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**Awareness and Use of Open Educational Resources by Library and Information Science
Students of Ignatius Ajuru University of Education, Rivers State, Nigeria**

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Abstract

The paper investigated awareness and use of open educational resources by Library and Information Science Students of Ignatius Ajuru University of Education, Rivers State, Nigeria. The researchers adopted descriptive survey design. The population of the study comprised of 248 undergraduate and postgraduate students. Three (3) research questions guided this study. Data was collected using the questionnaire. Data was analyzed with descriptive statistics such as frequency count and simple percentage. The findings revealed that the students have high level awareness of the concept of open educational resources and high level of utilization of the diverse types of OER. It was also established that inadequate information literacy skills, poor electricity supply, poor internet connectivity, lack of library sensitization and lack of support from lecturers on the use of OER were some of the challenges to the effective use of OER. Based on the findings, the researchers wish to recommend that the school management should organize trainings for the students on digital literacy skills, improve electricity supply and provide adequate internet facilities so that the students can fully utilize quality OER freely available on the internet. Academic libraries and lecturers should also help in promoting the use of OER among the students.

Keywords: Awareness, Use, OER, Library and Information Science Students

1.1. Introduction

The internet has become the most regular interaction and research tool for most people globally and has increase access to high-quality educational content. This technological innovations have moved education from being closed behind the four walls of the classrooms to openness and it has made learners not only consumers but creators too (Wiley, 2006). There is an ongoing movement towards more openness in education which encourages universities to open up their gates and permit access to those that could not attend higher education for various reasons (Iiyoshi, 2008) and this has lead to the development of open education resources (OER). The purpose of OER is to remove unnecessary barriers to access knowledge and equalize access to education by making high quality educational materials and opportunities more broadly available (Hewlett Foundation, 2016). With open educational resources education can become accessible to everyone who wants to learn, while teachers have the opportunity to enrich their teaching practice.

Open educational resources are educational materials that are freely made available on the internet for teaching, learning and research or educational purposes. Organization for Economic Cooperation and Development (2007) defined OER as digitized materials offered freely and openly for educators, students, and self-learners to use and reuse for teaching, learning and research. Open education resources are teaching, learning, and research resources that reside in the public domain or creative common area and are freely available to anyone over the Web (Okonkwo, 2012). It means that anyone can legally and freely copy, use, adapt and re-share them. OER include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge. (Hewlett Foundation, 2016). Creative Commons License is the most common license used but options vary in different countries.

Open educational resources has the potential to make education more accessible, enable the creation of relevant teaching materials, improve the quality of content, and empower learners to be critical thinkers and knowledge creators. OER can be utilized to improve the quality of higher education and give more people in developing countries the opportunity to receive a higher education while keeping the total cost for education down (Caswell et al., 2008) and (Sikwibele & Mungoo, 2009). OER can provide access to education for those in remote areas, for the

society disadvantaged, and for the marginalised. If carefully implemented, OER can play an important role in achieving the Sustainable Development Goals (SDGs) and enabling lifelong learning.

The awareness and use of OER has witness incremental growth especially in developed nations, where many universities and national institutions have established OER portals for providing wider access to educational resources to students (Sanjeeva & Powdwal, 2017). Open educational resources (OER) has become an important method of providing access to, and enhancing, the teaching and learning experience for both lecturers and students (Zaid & Alabi, 2020). Using and creating OER encourages collaboration, so students are able to share knowledge and benefit from the ideas of others. Effective use of OER has the potential to improve the quality and reduce the costs of educational materials. As such, OER is a possible substitute to costly commercial textbooks, offering a means of more affordable learning. This is one potential solution to the problem of dearth of quality materials and general underfunding of education in Africa. Open educational resources makes students learning interesting, gets them more engaged and directly improve the quality of their learning experience (Itasanmi, 2020). Generally, OER enable students to learn at their own pace, convenience, helps them prepare for classes, and mainly serves as supplementary materials to their course modules.

