An Assessment of Challenges of e-Learning Utilization by University Undergraduates in Ogun State, Nigeria

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Abstract

This study assessed the challenges of e-learning utilisation by university undergraduates in Ogun State, Nigeria. Survey type of descriptive research design was used in the study. 381 undergraduates were randomly selected from three Universities in Ogun State. A questionnaire with test-retest reliability coefficient of value 0.88 was used for data collection. The researcher used frequencies, percentages, mean and t-test for data analysis. Findings from the study revealed that all the fifteen challenges investigated in the study affect e- learning utilization by university undergraduates in Ogun State, Nigeria in varying degrees. The foremost factor is money to purchase e-learning devices followed by limited electricity supply. Moreover, significant difference was found in the challenges of e-learning utilization by university undergraduates on the basis of gender (t= .796, df = 397, P > 0.05). It was recommended that all the identified challenges affecting the e-learning utilisation by university undergraduates in Ogun State, Nigeria should be addressed by the government and other stakeholders in education.

Introduction

Higher education is regarded as an instrument of social, political and economic development. The products of higher education in any nation will determine the development of such nation. Therefore, higher education contributes to national development through high level relevant manpower training in order for individual to acquire both

physical and intellectual skills which enable them to be self-reliant and useful in the society (Federal Ministry of Education ,FRN, 2004).

According to Udokang (2006), education is the provision of opportunity for a child to realise his/her potentials, goals and abilities in life. Education includes the acquisition of functional skills, moral identity, and attribution to succeed in life and thereby improve the society (Fareo, 2012). The yearnings, needs, aspirations as well as the cultural heritage and environment of any society determine, to a large extent, determine the kind of knowledge and skills to be acquired (Adebosin, 2004). The National Policy on Education (2004), states that education has been adopted as instrument per excellence for effecting national development.

University is the highest level of education where high-level manpower, intellectuals and future leaders are developed. It is a place where students come together to pursue knowledge and it promotes the development of intellectual capacities of individuals to understand and appreciate their environments (Ajayi, 2003). Universities therefore educate future leaders and develop the high-level technical capacities that underpin economic growth and development (Odekunle, 2001).

Information and Communication Technology (ICT) refers to the totality of methods and tools that are used in gathering, storing, processing and communicating information. ICT has found application in virtually all the available professions in the world and professionals in different field called it by different names. When ICT is used in education or to foster learning, it is called e-learning technology or educational technology. In the broadcasting profession where ICT is used as the communication tool, it is commonly referred to as Electronic Information Technology or Communication Technology. A careful consideration of the meaning and scope of ICT makes it easy to think that hardly can any profession survive or continue to be relevant without the integration of ICT. According to Adeola (2012), ICT encompasses all the technologies used to transmit or disseminate information to an audience. These cover

internet services provision, telecommunications equipment and services, media and broadcasting and other related information and communication activities. Modern ICT products include email, voice mail, internet, electronic bulletin boards, cellular phones, video conferencing among others.

According to the National Policy on Information and Communication Technologies (ICT) in Education (2010), ICT refers to an art and applied sciences that deal with data and information. It encompasses all equipment, including computational machinery–computers, hardware, software, firmware, etc and tools, methods practices, processes, procedures, concepts, principles and the sciences that come into play in the conduct of the information activities: acquisition, representation, processing, presentation, security, interchange, transfer, management, organisation, storage and retrieval of data and information.

In the teaching profession, e-learning is now accepted worldwide as a standard mode of delivering instructions due to the use of ICT (Adeola, 2012). E-learning can be described as an innovative platform that enhances the learning situation for learners at their own pace and convenient time (Odunaike, Olugbara & Ojo, 2013). Oblinger (2005) defined e-learning as new learning methods in which the interactions among students and lecturers are online using the internet facilities.

According to Suo (2008), e-learning is an enhanced and efficient method of learning by utilization of multi-media and hypermedia technologies. It limits the expenses such as stationery cost consumed by learners every day in the classroom. E-learning in its broadcast sense refers to any learning that is electronically enabled. In a slightly narrower sense, it is learning that is enabled by the application of digital technologies. Narrowed down further, it becomes any learning that is web-based or internet enabled. Advantages of e-learning technologies according to Bhuasiri, Xaymoungkhoun, Jeung and Cigenik (2011), include increase in accessibility to information, better content delivery,

interactivity, increased concentration, self-spacing, personalised instruction and content standardisation.

