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Factors influencing the use of online educational resources by students of tertiary institutions in the North-West, Nigeria

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Abstract

This research aimed at (i) examine gender influence on the use of online educational resources among students of tertiary institution in the Northwest Nigeria.(ii) find out family economic influence on the use of online educational resources among students of tertiary institutions in Northwest (iii) identify the challenges faced by students of tertiary institutions in the use of online educational resources among students of tertiary institutions in North-west, Nigeria. The descriptive research design of survey type was employed for the study. The population sample was 333 students of tertiary institutions in the zone. Three research questions were generated while two hypotheses were raised and tested at 0.05 level of significance. The instrument employed for the study was a researchers-designed questionnaire and a checklist. Percentage, mean score and Pearson, Product-

Moment correlation were used to answer the research questions and analyze the collected data. The findings of the study revealed that: gender does not have any influence on the use of OER among students of tertiary institutions in Northwest, Nigeria. The study also revealed that economy of the family has an influence on the use of OER among students of tertiary institutions in northwest, Nigeria. The study identified challenges such as power, ignorance and high cost of material among others. The study recommended that all students irrespective of gender, should be encouraged to use OER for their academic activities, Families should strive to empower their wards with the necessary material that would enable them use OER for their academic activities among others.

Keywords: Factors, influencing, online educational resources

Introduction

The education industry has witnessed tremendous changes in the mode and manner of information processing and service delivery through the use of computer. The computer has dominated other methods of content delivery. This is because of its availability, accessibility, and acceptability worldwide. Its variability and versatility makes the use of computer and computer related accessories more favourable to many teachers. One of such variability is the use of online educational resources. Online educational resources refer to web document on the internet that provides useful information (Oxford University Press, 2017). They are resources that are accessible via internet and World Wide Web. Any support software available online can also be considered a resource (Pappas, 2017). Online educational resources were created to provide students and lecturers with free-of-charge, ready-to-use teaching and learning resources. (Oxford University, 2017). Online educational resources has the advantage of making a learner learn what he or she wants to learn, provide comfort, self-pace learning, low cost (Pappas, 2017). That is why it is said that learning resources are key mental assets in a competitive higher education the world over. Today more and more institutions and individuals are sharing digital learning resources over the Internet openly and without recourse to cost as online educational resources (OER). Until recently, much of the learning materials were locked up behind passwords within proprietary systems, unreachable for outsiders. Online educational resource was in fact introduced in 2002, at UNESCO's Forum on Open Courseware (Wiley & Duval, 2010) [15]. OER have the potential to transform teaching and learning practices in all educational settings. They can be used to reduce the time to develop courses and programmes, facilitate knowledge sharing, preserve and disseminate indigenous knowledge, and improve educational quality at all levels (Kanwar, Kodhandaraman, & Umar, 2010) [8].

Ipaye (2012) ^[7] observed that computers, smart board, data projector, digital camera, and so on are not adequately available and are being much less utilized, therefore they are not part of classroom technology in most tertiary institutions in Nigeria, thus the lecture method and course materials/handout continue to dominate classroom activities. This is an indication that the students are still lagging behind in the trend of changes in the world of ICTs. According to the 11th Edition of Global Information Technology Report (2012), Sweden occupies the top spot on global index with Mauritius ranking a distant 53rd as the best performing Sub-Saharan African Nation followed by South Africa 71st position and Nigeria comes at the 112th position. Other African countries like Rwanda 82nd, Botswana 89th, Kenya 93rd and Senegal 100th position. The report further stated that African countries suffer from severe weaknesses in all components of the index from poor connectivity caused by expensive and poor-quality ICT infrastructure to very low levels of basic skills and weak framework for technology-niche activities to flourish. Most Nigerian tertiary institutions are already having computer study as part of their academic programmes; most of them are still theoretical in nature to impact meaningfully on the society.

The National Universities Commission recently established a virtual learning website, but its impact is yet to be felt (Gbenga, 2006) ^[4]. In fact, ICT has had more impact on administrative services such as admissions, registration, fee payment and purchasing than on the fundamentals of classroom teaching and learning. But even if ICT has not revolutionized the classroom yet, it is changing the learning experience of students by relaxing time and space constraints as well as providing easier access to information, online journals and e-books; students' portals and so on; an achievement that should not be downplayed (Gambari & Okoli, 2007) ^[3].

The Federal Ministry of Education, through the National Universities Commission (NUC) and National Commission for Colleges of Education (NCCE), is also implementing the Virtual Library Project, while conducting capacity-building activities, as well as providing technical and logistics support to enable the Universities and Colleges of Education to build their ICT capacities for staff and students use in other to enable them embrace online educational resources.