But despite the increasing popularity, benefits and the potentials of OER to contribute in the educational advancement of developing countries, it has been observed that there is a low level of awareness which is a major obstacle in the use of OER in Nigerian Universities (Zaid & Alabi, 2020). One major reason the researchers attributed to the low awareness and usage of OER among students is that lectures and librarians have not adequately promoted the use of OER to the students. Usage of OER may prove to be a solution for addressing major challenges of tertiary education like; high cost textbooks, quality of teachers, huge teacher's deficit etc. especially in developing countries. However, the researchers also observed that there are no sufficient empirical studies on awareness and usage of OER among university students in Nigeria and this is the gap the current study intends to fill. Therefore, this study investigated awareness and use of open educational resources among library and information science students of Ignatius Ajuru University of Education, Port-Harcourt, Rivers State, Nigeria.

1.2. Statement of the Problem

OER has the potential to improve the quality and reduce the costs of educational materials especially in developing countries like Nigeria where access to high quality teaching resources is scarce. However, despite the possible potentials of OER to create free, high quality educational resources for anyone and everyone to use, there is a low level of awareness and low level of utilization by university students in developing countries such as Nigeria. Akomolafe and Adegun (2014) stated that the use of OER among students in Nigeria is low. This may be as a result of the low level of awareness of OER among the students. Other possible reasons for the low usage could be inadequate information retrieval skills, lack of internet access, erratic power supply etc. To this end, this study investigated awareness and use of open educational resources among undergraduate students of library and information science of Ignatius Ajuru University of Education, Port-Harcourt, Rivers State, Nigeria.

1.3. Objective of the Study

The main objective of this study is to investigate awareness and use of open educational resources by Library and Information Science students of Ignatius Ajuru University of Education, Port-Harcourt, Rivers State, Nigeria. The specific objectives are:

- To determine the level of awareness of open educational resources among the students
- To investigate the types of OER used by the students
- To find out the challenges to the effective use of open educational resources by the students

1.4. Research Questions

The following questions will guide the study:

- What is the level of awareness of open educational resources among the students?
- What are the types of OER used by the students?
- What are the challenges to the effective use of open educational resources by the students?

2.1. Literature Review

Butcher (2015) described open educational resources as "any educational resources that are openly available for use by educators and students, without an accompanying need to pay royalties or licence fees". They are typically made freely available over the Web or the Internet. Their principal use is by teachers and educational institutions support course development, but they can also be used directly by students. OERs include full courses, course materials, modules, textbooks, streaming videos, tests, software, technical papers and any other tools, materials, or techniques used to support access to knowledge These resources have the potential to reduce costs, improve quality, and increase access to educational opportunities (Daniel, 2011; Plotkin, 2010; Wright & Reju, 2012) especially in developing countries where access to quality educational resources are very scares.

Several studies have been carried out to examine awareness and usage of OER. Arunkumar and Kannan (2020) investigated awareness and use of open education resources (OER) among PG students: A study of Alagappa University. The study found that found that OER usage was on the average. Hu et al., (2015) examined open educational resources (OER) usage and barriers: A study from Zhejiang University, China. The results show that a significant number of university students have experienced with OER, but there are challenges involved with student, content, interface, and environment related factors that impacted rapid diffusion of OER. Shams et al., (2020) carried out a study on open educational resources (OER) usage trends among university students of Pakistan. The study found that the students had high proficiency in using OER and is aware of different types of OER. Nyamwembe et al., (2018) studied the relationship between students' awareness and utilization of open educational resources for academic work in Private Universities in Kenya. The researcher concluded that majority of the students were moderately aware of the OER but the usage is still very low.

Issa et al., (2020) conducted a study on utilization of open educational resources for learning in universities in Kwara State. The study concluded that the utilization of OERs for learning by undergraduates was on the average. Itasanmi, (2020) investigated OER awareness and usage among open and distance learning students in South-Western Nigeria. The results of the study revealed that OER awareness among ODL students was on the average while OER usage was

very high. Similarly, Ivwighrehweta and Ambrose (2020) did a study on open educational resources utilization under the Covid-19 pandemic lockdown among distance postgraduate students in Nigeria: the case of the National Open University, Benin Study Centre, Edo State, Nigeria. The study shows that the students are aware of the concept of OER and their level of usage was high.