Despite the numerous merits of e-learning in higher institutions, several challenges are affecting the use of it in the tertiary institutions. Thus, Anene (2014) investigated the challenges and prospects of e-learning in Nigeria tertiary institutions. The study discovered that one of the challenges to the use of ICT was inadequate facilities and infrastructure, the learners complained that Nigerian higher institutions do not have sufficient e-learning library domain for online interactions with lecturers. In addition, the findings of Eze (2018), in the study on the utilisation of e-learning facilities in the educational delivery system of Nigeria revealed that attitude of users, inadequate internet facility and inadequate training of partakers affect the successful adoption of e-learning technologies.

Moreover, Aboderin (2015) study revealed that the learners' major problems in using e-learning included inadequate computers, inadequate internet facilities, learners' inadequate access to e-learning instruments and tools, costly software and poor power supply. The outcome of study of Chiaha (2013), revealed that about 42.92 percent of the learners had opportunity to the use of e-learning tools; some learners have privilege to the use only email while some impediments to the use of e-learning tools by learners include poor power supply, slow network connectivity, amongst others.

Furthermore, content and infrastructure development have not been sufficient for successful implementations of e-learning systems (Ndubisi ,2021). Both the lecturers and students in Nigerian higher institutions have been facing a lot of problems that make the use of e-learning not to be effective and efficient. Hence, this study, an assessment of the challenges of e-learning utilisation by university undergraduates in Ogun State, Nigeria.

Research Questions

The following questions were raised and answered in the study:

i. What are the challenges of e-learning utilisation by university undergraduates in Ogun State, Nigeria?
ii. What is the ranked order of the challenges of e-learning utilisation by university undergraduates in Ogun State, Nigeria
iii. Is there a significant difference in the challenges of e-learning utilisation by university undergraduates based on gender?

Methods

The study adopted survey type of descriptive research design. All the university undergraduates in the federal and state-owned universities in Ogun State constituted the target population. The researcher selected three hundred and eighty-one participants using a simple random sampling technique. An instrument titled: "Challenges of e-learning Utilisation Questionnaire (CEUQ)" designed by the researcher with four-point likert-type scale and five points was used to collect relevant data from the participants. Both validity and reliability of the instrument were carried out. The test-retest reliability coefficient value of 0.88 was obtained for the instrument. The researcher along with three research assistants administered the instruments to the participants in the respective universities.

Frequencies, percentage, mean and t-test were used to analyze the data collected at 0.05 alpha level. The variables that had a mean of 2.5 (Midpoint) and above represented "agree" while mean below 2.5 represented "disagree." The extent of variability of the participant responses were determined using the Standard Deviation (SD). A standard deviation that is less than 1.0 shows low variability.

Results and Discussion

Research Question I: What are the impediments to e-learning utilisation by university undergraduates in Ogun State, Nigeria?

Table 1. Percentages of responses on impediments to e-learning utilisation by university undergraduates in Ogun State, Nigeria.