Statement of the Problem

Access to quality and affordable educational resources have posed a serious challenge to many students and educators in many developing countries like Nigeria where government funding of education is grossly inadequate (World Bank, 2010). Usage of online information resources by students of tertiary institutions especially in North-west, Nigeria is affected by low information literacy skills, inadequate computers, and slows Internet connectivity. Pappas (2017) revealed that more than 20,000 active courses, about 3 million, and more than 7500 instructors are in one of the active resources; an indication that many students are already in online learning in other countries of the world. However, Ozoemelem's (2009) findings revealed that there is a disparity in the frequency of use of online information resources among students in develop and developing countries and such disparity translates to a disparity in access to digital information resources. Haßler and Jackson (2010) ^[6] noted that there is a significant gap between available Internet bandwidth in developing and developed countries.

This of course shows that developing countries like Nigeria will be lagging behind other nations in the use of online information for educational activities.

Okonkwo (2012) ^[11] carried out a study on the challenges posed by the lack of adequate knowledge in the use of OER in the Nigerian universities. The study examined the willingness, readiness and needs of open distance learning professionals from two hybrid universities in Nigeria to deploy OER in support of teaching and learning. Participants in the study consisted of 20 academic staff members from the two universities. The study revealed that one of the major challenges of developing OER initiatives in developing countries is the lack of appropriate skills on the part of educators to use OER. Therefore, the study recommended the need to train educators in the use of OER. However, other issues related to this include the lack of support for OER initiatives among top stakeholders, the application of appropriate technologies in OER creation, and the prevalent ineffective OER policies among others. Another study by Oso and Adesua (2017) ^[13] indicated that the use of online resources was not gender sensitive but students from high social economic background used internet more frequently than those from poor economic background.

None of the existing studies specifically investigated issues relating to the factors influencing the use of online educational resources by students of tertiary institutions in North-west Nigeria. Secondly, it is not certain if gender and social economic factor of families have any influence on the use of online educational resources among students. All these prompted the researchers to investigate factors influencing the use of online educational resources by students of tertiary institutions in the North-west, Nigeria with a view to suggesting better alternatives for students of tertiary institution in the North-west in particular and Nigeria in general. The following research questions guide this study:

1. Examine gender influence on the use of OER among students of tertiary institutions in North-west, Nigeria
2. Find out family economic influence on the use of OER Among students of tertiary institutions in North-west, Nigeria
3. Identify the challenges faced by students of tertiary institution in using online educational resources in North-west, Nigeria

Hypotheses

Ho1: There is no significant relationship between gender and the use of online educational resources among students of tertiary institutions in North-west, Nigeria

Ho2: There is no significant relationship between family economic factor and the use of online educational resources among students of tertiary institutions in North-west, Nigeria

Method

Research Design

The research design adopted for this study is the descriptive research design of survey type. Akuezilo and Agu (2004) posited that the descriptive research focuses on collection of information on the opinions, beliefs and attitudes of a representative sample of a specified population which permit the making of inference and generalization to the entire population.

The population for this study comprises all students of tertiary institutions in the North West Nigeria. The target population was 2,597 students selected from six (6) tertiary

institutions in North-west; Nigeria. The sample size is 333 students (Research Advisors, 2006) at 95% confidence level and 5% margin of error which were obtained using stratified and random sampling techniques.

Instrumentation

The instrument used for this study was a researcher-designed questionnaire developed by the researchers. The questionnaire was used to identify the influence of gender, family economy on the use of OER and challenges faced by students in tertiary institutions on the use of OER in North West, Nigeria. The content validity of the instrument was done by three lecturers; two from the Department of Measurement and Evaluation of the Federal University Gusau and one from the Department of Statistics, Federal Polytechnic, Kaura-Namoda, Zamfara State. The reliability of the instrument was done using test-retest method within the interval of four weeks. The instrument was administered to 113 students in Isa Kaita College of Education, Katsina. The data collected was analyzed using Chronbach Alpha. The analysis of the data collected was done and reliability coefficient of 0.84 was obtained. This signifies that the instrument was reliable enough to be used.

