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*Alimi, A. A, Adeyemo, I. A, Arulogun, O. T., Fajobi, D. T, Osunniyi, J. S, Adeoye, M. A.
& Ojo, O. S.*

Ladoke Akintola University of Technology

ABSTRACT

In developing countries like Nigeria, distance learning programs have gained increased attention mainly due to the potential to provide equitable and accessible educational services for learners worldwide irrespective of location. This study specifically examined how frequent learners and faculty make use of OER materials. Also, this paper reports the investigation of faculty and learners' attitudes towards OER application and as well as identifying the purpose of using OER by them. Descriptive statistics were used as the research design and 1200 Open and Distance learning (ODL) students and staff of the Ladoke Akintola University of Technology, Ogbomoso, Oyo State, Nigeria, were used as research population. 300 staff and students were sampled using Taro Yamane to determine the sample size. The finding indicated that OER was completely unknown to more than 60% of the respondents and that, among those who have some knowledge, less than 10% realized the importance of OER.

Keywords: open educational resource; distance learning; oer; materials; students; staff.

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Adoption of Open Educational Resource (OER) Materials by Faculty and Learners: A Framework to Increase Openness Adoption in Open and Distance Learning Programmes

Alimi, A. A.^a, Adeyemo, I. A.^σ, Arulogun, O. T.^ρ, Fajobi, D. T.[#], Osunniyi, J. S.[✳], Adeoye, M. A.[§]
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ABSTRACT

In developing countries like Nigeria, distance learning programs have gained increased attention mainly due to the potential to provide equitable and accessible educational services for learners worldwide irrespective of location. This study specifically examined how frequent learners and faculty make use of OER materials. Also, this paper reports the investigation of faculty and learners' attitudes towards OER application and as well as identifying the purpose of using OER by them. Descriptive statistics were used as the research design and 1200 Open and Distance learning (ODL) students and staff of the Ladoké Akintola University of Technology, Ogbomoso, Oyo State, Nigeria, were used as research population. 300 staff and students were sampled using Taro Yamane to determine the sample size. The finding indicated that OER was completely unknown to more than 60% of the respondents and that, among those who have some knowledge, less than 10% realized the importance of OER. It can be concluded that OERs increasingly play an indisputable and fundamental role in providing cost-effective access to educational materials for both faculty and learners and becoming a valuable alternative to improve access to high-quality educational content released under open licenses by outstanding universities worldwide. Hence, distance learning programs should support the development of OER packages for improved teaching and learning.

Keywords: open educational resource; distance learning; oer; materials; students; staff.

Author: Ladoké Akintola University of Technology, Open and Distance Learning Centre, Ogbomoso, Nigeria.

I. INTRODUCTION

OERs have recently been described as digital materials that are freely and openly provided to educators, students, and self-learners for use and re-use in teaching, learning, and study. OER includes textbooks, course materials, manuals, videos, assessments, software, and all other resources, materials or techniques used to facilitate access to information, audio-video tutorials, sound and music lesson plans, quizzes, syllabi, instructional guides, models, content, software tools, licenses, and best practices. The 'open' conceptually implies the zero cost and non-restrictive nature of the materials (Rufai and Sani, 2017).

Numerous initiatives exist to intensify the adoption of open educational resources in tertiary institutions, yet its effect has not been greatly explored. Open Education can increase quality, access, and attractiveness of tertiary education, fostering "a more democratic and competitive higher education system, with the potential to improve access to education, develop and localize open educational services to suit local contexts, and enhance the integration of education into everyday lives as part of lifelong learning" (Fabio and Daniel, 2016).

In the past, a number of studies have investigated the reasons for the slow adoption of open access methods, focusing mainly on Open Policies and Open Educational Practices, but very few research projects have focused on the use of Open Educational Resource Materials (OER) for e-learners to open up to mainstream education, which is the need to empower learners to embrace open access. Kazmer and Haythornthwaite (2005) posit that e-learning comprises conventional training, such as courses, ad-hoc training, selected learning objects, formalization through document collections, and community formation which can be achieved via social software.

