

Faculty Perceptions of the Use of Open Educational Resources in State Universities in Bayelsa and Rivers States Nigeria

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Abstract - The paper explored faculty perceptions of the use of Open Educational Resources (OER) in state universities in Bayelsa and Rivers States, Nigeria. The research was guided by two (2) questions. The researchers used a descriptive survey approach. The population of the study comprised 1787 faculty members from the four-state Universities in Bayelsa and Rivers State. Convenience sampling techniques were done as the study employed all of the respondents to the questionnaire from the entire population. Data was collected using an online questionnaire. Educational technology specialists evaluated the questionnaire. The Cronbach alpha value of 0.96 was discovered after analyzing the study's data to look for internal consistency and reliability. The questionnaire was deemed credible based on the coefficient discovered. The frequency count, basic percentages, and mean were used to examine the data. The results showed that faculty opinions on the use of OER were favorable. It was also discovered that inadequate access to electricity, poor Internet connectivity, ignorance, a lack of library sensitization, and a lack of ICT skills were some of the main obstacles to the efficient use of OER. The researchers suggested that the universities should enhance their supply of electricity by providing alternative sources of power supply, provide adequate Internet facilities and encourage faculty to assist in encouraging students to use OER.

Keywords: Open Educational Resources, Faculty, Faculty Perceptions, Teaching, Bayelsa State

I. INTRODUCTION

The dawn of the Internet has made Open Education resources (OER) obtain widespread acceptance and use, and they have become an important instrument for interaction between teachers and students, particularly at the higher education level. The rising cost of textbooks and other educational materials led to the creation of OER to enhance access to education (Clinton, 2018) by providing free, high-quality learning tools, particularly in developing nations where such materials are limited.

Since it was first introduced at a UNESCO meeting in 2002, most universities and other organizations have begun creating and developing course materials and making them freely accessible on the Internet to increase the value of higher education and make it inexpensive and handy for learners in emerging nations.

OER can be characterized in a number of ways, but they all hinge on the fact that the materials are made freely accessible to users via the Internet. OER is described by Manjunatha *et al.*, (2016) as course materials generated by universities and other organizations and published freely on the Internet. Bissell (2009) defined OER as digital resources that are free and openly available for use and reuse by educators, learners, and self-learners. OER is a term that refers to a wide array of online content that is available to a broad audience (Atkins *et al.*, 2007). They are primarily found in digital format and can comprise video snippets, audio, animated graphics, and complete textbooks. Software, tests, journal articles, technical papers, lecture notes, textbooks, lecture videos, etc., or approaches used to enable access to information are all examples of open educational resources (William and Flora Hewlett Foundation, 2017).

In general, OER can increase educational quality by producing top-notch educational materials broadly available for free to all students and faculty members (Wanga and Wang, 2017). According to Mishra (2017), OER can help faculty members learn by allowing learners to take charge of their learning through the creation of new content and collaborative efforts between faculty and learners. Faculty are exposed to more teaching content as a result of OER, letting them include a broader array of information in their classes and discover novel means to communicate the subject to learners (Farrow *et al.*, 2015). OER use by faculty can save money, increase student success, and give faculty more flexibility in course customization (Hilton, 2019).

OER enables remixing and repurposing, which decreases teaching preparation time because teachers can remix and repurpose existing peer-reviewed OER to match their environment without having to reinvent the wheel (Ihrke, 2013). As a result, OER allows developers to customize current OER to their context and cultural norms (Tuomi, 2013). The use of OER minimizes the workload of the faculty members whose responsibility it is to provide learning content that aligns with the planned curriculum. To put it another way, if institutions use or accept OER as a pedagogical strategy, facilitators will spend more time

assuring the quality of learning resources rather than creating new content from scratch.

According to Zaid and Alabi (2020), OER have grown in fame and are now a vital technique for both lecturers and students to have access to and expand their instruction and study experiences. Hilton (2019) stated that there is significant growth in the use of OER, and academics play an important part in its success in schools. According to research, teacher perceptions influence whether or not OER resources are adopted. Faculty members, such as lecturers, tutors, and instructional designers, have final control over the content used to meet their learning goals.

Despite the potential educational benefits, Percy and Van Belle (2012) found that lecturers in the under-resourced African continent in terms of education largely ignore these open and free resources. This could be attributed to a lack of understanding among many faculty members and negative attitudes towards OER (Allen and Seaman, 2014). Although several more empirical studies have proven OER's efficacy (Hilton, 2016), some faculty members also remain skeptical of OER quality.