Akomolafe and Adegun (2014) noted that there is a moderate use of OER among undergraduates as a large number of students makes use of the internet to access learning resources in various forms such as video, audio and texts to support learning activities. Similarly, Nwana et al., (2017) revealed that even though there seems to be high awareness of open educational resources among undergraduates, there is a very low utilization of these resources for learning. They further stated that this may have occurred due to students' negative attitude toward e-resources. Afolabi (2017) revealed that students who are exposed to the use of open educational resources have a positive attitude toward its use and this showed in their academic performance as there was a significant difference in performance between their pre-test and post-test scores. Venegas-Muggli and Westerman, (2019) revealed an improved academic performance from students that are exposed to the use of open educational resources than those who relied on traditional textbooks alone.

The utilization of several open educational resources has no doubt paved way for academic excellence. A study regarding the utilization of OER by Nigerian undergraduate students found that the use of OER enhanced the sharing of common knowledge, course structure, access to quality learning materials and use of real instructional materials online. (Olufunke and Adegun 2014). Therefore, it is very important for librarians and lecturers to promote awareness and use of OER among their students. This can be done through workshops, seminars, and conferences using.

Methodology

The researchers employed the descriptive survey design. The population of the study comprised of 300 Undergraduate and Postgraduate Students of Library and Information Science in Ignatius Ajuru University of Education, Rivers State, Nigeria. Simple random sampling was used. The questionnaire was the instrument used for data collection. A total of 300 questionnaires were

distributed to the respondents, out of which 248 were returned and found usable. The instrument was administered to the respondents by the researchers and the data was analyzed using descriptive statistics such as percentages, frequency counts and mean. The results are presented below.

KEY: SA= Strongly Agree; A=Agree; SD=Strongly Disagree; D=Disagree.

Results

The findings of the study are presented in the following tables with explanations

Demographic Characteristics of Respondents

Table 1: Level of Study

Level of Study	Frequency	Percentage (%)
Undergraduates	223	90
Postgraduates	25	10
Total	248	100

Table 1 show that 223(90%) of the respondents are undergraduate students while 25(10%) are postgraduate students. This implies that majority of the respondents under study were undergraduate students.

Table 2: Gender of the Respondents

Gender	Frequency	Percentage (%)
Male	139	56
Female	109	44
Total	248	100

Table 2 show that 139(56%) of the respondents are male while 109(44%) are female. This implies that majority of the academic staff under study were male.

Table 3: Age of the Respondents

Age	Frequency	Percentage (%)
15-25	72	29
26-35	126	51
36-45	45	18
46years and above	5	2
Total	248	100

From table 3, it revealed that 126(51%) of the respondents were within the age bracket of 26-35years, 72(29%) were within the age bracket of 15-25years, 45(18%) were within the age bracket of 36-45years whereas 5(2%) were 46years and above. This implies that majority of the students were within the age bracket of 26-35years.

Answering of Research Questions

This section discusses the findings of this study based on the research questions raised. The results are presented in Tables 4-6.

Table 4: What is the level of awareness of open educational resources among students?

Level of Awareness of OER	Very Aware	Aware	Not Aware	Very Unaware	Mean
I am aware of open educational resources	57(23%)	155(63%)	33(13%)	3(1%)	3.0
I am aware that open educational resources are readily available for use, reuse and for research	42(17%)	173(70%)	33(13%)	-	3.0
I am aware that anyone can legally and freely copy, adapt and re-share OER	50(20%)	132(53%)	50(20%)	16(7%)	2.9
I know that OER is very easy to access	46(19%)	154(62%)	37(15%)	11(4%)	2.9
I know that it is very easy to find OER in my specific field	83(33%)	132(53%)	33(13%)	-	3.2
I aware that OER provide quality free materials for learning and teaching	66(27%)	125(50%)	57(23%)	-	3.0
I am aware that open educational resources are in online/electronic format	106(43%)	100(40%)	42(17%)	-	3.3
I know that OER do assist me in carrying out my academic activities	57(23%)	102(41%)	75(30%)	14(6%)	2.8
Grand Mean					3.0

Key: SA-Strongly Agree; A-Agree; D-Disagree, SD-Strongly Disagree

Table 4 shows the level of awareness of open educational resources among the students. All the items listed in table 4 have mean values that are above the criterion mean of 2.5, more so, the grand mean (3.0) is greater than the criterion mean (2.5), and this shows that the respondents have high level awareness of the concept of open educational resources.

Table 5: What are the types of open educational resources used by students?

