Utilization of E-Learning Resources among Tertiary Students in Ogun State, Nigeria

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Abstract. This study investigated assessment of e-learning resources utilization by students of tertiary institutions in Ogun State, Nigeria. The study was conducted using a descriptive survey design. Three hundred and eighty-one (381) tertiary students in the area were randomly selected for the study. A researcher-designed questionnaire titled "Utilization of E-learning Resources Questionnaire" (UERQ) with a Cronbach's Alpha reliability coefficient of 0.76 was used to collect data. Frequency counts, percentages, means, t-test and ANOVA statistics were used to analyse the data. The findings were that there is a significant difference in utilization of e-learning resources based on class and institutions. However, there is no significant difference based on gender and age. It is recommended that tertiary institutions re-design their general studies curriculum to include e-learning skills so as to help students to understand how they can utilize e-learning resources.

Keywords: E-learning; Resources management; ICT.

1   Introduction

E-Learning is becoming a veritable tool employed in enhancing academic achievement. Nwokike (2010) defined e-learning as an innovative approach that delivers an electronically mediated, leaner centred and interactive learning environment to anyone, at any time and in any place by utilizing the internet and associated digital technologies. There is increasing recognition of the potential of e-learning to meet the world's ever-growing educational needs. E-learning takes various forms including web-based, satellite, TV, video conferencing, and mobile technology (Eke, 2011).

In order for students to utilize and enjoy the usefulness of e-learning resources efficiently in Nigerian tertiary institutions, they must have the mastery of operating educational hardware. Also functioning e-learning resources must be available to them in their institutions and they should be motivated to use them. E-learning can occur inside or outside of the classroom. It can be self-paced (asynchronous learning) or it can be instructor led (synchronous learning).

Asynchronous E-learning is self-paced and allows participants to engage in the exchange of ideas or information without the dependency on other participants' involvement at the same time (Wikipedia, 2014). It uses technologies such as e-mails, blogs, wikis and discussion boards as well as web-support, textbooks (Loutcko, Kurbel & Pakhomov, 2002). On the other hand, Synchronous e-learning occurs in real time with all participants interacting at the same time (Wikipedia, 3014). It involves the exchange of ideas and information with one or more participants during the same period of time.

A face to face discussion is an example of synchronous learning. In e-learning environments, examples of synchronous learning include online real time live teacher instruction and feedback, Skype conversations, chat rooms or virtual classrooms. Both the synchronous and asynchronous learning methods rely heavily on motivation, self-discipline and the ability to communicate in writing effectively. E-learning is not a new phenomenon in promoting education in some parts of the world. Some institutions in Nigeria use it to promote distance learning education and life-long learning. A good example is the National Open University of Nigeria (NOUN) and distance learning centres in some universities. Nwokike (2011) summarized the merits of e-learning as follows:

1. Electronic learning is both convenient to the teacher and the learner.
2. E-learning is flexible, and learning can take place anywhere and anytime.
3. Learners enjoy having the opportunity to learn at their own pace and their own time and
4. E-learning helps students to develop knowledge of ICT and digital technologies.

E-learning is beneficial to education, to teachers and to learners. It is one of the effective ways to facilitate teaching and learning in Nigerian tertiary institutions. Assessment plays an important role in the teaching and learning process. The essence of assessment is to ensure quality, to improve teaching methods and students' performance. It is crucial to the educational process both for teachers' advancement, students' promotion, and effective teaching. Assessments of learning (summative) generally occurs at the conclusion of a course, semester or academic year. Assessments for learning is formative in nature and is used by the teachers to consider approaches to teaching and next steps for individual learners and the class (Earl, 2003). Formative assessment provides feedback, which can be used to improve learning while the programme of instruction is still on.

In addition, assessment involves the collection of information about an individual's knowledge, skills, attitudes, judgment, interpretation and using the data to take relevant decisions about the individual, instructional process, curriculum or programme (Ugodulunwa, 2008). Anikweze (2013) defines assessment to include teacher, peer and self-assessment processes, where the goal is to develop new models of assessment, generally to foster life-long skills.

Because assessment covers all aspects of school learning, teachers must be skilled in different techniques of assessment. These techniques include tests, projects, observation, anecdotal records, interviews and rating scales etc.