S/N	Factors affecting the use of e-learning	Strongly Agree	Agree	Disagree	Strongly disagree	No response	Mean	SD	D
1.	No money to purchase e-learning resources/devices	178 (46.7%)	120 (31.5%)	44 (11.5%)	18 (4.7%)	21 (5.5%)	3.092	1.124	A
2.	Skilled manpower is inadequate	88 (23.1%)	164 (43.0%)	74 (19.4%)	28 (7.4%)	27 (7.1%)	2.677	1.121	A
3.	Limited electricity	152 (40.0%)	115 (30.3%)	56 (14.7%)	31 (8.2%)	27 (7.2%)	2.884	1.217	A
4.	Lack of training on use of e-learning	120 (31.5%)	119 (31.2%)	79 (20.7%)	30 (7.9%)	33 (8.7%)	2.690	1.235	A
5.	Appropriate e-learning software is lacking	140 (36.7%)	96 (25.2%)	66 (17.3%)	40 (10.5%)	39 (10.2%)	2.562	1.256	A
6.	Lack of good quality of education content on e-learning	110 (28.9%)	102 (26.8%)	88 (23.1%)	47 (12.3%)	34 (8.9%)	2.522	1.253	A
7.	Poor networking	126 (33.1%)	123 (32.3%)	68 (17.8%)	37 (9.7%)	27 (7.1%)	2.738	1.209	A
8.	Cost of buying data	133 (34.9%)	112 (29.4%)	73 (19.2%)	35 (9.2%)	28 (7.4%)	2.753	1.230	A
9.	Fear of e-learning resources usage	97 (25.5%)	85 (22.3%)	83 (21.8%)	81 (21.3%)	35 (9.2%)	2.305	1.280	DA
10.	Cost of working in cyber café	142 (37.3%)	108 (28.3%)	60 (15.7%)	40 (10.5%)	31 (8.1%)	2.672	1.220	A
11.	Download delay	131 (34.4%)	127 (33.3%)	59 (15.5%)	36 (9.5%)	28 (7.4%)	2.769	1.216	A
12.	Problem with credibility of information	124 (32.5%)	92 (24.1%)	78 (20.5%)	55 (14.4%)	32 (8.4%)	2.423	1.204	DA
13.	Inability to find information	110 (28.9%)	103 (27.0%)	77 (20.2%)	61 (16.0%)	30 (7.9%)	2.375	1.198	DA
14.	Inaccessibility of some websites	146 (38.3%)	94 (24.7%)	81 (21.3%)	33 (8.7%)	27 (7.1%)	2.648	1.150	A
15.	Poor skills for operating e-learning resources/devices	126 (33.1%)	93 (24.4%)	79 (20.7%)	56 (14.7%)	27 (7.1%)	2.530	1.208	A

Key: SD=Standard Deviation, D=Decision, A=Agree, DA=Disagree.

Table 1 shows that 178 (46.7%) of the respondents strongly agree to item 1 (No money to purchase e-learning devices/devices), 120 (31.5%) agree, 44 (11.5%) disagree, 18 (4.7%) strongly disagree and 21 (5.5%) respondents did not answer item number 1. There are 88 (23.1%) of the respondents strongly agree to item 2 (Skilled manpower is inadequate), 164 (43.0%) agree, 74 (19.4%) disagree, 2 8(7.4%) strongly disagree and 27 (7.1%) respondents did not answer item number 2. Table 1 also reveals that 152 (40.0%) of the respondents strongly agree to item 3

(Limited electricity), 115 (30.3%) agree, 56 (14.7%) disagree, 31 (8.2%) strongly disagree and 27 (7.2%) respondents did not answer item number 3. In addition, 120 (31.5%) of the respondents strongly agree to item 4 (Lack of training on use of e-learning), 119 (31.2%) agree, 79 (20.7%) disagree, 30 (7.9%) strongly disagree and 33 (6.66%) respondents did not answer item number 4. On the other hand, 126 (33.1%) of the respondents strongly agree to item 7 (poor networking), 123 (32.3%) agree, 68 (17.8%) disagree, 37 (9.7%) strongly disagree and 27 (7.1%) respondents did not answer item 7. There are 133 (34.9%) of the respondents that strongly agree to item 8 (cost of buying data), 112 (29.4%) agree, 73 (19.2%) disagree, 35 (9.2%) strongly disagree and 28 (7.4%) respondents did not answer item number 8. Hence,131 (34.4%) of the respondents strongly agree to item 11 (download delay), 127 (33.3%) agree, 59 (15.5%) disagree, 36 (9.5%) strongly disagree and 28 (7.4%) respondents did not answer item number 11.

Research Question II: What is the ranked order of impediments to e-learning utilisation by university undergraduates in Ogun State, Nigeria?

Table 2. Mean and ranked order of impediments to e-learning utilization by university undergraduates in Ogun State, Nigeria.

Item	Factors affecting the use of e-learning	N	Mean	Std Deviation	Rank
1	Money to purchase e-learning resources/devices	381	3,0919	1.12365	1st
3	Limited electricity	381	2,8842	1.21654	2nd

11	Download delay	381	2,7690	1.21577	3rd
8	Cost of buying data	381	2,7533	1.22990	4th
7	Poor networking	381	2,7375	1.20934	5th
4	Lack of training on use of e-learning	381	2,6903	1.23486	6th
2	Skilled manpower is inadequate	381	2,6772	1.12073	7th
10	Cost of working in cyber cafe	381	2,6719	1.22043	8th
14	Inaccessibility of some websites	381	2,6483	1.15037	9th
5	Appropriate e-learning software is lacking	381	2,5617	1.25635	10th
15	Poor skills for operating e-learning resources	381	2,5302	1.20842	11th
6	Lack of good quality of education content	381	2,5223	1.25348	12th
12	Problem with credibility of information	381	2,4226	1.20412	13th

