to select all government-owned colleges of education in southwest, while in stage two, proportionate sampling technique was used to select 35% which is equal to 1,627 of available academic staff from all the colleges of education in South-west, Nigeria for the study after the census of all the colleges' academic staff had been taken and in stage three, stratified sampling technique was used to stratify respondents along the gender line.

A structured questionnaire titled "Questionnaire on appraisal of versatility level among colleges of education lecturers was used to elicit information from the samples selected. 1,627 questionnaires were administered to members of academic staff in all of the sampled Colleges of Education out of which 1,248 were returned while 1,088 questionnaires which was 667% were found useful for data analysis. The data collected were analyzed using both descriptive and inferential statistics (mean score and t-test) to answer the research question and test the research hypothesis

RESULTS

Table 10: COE Lecturers Versatility Level on e-learning skills.

S/N	e-learning Versatility Level	Mean (x)
1.	I can connect e-learning sites on website for appropriate teaching	1.53
2.	I can use different computer operating systems	1.47
3.	I can use different instructional software packages	1.19
4.	I can establish virtual learning environment	1.08
5.	I can participate in online discussion	1.11
6.	I can carry out minor hardware repairs	0.55
7.	I can use presentation software and other digital media to supplement a lesson	1.03
8.	I can develop educational website	0.49
9.	I can prepare scheme of work and lesson notes using ICT tools	1.00
10.	I can prepare ICT based learning materials e.g. WebQuest	0.98
	Grand mean	**1.06**

The result in Table 1 revealed or showed that connecting sources of e-learning site and using different computer operating system had the highest mean scores of 1.53 and 1.47 respectively out of 3. This was followed by participating in online discussion, using different instructional software packages, using presentation software and other

digital media to supplement a lesson having the means of 1.22, 1.19, and 1.08 respectively. The lowest mean score was 0.49 with the statement that I can develop educational website.

However, the grand mean score for COE lecturer versatility level on e-learning skills was found to be 1.06 using 2.00 as the average benchmark, it can be inferred that college of education lecturer's versatility levels e-learning skills was low.

Significant difference between male and female lecturers on e-learning versatility level as indicated in research hypothesis two the null hypothesis was tested by using t-test as shown in Table 2.

Table 2: t-test of male and female COE Lecturers on e-learning Versatility Level.

Gender	No	X	SD	DF	T	Sig. (2 tailed)
Male	668	1.06	.59	1086	.21	.83
Female	420	1.05	.59			
Total	1088					

Table 2 indicated that t (1086) = .21 = .83. This means that the stated null hypothesis was accepted. This was as a result of the t-value of .21 resulting in .83 significance value which is greater than 0.05 alpha value.

By implication, the stated null hypothesis was established thus. There is no significant difference between male and female COE lecturers on e-learning versatility level. In other words, based on the earlier mean score of the lecturers' general versatility level in e-learning both male and female lectures were at the same level.

DISCUSSION

COE lecturers' Versatility Level in e-learning

The result of COE lecturers' versatility levels in the use of e-learning was examined using research question 1. The finding revealed that COE lecturers' versatility in the use of e-learning was low. This finding was in agreement with Olasedidun (2013) who reported that there was a low level of skillfulness in the use of ICT in Nigerian colleges of education. Similarly, Yusuf (2007) reported that teachers in Nigerian secondary schools were not competent in basic computer operations and in the use of generic software. However, this finding is contrary to the study of Adeyaju (2014) who found that lecturers in colleges of education were moderately skilled in the use of ICT for educational purposes.

Gender influence of COE lecturers' versatility levels in e-learning

The influence of COE lecturers' gender on their versatility levels in e-learning was examined by hypothesis 1. This result of the t –test established no significant difference between male and female COE lecturers' versatility levels in e- learning.

These findings on gender influence agreed with findings of Olumorin (2008) who could not find any form of gender influence or lecturers' attitude and use of ICT. Moreover, Olasedidun (2013) reported that no significant difference existed in the perception of COE Lecturers perceived usefulness, ease of use, attitude and intention to use social media in instruction based on gender. Also, Adeyanju (2014) established that no significant difference was found on COE lecturers' attitude to and proficiency in the use of ICT based on gender. Kirkpatrick and Cubar (1998) noted that the gender gap is narrowed when genders are exposed to the same the amounts and types of experience on computers. Atan, Azli, Rahman and Idrus (2002) further added that the absence of gender disparity is obvious when females and males are in a learning environment that requires the constant use of specific computer software to support their learning activities.

However, Onasanya, Shehu, Oduwaiye, &Shehu, (2010) reported that males had more positive attitudes towards e-learning than females. They found significant gender variation where males' ratings of perceptions towards computer self-efficiency, perceived usefulness and ease of use and behavioural intention to use e-learning were all higher than those of females. Also, Chen,&Tsai (2005) revealed that male exhibited more favourable attitudes toward Web- based learning than females. However, Jackson, Ervin, Gerdner and Schmitt (2001) found that females used e-mails more than males. From the previous illustrations', it can be deduced that COE lecturer's versatility levels in e-learning has been unstable yielding conflicting and questionable findings on the relationship between e-learning versatility levels and gender differences. Gender should therefore not be considered as a major criterion in the integration of e-learning by lecturers.

CONCLUSION

ICTs in education are not transformative on their own. Transformation requires teachers who can use technology to improve students learning. The ICT integration in the professional development of colleges of education lecturers in the South-west, Nigeria is essential. Unless teacher educators' model effective use of technology in their own classes, it will be impossible to produce 21stcentury teachers who can competently use the new e-learning tools for teaching. It is apparent that the main skill acquired by the lecturers was in word processing which can be attributed to typing of examination, test questions, student records and so on by the lecturers.

RECOMMENDATIONS

Based on the findings and conclusion of this study, the following recommendations were made;

1.   Colleges of education lecturers should improve their versatility skills by making use of ICT tools for instructional purpose to bring about sustainable development in Nigeria.

2.   Government should organize more seminars, workshops and conferences in and outside the country for lecturers on e-learning for effective instruction in colleges of education.

3.   College management should allocate both financial and material resources in such a way as to promote professional development of lecturers thereby providing sustainable overall institutional development of technical skills and versatility needed for e-learning.

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