
BASIC EDUCATION TEACHERS' INTEREST IN THE USE OF OPEN EDUCATIONAL RESOURCES IN TEACHING WITHIN OYIGBO METROPOLIS, RIVERS STATE

By

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Abstract

Open Educational Resources have been observed to be efficient and accessible to teachers and learners. Thus, this study seeks to examine teachers' interest in the use of Open Educational Resources in classroom teaching in Oyigbo metropolis, Rivers State. 123 basic education teachers from four junior secondary schools in Oyigbo metropolis formed the population of the study. Teachers' Open Educational Resources Interest Inventory (TOERII) was developed by the researchers and used for data collection. Spearman rank order correlation coefficient was used to test the stability and consistency of the instrument and the value $r=0.67$ was obtained. This value determines the consistency and stability of the instrument. 55 teachers were sampled using purposive sampling techniques and used for the study. The study was guided by three research questions and three hypotheses. Research questions were answered using mean, standard deviation, percentage and presented with pie charts while the hypotheses were tested with one-sample t-test and independent t-test for hypotheses one and two respectively. The study reveals positive interest of OER on teachers' use in classroom teaching. The authors therefore, recommend that awareness should be emphasized to encourage more basic education teachers' patronage of OER.

Keywords: *Open Educational Resources, Technology, Interest*

Introduction

The use of Open Educational Resources (OER) in teaching and learning is in vogue in several countries especially among university lecturers and students. Recently, OER took center stage in international discourse as the world seeks ways and means to avoid gathering of people particularly during pandemic such as Covid -19. It is in this direction that the demand for OER increased worldwide. One major reason for the demand of OER is the openness of content and the right to retain, reuse, repurpose, remix, and redistribute (Wiley 2013; Wiley, 2014).

OER is highly seen as one that support learners in their private study. This is built on the backdrop that OER is in different format and can be used for different leaning situation. The major fact about OER is that the copyright of the content are released with open license. This is against traditional copyright laws which reserve the right to control the distribution of any work to the copyright holder. OER provides the author of the work, the copyright holder privilege to ascribe the rights to anyone that desire or license the work for use in a specific manner (Commonwealth of Learning 2017).

It is in this regard that UNESCO (2019) Recommendation defines OER as “learning, teaching and research materials in any format and medium that reside in the public domain or are under the copyright that have been released under an open license, that permit no-cost access, re-use, re-purpose, adaptation and redistribution by others”(P.54).OER can be seen as a piece of information or resources with the following features: digital in nature, open licenses for free sharing, modifiable, and active in collaborative and participatory teaching and learning. It is these features that makes OER relevant in the 21st century. OER may be any teaching and learning resources that include curriculum maps, course materials, textbooks, streaming videos, multimedia applications, podcasts, and any other materials that are basically designed for education with open license and made available for use without any need for payment of royalties (Nwaohiri, 2021).

More so, teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others is referred to as OER. This means Open educational resources is made up of the following: 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 n.d.). The definition of OER can't be unambiguous with free access because even if OER do not explicitly give open license, they all emphasized the right to reuse content (Creative Commons 2013). In other words, there may be some OER whose content may not be completely free but are licensed for public right to use. In summary OER is the design and development of learning resources with free and open license for teachers and students' use. What makes OER free and open is its availability, open access to repurpose and redistribute etc.

The development and use of OER is basically driven by technology and that simply means that the absent, lack of skills to use and the poor attitude of teachers to technology integration ultimately will derail the efficiency of OER development and use. In fact teachers need to hold a positive attitude towards technology in order to use it effectively. Because, teachers' attitude, pedagogical interest and existing teaching practices will determine how technology will be integrated in the classroom (Moeller et al., 2011). Sincerely speaking, it can't be possible for teachers to work with what they have no fate in, hence Vataartiran and Karadeniz (2015) emphasized the importance of “teachers personal beliefs in technology integration because it is related to their attitude towards technology” (p. 209).

Teachers attitude most time is driven by their interest, thus once a teachers' interest is garnered round a thing/project their efficiency can be quickly noticed. Interest in most cases can be seen as a feeling or emotion that causes attention to focus on an object or a process. It is a mental state evoked by something like quality, subject or activity. It means to cause someone to become involved in something (Mbaba, et al. 2018). There are calls for technology integration and the use of OER in classroom teaching and learning. Mbaba, et al.,(2020) asserted that “ the use of appropriate technology in teaching has been canvassed as a panacea for increasing students' achievement in a number of subjects” Mbaba et al., (2020) also mentioned that the advocacy on the use of technology in teaching has the tendency of hindering learning if inappropriately used in the classroom”(P. 75). Therefore, teachers' interest and competency is key, it behold on the managers of education to enhance teachers' interest and competency through appropriate approach. Hence, this study is to ascertain teachers' interest in the use of technology and specifically OER in the classroom.