Types of OER	SA	A	D	SD	Mean
Lecture Notes	25(10%)	173(70%)	50(20%)	-	2.9
E-textbooks	33(13%)	173(70%)	42(17%)	-	2.9
E-journals/databases	57(23%)	141(57%)	50(20%)	-	3.0
Project reports	25(10%)	150(60%)	66(27%)	7(3%)	2.8
Courseware from other universities	16(7%)	142(57%)	75(30%)	15(6%)	2.6
Conference papers	33(13%)	173(70%)	42(17%)	-	2.9
YouTube videos	18(7%)	173(70%)	57(23%)	-	3.1
Grand Mean					2.9

Key: SA-Strongly Agree; A-Agree; D-Disagree, SD-Strongly Disagree

Table 5 revealed the types of OER used by library and information science students. Table 5 therefore shows that all the items listed have mean values that are above the criterion mean of 2.5, more so, the grand mean (2.9) is greater than the criterion mean (2.5), as a result, all the items in table 5 are the types of OER used by the respondents. This data shows that the respondents have high level of utilization of the various types of OER.

Table 6: What are the challenges to the effective use of open educational resources by students?

Challenges to the Use of OER	SA	A	D	SD	Mean
Inadequate information retrieval skills	112(45%)	120(48%)	16(7%)	-	3.4
Poor internet connectivity	115(46%)	117(47%)	16(7%)	-	3.4
Poor electricity supply	125(50%)	100(40%)	16(7%)	7(3%)	3.4
Lack of access to computers/laptops	41(17%)	150(60%)	50(20%)	7(3%)	2.9
Lack of time to look for suitable resources	52(21%)	106(43%)	83(33%)	7(3%)	2.8
Lack of support from lecturers to use OER	100(40%)	66(27%)	75(30%)	7(3%)	3.0
Lack of library sensitization on the use of OER	106(43%)	93(37%)	42(17%)	7(3%)	3.2
Grand Mean					3.2

Key: SA-Strongly Agree; A-Agree; D-Disagree, SD-Strongly Disagree

Table 6 shows the respondents responses on the challenges to the effective use of OER. All the items in table 6 have mean values that are above the criterion mean of 2.5, more so, the grand mean (3.2) is greater than the criterion mean (2.5), this shows that all the items in the table 6 are the challenges to the effective use of OER. Most notable among the challenges are inadequate information retrieval skills, poor internet connectivity and poor electricity supply with mean values of 3.4 each. Others include lack of library sensitization and lack of support from lecturers on the use of OER

Discussion

The study shows that the respondents have high level awareness of the concept of open educational resources. This finding is in agreement with the findings of Ivwighreghweta and Ambrose (2020) who found that the students under study were aware of open educational resources. The high level awareness could be credited to the fact that the concept is gaining more popularity among scholars and students in Nigeria generally. The study also discovered that that the respondents have high level of utilization of the various types of OER. This is therefore in

conformity with the findings of Itasanmi (2020) who found in his study that OER usage among students is high. The high usage of OER among the students could be as result of the easy access to wide range of quality educational materials freely made available on the internet. This is supported by Kurelovic (2015) who stated that OER expose students to different educational resources at no cost, thus helping to reduce the cost of accessing learning materials which makes its usage very high. On the challenges to the effective use of open educational resources, the study observed that inadequate information retrieval skills, poor internet connectivity and poor electricity supply were some of the major challenges to the effective use of open educational resources. Others include lack of library sensitization and lack of support from lecturers on the use of OER. This finding is in agreement with the findings of Shams et al., (2020) and Mwinyimbegu (2018) who also found that poor electricity supply, low internet bandwidth, listed lack of access to computers, lack of internet search skills, lack of time to look for suitable resources etc. were some of the major barriers to the use of OER in higher education.

Conclusion and Recommendations

The open education initiatives have created free, high quality educational resources for anyone and everyone to use. This study confirmed that the respondents have high level awareness of the concept of open educational resources and have high level utilization of the diverse types of OER. However, inadequate information retrieval skills, poor internet connectivity and poor electricity supply were some of the major challenges to the effective use of open educational resources. Others include lack of library sensitization and lack of support from lecturers on the use of OER. Based on the findings, the researchers wish to recommend that the school management should organize trainings for the students on digital literacy skills, improve electricity supply and provide adequate internet facilities so that the students can fully utilize quality OER freely available on the internet. Academic libraries and lecturers should also help in promoting awareness and the use of OER among the students.

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