Results

Demographic Data of Respondents

The demographic data of the respondents which included gender, levels of education, age and income were presented and analyzed as follows:

Table 1: Demographic Data of Respondents

S/No	Item	Value	Value Label	Freq.	Percent
1.	Gender	1	Male	204	61
		2	Female	129	39
			Total	333	100.0
2.	Levels of Education	1	100	68	20
		2	200	53	16
		3	300	95	29
		4	400	117	35
			Total	333	100.0
3.	Age of Participants	1	17 – 27	78	23
		2	28 – 37	102	31
		3	38 – 47	153	46
			Total	333	100.0
3.	Income	1	High	86	26
		2	Average	151	45
		3	Low	96	29
			Total	333	100.0

Table 1 shows the demographic data of respondents in this study such as gender, levels of education, age and income. As shown in Table 1, 204 (61%) of the respondents were male while 129 (39%) were female. The Table also indicated the levels of education of participants that 68 (20%) were in 100 level, 53 (16%) were in 200 level, 95 (29%) were in 300 level and 117 (35%) were in 400 level. Furthermore, the age of the participants was revealed that 78 (23%) were in 17 – 27 years age bracket, 102 (31%) were in 28 – 37 years age bracket and 153 (66%) were in 38 – 47 years age bracket. Table 1 also revealed the income of participants that

86 (26%) of the participants’ income was high, 151 (45%) was average and 96 (29%) of the participants had a low income.

Research Question 1: Does gender influence the use of online educational resources among students of tertiary institutions in North-west, Nigeria?

Table 2

Level	Total Number of Students	Total Number of Yes&%	Total No. that said No.&%
100	68	28(41.2%)	40(58.8%)
200	53	13(24.5%)	40(75.5%)
300	95	30(31.6%)	65(68.4%)
400	117	17(14.5%)	100(85.5%)
Total	333	88(26.5%)	245(73.5)

Table 2 shows the responses of various levels of students on gender influence in the use of online educational resources among students of tertiary institutions for educational activities in North-west, Nigeria. The Table indicated that out of the 68 students in 100 level, 28 (41.2%) agreed that gender had an influence while 40(58.8%) of the respondents disagreed. For the 200 level students 13(24.5%) of the respondent agreed while 40(75.5%) disagreed. For 300, majority of the students 65 (68%) disagreed while 30(31%) agreed. In case of the 400 level students, majority of the respondents also rejected the claim with 100 (85%) disagreeing and 17(14.5%) agreeing. From the total analysis, 88(26.5%) agreed that gender influences the use of OER while 245(73.5%) disagreed to the statement

Research Question 2: Does family economy influence the use of online educational resources among students of tertiary institutions in North-west, Nigeria?

Table 3: Family influence on the use of online educational resources by students of tertiary institutions in North-west, Nigeria

Level	Total Number of students	Total number of Yes%	Total Number of No.%
100	68	40(58.8%)	28(41.2%)
200	53	40(75.5%)	13(24.5%)
300	95	65(68.4%)	30(31.6%)
400	117	100(85.5%)	17(14.5%)
Total	333	245(73.5)	88(26.5)

Table 3 presented the views of the participants on whether family economy has any influence on the use of online educational resources. 40(58.5%) of 100 level students agreed to the question while 28(41.2%) disagreed. 40(75.5%) of 200 level students agreed to the question while 13(24.5%) disagreed. In the case of 300 level, 65 (68.4%) agreed that family economy influences the use of online educational resources while 30(31.6%) disagreed. For the 400 level students 100(85.5%) agreed that family economy influences the use of online educational recourses while 17(14.5%) disagreed. The sum total of the analysis shows that majority of the students 245(75.5%) agreed that family economy actually influences the use of online educational resources for academic activities.

Research Question 3: What are the challenges faced by students in the use of OER in tertiary institutions in North-west, Nigeria?

Table 4: Challenges faced by tertiary institution students in the use of OER in North-west, Nigeria

S/N	Challenges faced by students on OER	SA	A	D	SD	Mean Score	Remarks
1	Lack of constant network	35	184	59	55	2.84	Agree
2	High cost of online accessibility	152	109	15	57	3.07	Agree
3	Lack of interest	18	37	167	111	1.91	Disagree
4	Ignorance	99	187	20	27	3.08	Agree
5	Power	123	198	9	3	3.32	Agree

Table 4 revealed the challenges faced by students of tertiary education in the use of online educational resources (OER) in tertiary institutions in North-west, Nigeria. As indicated in the Table, majority of the participants agreed that lack of power with a mean score of 3.32 is the greatest challenge faced by students. It is followed by ignorance with a mean score of 3.08. High cost of online accessibility was next with a mean score of 3.07. Lack of constant network is one of the greatest challenges with a mean score of 2.84 while lack of interest was disagreed with a mean score of 1.91.