Recent studies suggest that the dearth of learning and instructional materials and the general underfunding of education, associated with the recent advancements in information and communication technology ease the application of OER in Nigeria educational enterprise (Rufai and Sani, 2017). The most important aspects of openness in OER have to do with free availability over the internet and as few restrictions as possible on the use of the resource (Clements, Pawlowski, and Manouselis, 2015). OER excludes technical barriers, price barriers, and a few legal permission barriers as possible (copyright and licensing restrictions) for the faculty and learners (Chen, Nasongkhla and Donaldson, 2014).

It is also a known fact that the students' eagerness and attitudinal change toward the internet and its applications in recent times is enough a spur for research of this kind. The intractable challenge of unawareness of students and tutors towards OER pedagogy has been the greatest challenge to learning from time immemorial. The review of studies on OER since this assertion was long made revealed that very scanty studies were carried out on this field. This is not still encouraging with regards to developing countries and especially in Nigeria when compared with developed nations, hence the need for this study.

II. AIM AND OBJECTIVES

This study aims to examine how frequent students and faculty apply OER materials while the specific objectives are to investigate the faculty and students' attitudes towards OER application and as well as determining the purpose of using OER by them.

III. LITERATURE REVIEW

Greenberg (1998) opined that contemporary distance learning is a learning experience or teaching plan that makes use of technologies in a wide spectrum to reach out to learners in which distance is not a barrier and it has been designed to encourage interaction between learners and certification of learning. In addition to this, Teaster and Blieszner (1999) posited that instructional methods have been used by various distance learning centers even though the teacher and the learner are separated in space and possibly time. Organization for Economic Co-operation and Development (OECD) 2007 reported that OER is materials that are digitized which are offered freely and openly to use and reuse for teaching learning and research by educators, students, and self-learners. It is deduced from this definition that accumulated assets involved in the development of individuals or capabilities for special understanding can be enjoyed without disparity/discrimination.

The UNESCO (2002) stressed that the words open and distance learning reflect solutions that focus on opening up access to education and training, freeing learners from time and space constraints, and creating flexible learning opportunities for individuals and groups of learners. Keats (2003), on the other hand, draws on lessons learned from open-source software creation and outlines a process model for collaborative content development.. Siemens (2003) listed several reasons for educators to share learning resources for free, including it, is free to share digital resources; it gives educators alternatives way and increases competition on the

market; finally, it is democratic and a way to preserve public education.

IV. METHODOLOGY

A descriptive analysis was adopted. The descriptive method was used to ascertain the current status of the level of professional development among the learners who enrolled in LODLC degree programs. The study was conducted in Ogbomoso, Oyo State, Nigeria. The population of the study involved all the learners pursuing a degree program in LODLC across all the departments. LODLC's data records showed a total of 1,200 learners enrolled in a degree programme across four departments (Nursing, Accounting, Marketing, and Computer Science) operating in LODLC as of the 2017/2018 academic session. 300 samples consisting of learners in LODLC were randomly selected from the four departments i.e. computer science, marketing, accounting, and nursing with the used of the questionnaire using Taro Yamane formula with 95% confidence interval to determine the sample size, to reduce the sample size to a

manageable size whose their ages range between 18 – 55 years. Thus, Taro-Yamane's expression was used:

$$n = \frac{N}{1+N(e^2)}, \tag{1}$$

Where: n= Sample size, N= Total population, e= Margin of error disturbance. Therefore, given that N = 1200 (as stated above), and e is assumed to be 5%. Then sample size

$$n = \frac{1200}{1+1200(0.05^2)}, n = \frac{1200}{1+1200(0.0025)}, n = \frac{1200}{1+3}, n = \frac{1200}{4} = 300$$

Data collected was analyzed using simple tabulated frequency count and percentages.

V. RESULT AND DISCUSSIONS

The results are presented by analyzing the answers to each question. The distribution of responses regarding the awareness that students and staff have of OER platforms is presented in Table 1.

Table 1: Open Educational Resources Platforms (Awareness and unawareness)

Open Educational Resources Platforms	Not aware (%)	Aware (%)
MIT OpenCourseware	88	12
OpenCourseware Consortium	87	13
Open Learning Initiative	91	9
MERLOT	92	8
TOTAL	358	42
Percentage of the total	89.5%	10.5%

Source: Researcher computation, 2020

Based on the results directly related to OER and their platforms, it infers that the OER application is still unfamiliar within the teaching and learning context of higher education students, who simultaneously value the features of such resources with 89.5% not aware and 10.5% aware. Therefore, there is an urgent need to promote the dissemination and use of OER, so that students can benefit from resources which are mainly developed to be useful, freely available,

charge-free, and used by anyone who wants to learn, regardless of their financial or social condition or of the place in the world where they happen to be.