The roles of e-learning in the teaching and learning process cannot be overestimated, especially in Nigeria where emphasis is being placed on technological development (Olutola & Olatoye, 2015). Based on the importance of e-learning resources in the teaching and learning process, this study investigated assessment of e-learning resources utilization by undergraduate students of tertiary instructions in Ogun State, Nigeria. The following questions were addressed:
1. What is the students' level of utilization of e-learning resources in Ogun State tertiary institutions?
2.   Is there a significant gender difference in the e-learning resources utilization of students of tertiary institutions in Ogun State?
3. Is there a significant difference in the e-learning resources utilization by students of tertiary institution in Ogun State, on the basis of class level?
4. Is there a significant difference in the e-learning resources utilization by students of tertiary institution in Ogun State on basis of institutions?
5. Is there a significant difference in the e-learning resources utilization by students of tertiary institutions in Ogun State on the basis of age?
6. Is there a significant difference in the e-learning resources utilization between students of universities and college of education in Ogun State?

2   Methodology

The study adopted a descriptive survey design. The population comprised all students in public tertiary institutions in Ogun State, while the target population was made up of the students in Tai Solarin College of Education, Omu; Federal College of Education, Abeokuta; Tai Solarin University of Education, Ijagun; and Olabisi Onabanjo University, Ago-Iwoye. Simple random sampling was used to select students from the institutions. A total of three hundred and eighty-one (381) students participated in the study. A researcher designed questionnaire titled "Utilization of E-learning Resources Questionnaires" (UERQ) was used. The questionnaire was divided into two sections, which respectively elicited data on the respondents and their utilization of e-learning resources. The utilization of e-learning resources was measured on a four point Likert-type scale. Expert judgment was used in validating the instrument. Cronbach's Alpha reliability coefficient for

the instrument was established at .76. The data collected was analysed using frequency counts, percentages, means, t-test and ANOVA (at the level of confidence p. =.05).

3 Findings

3.1 Utilization of E-learning Resources

Table 1: Utilization of E-learning resources (%, n = 381)

E-learning technologies	Frequently used	Seldom used	Not used	Not available	No response	Total
Web-based resources	15	10	33	39	3	100
Computer based resources	13	8	35	42	2	100
Virtual Classrooms	20	9	24	40	7	100
Content delivery via e-networks	24	15	33	21	6	100
Audio/ video tapes	30	17	21	26	7	100
Satellite TV/dishes	30	14	18	32	6	100
CD-ROM	28	16	21	27	8	100
Video conference	46	14	17	14	10	100
I-pads	45	13	15	12	15	100
E-mail	8	7	23	55	7	100
Wireless and mobile technologies	6	9	20	62	3	100
Internet	4	7	18	68	3	100

From Table 1, 57 (15%) of the respondents affirmed that web-based learning resources are available and frequently used by them, 40(10%) responded that it is available but not frequently used by them, 127(33%) responded that it is available but not used at all and 147(39%) responded that web-based learning resources are not available to them and 10(3%). On the use of e-mail, item 10 reveals that 30(8%) of the respondents affirmed E-mail is available and frequently used by them, 28(7%) responded that it is available but not frequently used by them, 87(23%) responded that it is available but not used at all and 210(55.1%) responded that e-mail is not available to them.

3.2   Gender and Utilisation of E-learning Resources

Table 2. Difference in utilization of e-learning resources by gender

Variable	N	X	SD	Df	Cal. t-value	Sig. of t-value	Decision
Male	232	31.4335	8.298	379	0.321	0.748	Not
Female	149	31.1544	8.387				Significant.

Table 2 reveals that there is no significant difference in the utilization of e-learning resources between male and female students of tertiary institutions (t=0.32, P>0.05). Thus, male and female students in tertiary institutions in Ogun State are not significantly different in their use of e-learning resources.

3.3   Class Level and Utilisation of E-learning Resources

Table 3. ANOVA in utilization of e-learning resources by class level

Sources	Sum of Squares	Df	Mean Square	F	Sig.	Remark
Between Groups	378	3	126.21	1.834	.140	Not Significant
Within Groups	25945	377	68.82			
Total	26323	380				

Table 3 reveals that there is no significant difference in the use of e-learning recourse by students' level of study (100 level to 400 level). All the students were using the resources.

3.4   Institution and Utilisation of E-learning Resources

Table 4. ANOVA in utilization of e-learning resources by tertiary institution

Sources	Sum of Squares	Df	Mean Square	F	Sig.	Remark
Between Groups	324.109	3	108.036	1.567	197	Not Significant
Within Groups	25999-534	377	68.964			
Total	26323.643	380				

Table 4 reveals that there is no significant difference in the use of e-learning resources by students based on their institutions. Students in each institution use e-learning resources just like students in any other institution ($F_3377 = 1.567$, P >0.05).

3.5   Age and Utilisation of E-learning Resources

Table 5. Differences in utilization of e-learning resources by age.