The long-term survival and viability of OER, according to Wright and Reju (2012), is dependent on institutional communities and faculty members. As a result, the future of OER will most likely be determined by how individual faculty members view it. As a result, faculty perceptions can have a profound effect on OER uptake and use. The effective use of OER is a possible remedy for the issue of a lack of good materials and overall poor funding of education in Africa. Consequently, the researchers discovered that only a few studies assessing faculty perceptions of OER use in Nigeria have been done, which is the gap that the current study aims to fill. Thus, this study surveyed faculty perceptions of the use of OER in state universities in Bayelsa and Rivers States, Nigeria.

A. Statement of Problem

OER is a technology that enables universal access to free, high-quality learning resources, particularly in developing countries where such resources are scarce. OER has emerged as a viable alternative to expensive commercial textbooks, enabling a more cost-effective method of learning and creating unique opportunities by allowing greater access to educational resources. Even though OER is accessible in many institutions of learning and it is widely used by students, lecturers, and educators, it has been discovered that faculty in Nigeria use OER at a low rate (Zaid and Alabi, 2020). This could be due to a lack of understanding and a negative attitude toward the use of OER. The researchers also noted that there are insufficient empirical studies on lecturers' views on the usage of OER in Nigeria, a gap that the present study seeks to fill. This led the researchers to explore faculty perceptions towards the use of OER in four state-owned universities in Bayelsa State, Nigeria.

B. Objectives of the Study

This study's primary goal is to investigate faculty perceptions of the use of OER in four state universities in Bayelsa and Rivers States, Nigeria. The exact aims are

1. To establish faculty perceptions of the use of OER
2. To ascertain the obstacles to the efficient use of OER by faculty members.

C. Research Questions

1. What are faculty perceptions of the use of OER?
2. What are the obstacles to the efficient use of OER by faculty members?

II. LITERATURE REVIEW

OER are becoming more popular, but there is little empirical research on faculty members' perceptions regarding their utilization, particularly in poor nations like Nigeria. A review of some of these investigations is offered in this section. For instance, Lantrip and Ray (2021) did a study on faculty views and the use of OER at Oregon Community Colleges. The findings revealed that faculty members had a positive perception of OER.

In a similar study, Bond *et al.*, (2021) examined the perceptions and behaviours of university faculty members towards OER. The findings reveal that many faculty have used OER in the past or currently and that many have good attitudes toward OER. Pande *et al.*, (2019) investigated "teachers' perceptions towards OER and the findings revealed that most respondents have a positive perception about the forecasts of sharing, adapting, and using OER.

Donyina *et al.*, (2019) conducted research on faculty perceptions of OER and their use in two Ghanaian universities. The study outcomes reveal faculty impressions of OER. Ogunbodede *et al.*, (2021) looked into OER usage and awareness among faculty personnel at the Federal College of Education Technical Asaba in Delta State, Nigeria. The study reveals that faculty is knowledgeable and they use OER. The positive perceptions of OER among faculty are largely due to the benefits provided by OER.

However, some studies have also reported varying perceptions, lack of awareness, and concern about the quality of OER among faculty. For instance, Orwenjo and Erastus (2021) did a study on teachers' perceptions of OER in Kenya. According to the study, while teachers are eager to use OER, but they have differing views on the suitability and potential efficacy of open resources in Kenyan classrooms. Allen and Seaman (2014) surveyed a nationally representative sample of 2,144 college faculty members regarding their perceptions of OER and found that although they seemed to have a generally positive perception of OER, very few were using them, with 26.3% of faculty stating that traditionally copyrighted resources were superior and 15.3% rating traditional resources as having superior efficacy.

Elf *et al.*, (2015) discovered that while students and faculty were enthusiastic about using OER, they were also unable to handle the volume of materials obtainable and were worried about the standard. Madiba (2018) investigated faculty perceptions and experiences of OER in South Africa. The study indicated that instructors are still lacking in awareness of OER. Anthony *et al.*, (2018) investigated faculty perceptions of OER for academic purposes at the University of Port Harcourt's Faculty of Education. The population for the study consisted of all lecturers, with a total of 150 participants as samples. The study found that lecturers' understanding of OER and their ability to evaluate web-based information was quite low.

Several studies have also identified barriers to effective OER use, particularly in underdeveloped nations. Wiche and Ogunbodede (2021) found that effective OER use in Nigeria was hindered by a lack of library sensitization, information literacy skills, inadequate energy supply, insufficient Internet access, and lecturers' lack of support for OER utilization. Poor electricity supply, limited access to computer terminals, poor Internet connectivity, lack of search skills, and insufficient bandwidth were also some of the obstacles to accessing OER in Nigeria (Ivwhighrehweta and Ambrose, 2020). However, Mtebe and Raisamo (2014) identified additional limitations such as Internet accessibility and reliability; however, they were peculiar to their study location of Africa. Other major deterrents to faculty using OER, according to Todorinova and Wilkinson (2020), are that many faculty find it difficult to discover OER.