Table 2: Cost associated with OER materials responded by students

Cost of OER materials	Frequency	%
Not costly	285	95.00
Costly	13	4.33
Very costly	2	1.8
Total	300	100

Source: Researcher computation, 2020

95% said OER does not cost them much compared to buying of textbooks that are related to their courses, so the adoption of OER reduces financial barriers to their course. However, there are financial savings in open textbook adoption that may likely reduce the rates of withdrawal students.

Table 3: Types of OER Sourced for by Students

Types of OER sourced for by students	Frequency	%
Textbooks	90	35.4
Video	120	47.24
Flashcards	40	15.75
Syllabus	4	1.57
Total	254	100

Source: Researcher computation, 2020

35.4% OER were of the type Textbook, 47.24% of Video, 15.75% of Flashcards and 1.57% of Syllabus are sourced for by students. This shows that Video is the highest type of OER being sourced for by students.

Table 4: Types of OER sourced for by Faculty

Types of OER sourced for by Faculty	Frequency	%
Textbooks	181	60.33
Video	101	33.67
Flashcards	18	6.00
Syllabus	0	0
Total	300	100.0

Source: Researcher computation, 2020

Textbooks have the highest percentage (60.33) that staff makes use of textbooks in OER to adapt been sourced for by the Faculty, this indicated to the materials that will be given to the students.

Table 5: Time Spent in studying with OER materials by the students

Time Spent	Frequency	%
Spend more than 24 hours per week	284	94.67
Spend less than 24 hours per week	16	5.33
Total	300	100.0

Source: Researcher computation, 2020

94.7 % of the student spent more than 24 hours per week studying because the study behaviours that they adopted in OER materials are easy to

comprehend like the use of flashcards and reviewing lecture notes while 5.33% of the students spent less than 24 hours in studying.

Table 6: Awareness about OER materials by Faculty

Awareness about OER materials	N	%
I was not aware of Open Educational Resources	195	65.0
I was aware but I do not have an opinion about the potentialities of Open Educational Resources	45	15.0
I know the potentialities of Open Educational Resources but I have never used such resources	35	12.0
I have used Open Educational Resources and I consider them very useful in the teaching and learning process	21	7.0
I have used Open Educational Resources and I consider them of little relevance in the teaching and learning process	4	1.0
	300	100.0

Source: Researcher computation, 2020

The result above indicated that OER is completely unknown to more than 60% of the respondents and that, among those who have some knowledge, less than 10% give them importance. One of the concerns regarding the adoption of OER in Distance learning programmes lies in finding strategies that can make OER desirable to institutions, teachers and students. The results obtained give clear evidence of such a need. It is evident that in this study that a generalized adoption of OER did not occur.

VI. CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The results of this paper revealed that OERs are increasingly playing an indisputable and fundamental role in education for both faculty and learners. Interestingly, sharing educational resources openly and with no admission fee has ideological and financial justifications which creates a major demand for clarifying fundamental questions, such as who are the stakeholders in these processes, in what way are

they involved and why, and how do they influence the development, use, and widening of OERs? However, print educational materials are tailored to address the educational needs of Nigerian students depending on the laid down objectives of the given institution and it is largely upon which the implementation of the national curriculum depends. The infrastructural decay of the print sections and the paradigm shift of the learning interest of the students is keeping them off the print section's register. The growing IT infrastructures, ease of access, and current contents and proximity associated with OER have made it an educational hotcake. Though print stocks remain relevant, their contribution to educational dispensation in Nigeria is still unsatisfactory.

6.2 Recommendations

To adequately address the problem associated with OER usage in the open and distance learning programme, the following policy recommendations are being suggested.

- i. The government should undertake a novel project that would enable the development of our print materials, indigenous literature, and print artifacts in our academic libraries into OER to meet the students' needs and interests and at the same time meet up the trend of this globalized world.
- ii. Distance learning programmes should support the development of OER packages for improved teaching and learning.
- iii. Finally, the government should provide our librarians with in-service training to better their services toward their clients (students).

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