Variable	N	X	SD	Df	t	Sig.	Remark
22 years and below	233	31.1121	8.70699	379	.594	0.553	Not Significant
Over 22 years	158	31.6266	7.76607				

Table 5 reveals that there is no significant difference between the use of e-learning recourses by students of tertiary institutions in Ogun State based on their age (t=-o.594, P>0.05). Thus, students in tertiary institutions in Ogun State are not significantly different in their use of e-learning resources based on their age.

3.6   Type of Institution and Utilisation of E-learning Resources

Table 6. Differences in utilization of e-learning resources by category of institution

Variable	N	Mean	SD	Df	t	Sig.	Remark
Universities	183	30.8	8.38	379	-1.166	.245	Not Significant
Colleges of Education	198	31.8	8.26				

Table 6 reveals that there is no significant difference between the use of e-learning resources by students of universities and colleges of education in Ogun State (t=-1.166, P>0.05). Thus, students of universities and college of education in Ogun State are not significantly different in their use of e-learning resources.

4   Discussion, Conclusion and Recommendations

Based on the data collected, the findings of this study revealed that there is no significant difference in the male and female students of tertiary institutions use of e-learning resources. This implies that male and female students in Ogun State have the same level of utilization of e-learning resources. The findings of this study is against the study by Amkpa (2007), which revealed that male and female students differ significantly in attitudes towards computer applications which later affect their job opportunities after graduation. In addition, Ford and Moss (1996) reported that gender is a predictor of internet use and attitudes, males seem to enjoy browsing on the internet for enjoyment, while females tend to only use it for work-related purposes. This finding disagrees with the studies by Manda and Mulkangara (2007) and Ford, Miller and Moss (2001) who reported that male students use e-resources more than female students, and that female students have more difficulties finding information online than male students Ozoemelem (2009) reported high frequency of use of electronic information resources by both male and female postgraduate students. Also, it was discovered that there is no significant difference in the e-learning resources utilization by students of tertiary institutions in Ogun State on the basis of class level (100 to 400 levels).

In addition, there is no significant difference between students of tertiary institutions in Ogun State on the basis of institutions. This study is against the study of Olatokun (2009), which found that the level of education had the strongest influence on the capability to use personal computer and computer with Internet services by different categories of people including students, with respondents having less education being more disadvantaged in the use of internet.

Chiaha, Eze and Ezeudu's (2013) study is in agreement with the findings of this study. In their study, they found that there is no significant difference between the mean scores of federal and state universities on the extent to which students have access to e-learning facilities. Their findings in both state and federal institutions revealed that a greater percentage (57.15%) of undergraduate students did not have access to e-learning facilities. Specifically, the study reveals that 60.48% of students did not have personal computers, while 57.4% and 61.61% did not have regular electricity supply.

Moreover, the findings show that there is no significant difference in the e-learning resources utilization by undergraduate students of tertiary institutions in Ogun State based on age. Age has no influence on the utilization of e-learning resources by students. This implies that the age of students cannot determine the utilization of e-learning resources in Nigerian tertiary institutions. The Pew Internet and American Lie Project found that although 73% of teens between the ages of 12 and 17 use media, the rates of social media use are even higher (83%) for young adults between the ages of 18 and 29 (Lenhart, Purcell, Aaron, & Zickuhr, 2010:; Madeen & Zickhur, 2011). Due to age restrictions and limited access to social media, pre-adolescent students do not appear to have the same level of social media use as older students (Lenhat et al., 2010). In addition to the number of teens and young adults using social media, two-thirds of adult Internet users also use social media (Madden & Zickhur, 2011).

This study investigated the assessment of e-learning resources utilization by students of tertiary institutions in Ogun State, Nigeria. The findings of this study revealed that the age, gender, institutions and class level of students in tertiary institutions had no influence on the utilization of e-learning resources by the students. This implies that the age, gender, institutions and class level of students cannot determine the utilization of e-learning resources in Nigerian tertiary institutions. The following recommendations are made:

1. Government should provide adequate fund to equip all the e-learning centres in Nigerian tertiary institutions.
2. Nigerian tertiary institutions General Studies (GST) curriculum should be re-designed to include e-learning utilization training to help the students to understand how they can utilize e-learning resources.
3. There should be an awareness campaign on the usefulness and utilization of e-learning resources in Nigerian tertiary institutions,
4. Government and other stakeholders in education should assess the level of utilization of e-learning resources by students of Nigerian tertiary institutions periodically to know their needs and challenges, and
5. Private sector, non-governmental and voluntary organizations should also assist to equip tertiary institutions' e-learning resource centres.

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