III. METHODOLOGY

The study employed a descriptive survey design. The population of the study comprised 1787 faculty members from four state universities in Bayelsa and Rivers States. Convenience sampling was done as the entire population who responded by filling out the questionnaire was used for the study. The questionnaire was posted on the WhatsApp platforms of faculty members in each of the universities, and they were given a time frame of a month to respond to it. The WhatsApp platforms were strictly for faculty members only. It was clearly stated on the questionnaire that faculty should not answer the questionnaire more than once. The sample size of 286 was the total number of faculty who responded to the questionnaire, representing 15% of the total population. The sample size is justified by Kothari (2004), who recommended at least 10% of the total population. The four-state universities have 17,873 faculty members. The total number of respondents was 286 and their institutions were as follows: University of Africa (UAT, 68), Niger Delta University (NDU, 77), Ignatius Ajuru University of Education (IAUE, 88), and Rivers State University (RSU, 53).

The researchers developed an online questionnaire titled "Perceptions of Academic Staff of the Use of Open Educational Resources in State Universities in Bayelsa and Rivers State" (PASUOERQ), which was used to collect data for the study. The questionnaire was validated by educational

technology experts. A four-point Likert scale of "Strongly Agree," "Agree," "Disagree," and "Strongly Disagree" response types was used for research questions 1 and 2. The four-point Likert scale was used because the opinion of each faculty member is essential. It is suitable for cases when a specific opinion is required.

The study's data were analyzed for internal consistency and reliability, and a Cronbach alpha value of 0.96 was obtained. Based on the coefficient obtained, the questionnaire was considered reliable. For Research Question 1, the mean response below 2.5 was adjudged as a negative perception, while the mean response of 2.5 and above was adjudged as a positive perception. Similarly, for research question 2, a mean response below 2.5 was adjudged as "not agree," while a mean response of 2.5 and above was adjudged as "agree."

The data was analyzed with descriptive statistics such as frequency counts, simple percentages, and mean, and the hypothesis was tested with an independent t-test. The ethical principles were not applied, and ethical clearance was obtained because they were not required for this study. The results are presented below.

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

IV. RESULTS

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

A. Demographic Characteristics of Respondents

TABLE I GENDER OF THE RESPONDENTS

Gender	Frequency	Percentage (%)
Male	155	54
Female	131	46
Total	286	100

Table I shows that 155 (54%) of the faculty were male while 131 (46%) were female). This implies that the majority of the faculty under study was male.

TABLE II AGE OF THE RESPONDENTS

Age	Frequency	Percentage (%)
21-30	14	5
31-40	153	53
41-50	97	34
51years and above	22	8
Total	286	100

From Table II, it was revealed that 153 (53%) of the respondents were within the age bracket of 31-40 years, 97

(34) were within the age bracket of 41-50 years, 22 (8%) were within the age bracket of 51 years and above, and 14 (5%) were within the age bracket of 21-30 years. This implies that the majority of the academic staff were within the age bracket of 31-40 years.

TABLE III ACADEMIC QUALIFICATIONS OF THE RESPONDENTS

Qualifications	Frequency	Percentage (%)
Bachelors	20	7
Masters	160	56
PhD	106	37
Total	286	100

Table III shows that the majority of the respondents 160 (56%) were master's degree holders, 106 (37%), Ph.D. holders, and 20 (7%), bachelor's degree holders. This implies that the majority of respondents under study were Master's degree holders.

B. Answering of Research Questions

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

Research Question 1: What are faculty perceptions towards the use of open educational resources?

TABLE IV FACULTY PERCEPTIONS TOWARDS THE USE OF OER

Sl. No.	Perceptions of Faculty Members Towards the Use of OER	SA	A	D	SD	Mean
1	I believe in the use of open education resources	137(48%)	143(50%)	6(2%)	-	3.5
2	The use of OER will likely increase the learning outcomes of students	137(48%)	143(50%)	6(2%)	-	3.5
3	OER materials are very helpful for learning	123(43%)	157(55%)	6(2%)	-	3.4
4	OER is a very good alternative for expensive textbooks	123(43%)	131(46%)	32(11%)	-	3.3
5	The use of OER in teaching can save time and money	106(37%)	161(56%)	19(7%)	-	3.3
6	OER enhances the reputation of my institution	96(34%)	163(57%)	21(7%)	6(2%)	3.2
7	I encourage my students to use OER	68(24%)	212(74%)	6(2%)	-	3.2
8	I do or intend to use and integrate OER into my role as a lecturer	69(24%)	196(69%)	21(7%)	-	3.2
9	OER brings down the cost of learning and teaching	86(30%)	143(50%)	57(20%)	-	3.1
10	It is easy to become skilled at using and helping students integrate OER into their courses	69(24%)	185(65%)	32(11%)	-	3.1
11	My institution supports the use of OER in teaching and learning	75(26%)	154(54%)	57(20%)	-	3.1
12	I have the knowledge necessary to use and help faculty integrate OER into their courses	57(20%)	160(56%)	69(24%)	-	3.0
13	I use OER developed by other universities and institutions in my lectures	46(16%)	147(51%)	85(30%)	8(3%)	2.7
	Grand Mean					3.2