13	Inability to find information	381	2,3753	1.19795	14th
9	Fear of e-learning resources usage/devices	381	2,3045	1.28009	15th

Table 2 reveals that out of 15 impediments to e-learning utilization by university undergraduates in Ogun State, Nigeria listed above: money to purchase e-learning resources ranked first followed by limited electricity which ranked second; download delay ranked third, followed by cost of buying data, poor network, lack of training on use of e-learning, skilled manpower is inadequate, cost of working in cybercafé, inaccessibility of some websites, appropriate e-learning software is lacking, poor skills for operating e-learning resources, lack of good quality of education content, problem with credibility of information, inability to find information and fear of e-learning resources usage.

The least of the impediments to e-learning utilisation by university undergraduates is fear of e-learning which means university undergraduates in Ogun State did not have fear of using e-learning resources. Therefore, all other problems ranked 1st to 14th should be solved by governments and each institution management so that university undergraduates in Ogun State, Nigeria can make use of e-learning resources adequately. This will facilitate their progress in teaching and learning processes.

Research Question III: Is there a significant difference in the impediments to e-learning utilization by university undergraduates in Ogun State, Nigeria based on gender?

Table 3. T-test summary of comparison of impediments to e-learning utilisation by university undergraduates in Ogun State, Nigeria based on gender.

Variable	N	Mean	SD	SEM	Df	Cal. t-value	Sig. of t-value	Remark
Male	232	39.2371	11.61093	.76229	379	-.796	.427	P> 0.05(NS)
Female	149	40.2297	12.22860	1.00518				

NS= Not Significant

The result in Table 3 shows that no significant difference exists in the impediments to e-learning utilisation by university undergraduates in Ogun State, Nigeria based on gender. ($t = -.796$, $Df = 397$, $P > 0.05$). This implies that both male and female students faced the same impediments in the use of e-learning.

Discussion of Findings

The findings from the research questions revealed that all the respondents agree that money to purchase e-learning resources, limited electricity, download delay, cost of buying data, poor network, lack of training on use of e-learning, skilled manpower is inadequate, cost of working in cybercafé, inaccessibility of some websites, appropriate e-learning software is lacking, poor skills for operating e-learning resources, lack of good quality of education content; problem with credibility of information, inability to find information and fear of e-learning resource usage affect their use of e-learning in Ogun State. The findings are supported by Aboderin's (2015) study which found that the open University students' major challenges in using e-learning included inadequate computers, inadequate internet facilities, learners, inadequate access to e-learning instruments, costly software and poor power supply.

The findings from research question 3 shows that significant differences do not exist in the impediments to e-learning utilisation by university undergraduates in Ogun State, Nigeria based on gender (t = -.796, Df = 397, P > 0.05). This implies that the impediments faced in the use of e-learning by male and female university undergraduates are not different. The findings were supported by the findings of Olutola (2014) but contrary to the study by Aboderin (2015), which revealed that students' gender significantly differ in attitudes towards computer applications.

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Conclusion

Most of the factors considered (money to purchase e-learning resources, limited electricity, download delay, cost of buying data, poor networking, lack of training on use of the e-learning, skilled manpower is inadequate, cost of working in cybercafé, inaccessibility of some websites, appropriate e-learning software is lacking, poor skills for operating e-learning resources and lack of good quality of education content) except three (problem with credibility of information; inability to find information and fear of e-learning resource usage) serve as impediments to e-learning utilisation by universities undergraduates in Ogun State, Nigeria in varying degrees.

In other words, respondents generally agreed that 12 out of the 15 factors considered in this study are the factors affecting the use of e-learning. Therefore, there is an urgent need for the government, Universities and other relevant education stakeholders to address the impediments to e-learning faced by universities undergraduates students in Ogun State and Nigeria in general.

The researcher recommends that:

1. All the identified impediments to e-learning utilisation by universities undergraduates in study state and Nigeria should be addressed by the government;

2. Adequate e-learning resources and devices should be provided by the government to all Universities and tertiary institutions in order to enhance students' academic performance.
3. There should be adequate power /electricity supply to support and facilitate the use of e-learning in our Universities and other tertiary institutions in Nigeria.

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