Statement of the Problem

There are many studies from teachers and instructors identifying technology as crucial in effective teaching in the 21st century. These studies supports the fact that competency, interest towards technology, availability of technology and access are key in the use of technology driven resources for lessons (Hunter 2015; Barjracharya 2016). As a result, there were presumed high demand for the involvement of technology in the running of daily school activities and in lesson delivery. The same apply for Open Educational Resources in basic education as teachers surf the internet for open education materials to support their lesson presentation and to take care of inadequate text books and other instructional materials in schools. It was believed that the use of OER shall be a stepping stone in total technology integration in schools. Technology is generally known as game changer in several other field of endeavor as some studies have supported this position. Yet it is not clear whether teachers are really interested in the use of OER and whether their interest have any influence on technology integration in classroom lesson delivery. These and other issues trigger the need to study basic education teachers' interest in the use of OER in teaching within Oygbo metropolis, Rivers State.

Purpose of the study

This study is designed to identify the interest of basic education teachers in Open Educational Resources in Oygbo metropolis, Rivers State. Specifically, the study is guided by the following purposes to, identify:

1. the interest of basic education teachers in OER use in teaching within Oygbo metropolis;
2. the interest of male and female basic education teachers in OER use in teaching in the classroom;
3. the frequency of OER usage among basic education teachers in Oygbo metropolis, Rivers State.

Research Questions

1. What is the interest of basic education teachers in OER use within Oygbo metropolis?
2. What is the interest of male and female basic teachers in OER use in the classroom?
3. What is the frequency of OER use among basic education teachers in Oygbo metropolis, Rivers State?

Hypotheses

H₀₁: There is no significant basic education teachers' interest in OER use in classroom teaching.

H₀₂: There is no significant basic education teachers' interest in OER use on male and female teachers.

Methodology

The research adopted descriptive survey design, the study was conducted in Oyigbo metropolis, Rivers State among basic education teachers. 123 teachers from the four public Junior secondary schools in Oyigbo metropolis formed the population of the study. Purposive and availability sampling technique was used to sample the teachers engaged in the study. The criteria for selection was: teachers who are aware of OER and have used OER were sampled for the study. Thus, 65 questionnaires were distributed to 65 teachers, but only 55 questionnaires were retrieved and used for the study. The questionnaire was self-designed, titled Teachers' Open Educational Resources interest inventory (TOERII). The questionnaires have 5-points likert scale with the following options: strongly agree=5, Agree=4, undecided=3, strongly disagree =2 and 1 for disagree. The second section of the questionnaire on frequency of use was designed with 4-point likert scale having the following options: used daily=4, used 3-4 days weekly =3, 2-3 days weekly=2 while once in a while =1. The sample size is made up of 30 male and 25 female teachers. TOERII was given face validation by two experts of Measurement and Evaluation and Educational Technology in Rivers State University. The cut off mean for decision was calculated mean= 3.0.

Reliability of the Instrument

Before the instrument was administered to the sample, it was introduced to 15 teachers who were not participating in the study to ascertain the reliability of the instrument. Reliability test was carried out to ensure the consistency of the instrument, test retest method of reliability was used to measure stability of the instrument. Spearman rank order correlation coefficient was used, the correlation coefficient value calculated provides the measure of stability generally known as stability coefficient. The value of $r = 0.67$ was obtained. This value proved the stability coefficient and consistency of the instrument. Percentage, pie chart, mean and standard deviation were used to answer research questions while one-sample and independent t-test was used to test hypotheses 1 and 2 respectively.

Results

Research Questions 1: What is the interest of basic education teachers in OER use in teaching within Oyigbo metropolis?