Table IV shows the perceptions of faculty members toward the use of open educational resources. All the items in Table IV 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), which shows that the faculty members have positive perceptions toward the use of open educational resources.

Research Question 2: What are the challenges to the effective use of open educational resources by faculty members?

Table V shows the faculty member's responses to the challenges to the use of OER. All the items in Table VI have mean values that are above the criterion mean of (2.5). More so, the grand mean (3.1) is greater than the criterion mean (2.5), and this shows that all the items in Table V are challenges to the use of OER.

Most notable among the challenges are poor electricity supply, poor internet connectivity, lack of awareness, lack of library sensitization, and lack of ICT skills.

V. DISCUSSION

The study explored faculty members' perceptions toward the utilization of open educational resources. According to the study, faculty members had positive perceptions of the usage of open educational resources. The faculty's positive perceptions of OER are largely due to their understanding of the concept, its ability to improve student learning outcomes, increase cost savings for both students and faculty members, and facilitate access to high-quality teaching and learning resources in their various subjects, according to the responses.

TABLE V CHALLENGES OF FACULTY TO THE USE OF OPEN EDUCATIONAL RESOURCES

Sl. No.	Challenges to the Use of OER	SA	A	D	SD	Mean
1	Poor Internet connectivity	169(59%)	85(30%)	26(9%)	6(2%)	3.4
2	Poor electricity supply	154(54%)	100(35%)	26(9%)	6(2%)	3.4
3	Lack of awareness	118(41%)	143(50%)	18(6%)	12(4%)	3.3
4	Lack of ICT skills	125(44%)	105(37%)	50(17%)	6(2%)	3.2
5	Lack of Library sensitization on the use of OER	84(29%)	154(54%)	42(15%)	6(2%)	3.1
6	Lack of access to computers/laptops	94(33%)	111(39%)	75(26%)	6(2%)	3.0
7	Lack of time to look for suitable resources	31(11%)	133(47%)	100(35%)	22(7%)	2.6
	Grand Mean					3.1

The findings also show that the majority of faculty has a positive perception of OER. This study supports the findings of Lantrip and Ray (2021), who discovered that faculty members had positive perceptions toward OER. According to the study, some of the significant barriers to the successful use of open educational resources include poor electricity, poor internet connectivity, a lack of awareness, a lack of library sensitization, and a lack of ICT skills.

However, in Nigeria, the problems of epileptic power supply and limited ICT infrastructure are persistent issues. This finding is consistent with those of Wiche and Ogunbodede (2021), Oghenetega and Ambrose (2020), and Mtebe and Raisamo (2014), who found in their respective studies 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, and so on were some of the major barriers to OER use in higher education in Africa.

VI. CONCLUSION AND RECOMMENDATIONS

The positive experience of faculty toward the use of open educational resources is a significant step toward increasing OER awareness and use among undergraduate students in these institutions and throughout Nigeria. The researchers proposed, among other things, that school administration and university libraries should encourage faculty to adopt and use OER in the teaching and learning process because faculty are the major audience for encouraging OER use among their students.

Based on the findings, the researchers recommended that seminars and workshops be held by librarians to train faculty on how to properly use OER. In addition, universities should increase their electricity supply by providing alternative sources of electricity supply, provide adequate Internet access, and urge faculty to assist in promoting the use of open educational resources among students.

A. Implications for Research, Practice, and/or Society

The positive attitude of academics toward the use of open educational resources is an important step toward developing policies to expand the usage of OER. The goal is to encourage more professors to use OER, which will boost OER's

influence. The favorable opinion is also a significant step toward raising OER knowledge and use among undergraduate students in Nigeria's various institutions. Students may benefit from the efficient use of OER, including cost savings, increased access to higher education, and enhanced participation, as well as teachers having more control over their courses (Lantrip and Ray, 2021). It is one possible solution to Africa's lack of high-quality materials and underfunding of general education.

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