Hypotheses Testing

Ho1: There is no Significant Relationship between Gender Factor and the Use of Online Educational Resources among Students of Tertiary Institutions in North-West, Nigeria

Table 5: Significant Relationship between Gender Factor and the Use of Online Educational Resources among Students of Tertiary Institutions in North-West, Nigeria

Variables	N	X	SD	Df	r-value	p-value	Remarks
Gender Factor	333	2.28	1.19	331	.153	.021	Ho rejected
The Use of OER	333	1.59	1.20				

From Table 5 the mean for accessibility was 2.28 and standard deviation was 1.19. Also, the mean for the use of OER was 1.59 and the standard deviation was 1.20. The r-value was 0.153 while the p-value was 0.021. As shown in the Table, the p-value was less than the level of significance 0.05. Therefore, the null hypothesis which stated that there was no significant relationship between gender factor and the use of OER among students of tertiary institutions in North-west, Nigeria was rejected. This implied that there was a significant relationship between gender factor and the use of OER among students of tertiary institutions in North-west, Nigeria.

Ho11: There is no significant relationship between family economic factor and the use of online educational resources among students of tertiary institutions in North-west, Nigeria

Table 6: Family Economic Factor and the Use of Online Educational Resources among Students of Tertiary Institutions in North-west, Nigeria

Variables	N	X	SD	Df	r-value	p-value	Remarks
Family Economic Factor	333	2.28	1.19	331	.140	.014	Ho rejected
Use of OER	333	1.59	1.20				

From Table 6, the mean for family economic factor was 2.28 and standard deviation was 1.19. Also, the mean for the use of OER was 1.59 and the standard deviation was 1.20. The r-value was 0.140 while the p-value was 0.014. As shown in the Table, the p-value was less than the level of significance 0.05. Therefore, the null hypothesis which stated that there

was no significant relationship between family economic factor and the use of OER among students of tertiary institutions in North-west, Nigeria was rejected. This implied that there was a significant relationship between family economic factor and the use of OER among students of tertiary institutions in North-west, Nigeria.

Discussion

The focus of this study was to examine the factors that influence the use of online educational resources by students of tertiary institutions in the North-west, Nigeria and to examine also whether the demographic variables of gender and economy of the family have any influence on the use of online educational resources among students of tertiary institutions in the northwest Nigeria. The study also identified the challenges faced by students of tertiary institutions in the Northwest Nigeria in the use of online educational resources. The first research question which sort to know if gender influences the use of online educational resources among students of tertiary institutions in North-west, Nigeria, majority of the participants 247(73.5%) disagreed with the claim while 88(26.5%) accepted the claim. The implication is that gender has no influence. The second research question was interested to know if the economy of the family has any influence on the use of online educational resources among the students of tertiary institutions in the Northwest, Nigeria. Majority of the respondents 247(73.5%) agreed that the economy of the family actually influences the use of OER in the Northwest, Nigeria. The implication is that students from well to do families use online educational resources more than those from poor families. The third research question revealed in order of importance that power with a mean score of 3.32, was first and followed by ignorance, mean score of 3.08. High cost of material 3.07, lack of constant network 2.84 and lack of interest, a mean score of 1.91. This goes to support Oso and Adesua, (2017) [13], Okeke, Oghenetega, and Umeji (2014) and Onaifo (2016) findings that poor electricity supply, high cost internet access were the major hindrances on the use of online educational resources.

Two hypotheses were tested. Hypothesis one which sort to find out if there was a significant relationship between gender and the use of online educational resources among students of tertiary institution Northwest, Nigeria was rejected; this means that there was a significant relationship. This is different from Oso and Adesua (2017) [13] findings that internet usage was not gender sensitive. Hypothesis two, which sort to know if there was a significant relationship between family economy and the use of online educational resources among students of tertiary institutions in the Northwest, Nigeria was rejected; meaning there was a significant relationship between family economy and the use of online educational resources among students of tertiary institution in the Northwest, Nigeria. This support Oso and

Adesua (2017) ^[13] findings that students from high social economic background used internet more frequently than those from poor economic background.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. All students irrespective of gender should be encouraged to Use OER for their academic activities.
2. There should be sustainable and effective internet services provided to students at all times and in every tertiary institution.
3. Families should strive to equip their wards with necessary materials that would enable them use OER for their academic activities such as laptops, desktops, Smartphones, cell phones among others.
4. Constant power supply to tertiary institutions in the North-west Nigeria is necessary. This is because majority of the online educational resource tools relies heavily on constant supply of power.
5. Capacity building should be intensified for both teachers and students for exposure and training on how to place and source for information using online educational resources of various types.
6. Staff and students should be enlightened on the need and benefits of OER for scholars.

Conclusion

Online educational resources are becoming a revolution in the education industry the world over. Nigeria cannot be an exception therefore there is the need to intensify the use of online information resources for academic activities because of its numerous benefits which include among others; to enhance and improve effective teaching and learning at tertiary institutions while avoiding the traditional classroom teaching and learning characterized with talk and chalk methodology. However, the discovery from this study revealed that online educational resources is not gender sensitive while family economy influences the use of OER. Students and teachers should therefore develop interest in learning resources online to enhance academic excellence.

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