Table 1: Teachers’ Interest in OER use and Technology Integration

S/N	Item Statements	Mean	SD
1.	I enjoy using OER in my private study at home	3.16	1.135
2.	OER doesn’t support and improve my study and lesson preparation	2.78	1.301
3.	I avoid OER in my personal study	2.45	1.152
4.	My drive for lessons is most time low when there is no OER	2.98	.933
5.	I have curiosity for OER and technology integration in school	3.20	.931
6	I am usually uncomfortable with OER	2.49	1.069
7	I hate using OER	2.53	1.069
8	Don’t like technology integration even the use of OER in the classroom	2.04	1.088
9	Use of technology in the classroom could be boring sometimes	2.67	1.171
10	Learning craft through OER could be interesting and enjoyable	2.67	.985
11	Learning through OER could be boring and not fascinating	2.58	.994
12	I am inspired when I see OER modules	3.00	1.139
13	I get attention in creativity when I see OER videos	2.53	1.034
14	I love practicing and engaging in OER	2.56	1.358
15	It’s fascinating to work with OER contents	3.05	1.044
		2.71	1.0935

Teachers’ interest in OER use in classroom teaching at basic education within Oyo metropolis was assessed. The data above showed that teachers used OER for private study at home (m=3.16), teachers are fascinated with the use of OER (m=3.05), Curiosity for technology integration in school because of OER (m=3.20) and inspired when teachers see OER modules (m=3.00). These responses were positive judging from the cut off mean of 3.00 for decision and proved that the use of OER further increased their interest in technology integration. However, there are rejected responses such as: I avoid OER in my lessons (m= 2.45), I am usually uncomfortable with OER (m= 2.49) and Learning craft through OER could be interesting and enjoyable (m= 2.65) and others. These statements that fall below the cut off mean also helped to clarify the very areas that teachers were much more interested. The total mean is (m=2.71) is slightly lower than 3.00 calculated mean for decision. This simply means that there was low interest in the use of OER in classroom teaching.

- Research Question 2:** What is the interest of male and female basic teachers in OER use in the classroom?

Table 2: Gender Based Interest of OER use in classroom

Gender	Insignificant Interest Percent	Significant Interest Percent	Total Percent
Male Teachers	30	53.19	62.5
Female Teachers	25	46.81	37.5
			30
			25
			54.55
			45.45

The data presented in table 2 shows the significant interest of OER based on gender. From the above table, male teachers have 53.19% for insignificant interest and 62.5 % for significant interest and a total of 54.55%. Female teachers have 46.81% and 37.5% for insignificant and significant interest respectively with a total of 45.45%. This data indicates that male teachers’ interest in OER use is significant while their female counterpart was not. But, only inferential statistic will show whether this interest is truly significant or not.

Research Question 3: What is the frequency of OER use among basic education teachers in Oyigbo metropolis, Rivers State?

Duration of	No of Teachers	Percentage of Usage (%)
Daily	6	10.9
3-4 days a week	14	25.5
1-3 days a week	15	27.3
Once in a while	20	36.4

Table 3 presents the frequency of OER usage among teachers. From the table, most teachers use OER once in a while (36.4%). 1-3 days in a week (27.3%), 3-4 days in a week (25.5%) and daily usage is just 10.9%. This indicates poor usage of OER and lack of interest in the use of OER in junior secondary schools. The above data is presented on a pie chart on Fig. 1 below:

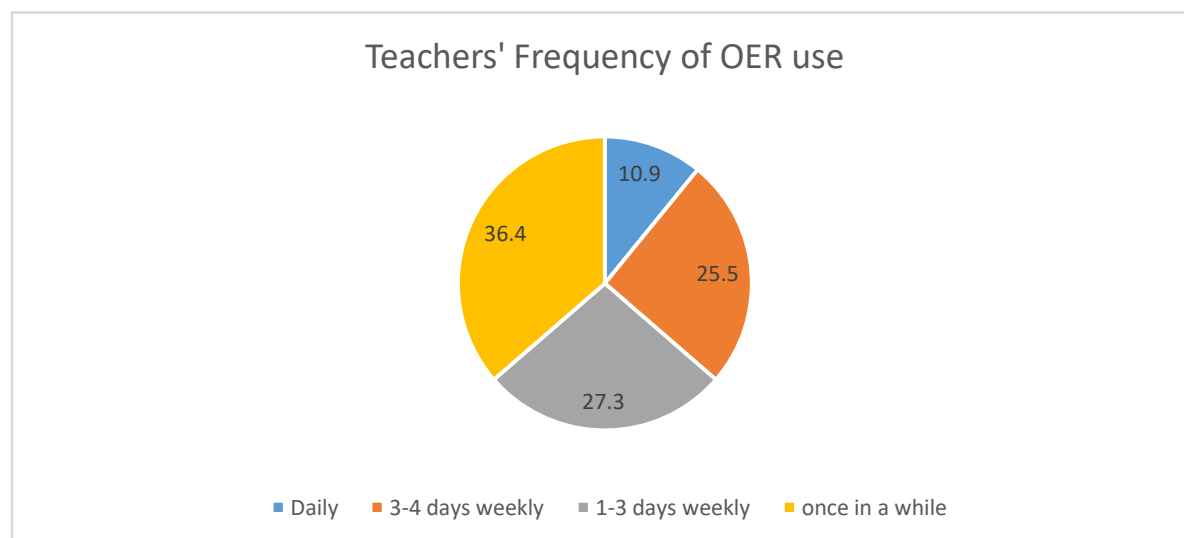


Fig 1

Hypotheses

The following hypotheses guided the study;

HO₁: There is no significant basic education teachers’ interest in OER use on classroom teaching.

Table 4: Impact of OER on Teachers interest in Technology Integration in Schools

N	Mean	SD	DF	T	Sig (2tailed)	Remark
55	1.15	.356	54	23.875	.000	Rejected

Table 4 shows mean=1.15 and SD=.356 and DF=54 with t value =23.875. The probability value obtained was less than the alpha value ($.000 < 0.05$). Thus, hypothesis 1 was rejected meaning that there is significant teachers' interest in OER use in classroom teaching. This result indicates that the more teachers are engaged in the use of OER the more they are likely to develop interest in technology inclusion in their classroom teaching.

HO₂: There is no significant basic education teachers' interest in OER use on male and female teachers.

Table 5: Teachers' interest in OER use Based on Gender

Gender	N	Mean	SD	F	DF	T	Sig(2-tailed)	Remark
Male	30	2.69	6.145	.660	53	-475	.420	Accepted
Female	25	2.74	4.725					

From the data on table 5 above, male teachers mean = 2.69 and female 2.74, with f value of .660 and t. value -475. The 2-tailed significance is .420. Therefore, the p value $.420 > 0.05$ level of significance hence the hypothesis is accepted. This indicates that there is no significant interest of OER on teachers' use in classroom teaching based on gender. It can be deduced that teachers' interest in OER use is not influenced by gender.

Discussions

This study tried to identify the gap that exists between the use of OER and classroom teaching in basic education among basic education teachers in Oyo metropolis, Rivers State Nigeria. Three research questions were answered and two null hypotheses bordering on teachers' interest in the use of OER in classroom teaching in basic education were tested. Research question 1. Showed that the use of OER among teachers is positive to a large extent, as teachers are interested in the use of OER for lesson private study ($M=3.16$), teachers are fascinated with the use of OER ($m=3.05$). Curiosity for technology integration in school because of OER (3.20) and inspired when teachers see OER modules ($m=3.00$). Research question 2. Also reveal the interest of teachers in OER use based on gender. On the issues of frequency of OER use, the data on table 4 shows that majority of teachers do use OER once in a while. This reveals that much must be done for the use of OER to be attractive to teachers. Hypothesis 1: There is no significant basic education teachers' interest in OER use on classroom teaching was tested. From the result, the hypothesis was rejected; meaning that there is significant interest of OER use in classroom teaching. This study is in agreement with Kabugo, (2020) who studied utilizing open educational resources to enhance students' learning outcomes during the covid-19 school lockdown and established that pedagogically effective integration of Kolibri OER into teaching has enormous potential to augment the provision of quality universal education in resource-constrained schools in Uganda. This

study is also in conformity with other studies that revealed that OER have great impact on the quality of education and educators at the tertiary level (Olufunke & Adegun 2014; Onairo, D. 2016; Martin et.al, 2015; Mbaba & Jimoh, 2022). The implication is that if OER is created and more awareness and training is provided for the teachers at basic school, teachers will be more effective than ever (Ibrahim, et.al, 2021).

The study also helps to reveal that gender does not play any significant role in the use of OER among teachers. It could be said that the use of technology driven materials such as OER is gender sensitive and therefore suitable for use of everyone irrespective of gender bias.

Conclusion

This study established the connection between OER use and classroom teaching in basic education. It also established teachers' interest in OER usage and giving room for more assessment of OER usage at wider scope of basic education. The use of OER was much more talked about in tertiary education and less at basic education. Therefore, this study has among many others established that OER support teachers in lesson preparation and presentation. What is now needed is to ascertain the competencies in computer skills among teachers in basic education, inspite of motivation, increase of interest and availability of learning resources without cost.

Recommendations

Based on the findings of this work, the researchers made the following recommendations, that:

1. more effort should be made through sensitization and training to get more teachers engage in the use of OER for their lesson preparation;
2. technological appliances for effective use of OER should be provided for teachers and for classroom use;
3. developers of OER should do more to develop more OER suitable for learners at basic education.

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