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Distance learning lecturers' awareness and readiness towards open educational resources

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ARTICLE INFO	ABSTRACT
	With the growing prevalence of distance learning in educational contexts, the open educational resources (OER) declaration mandated tertiary institutions to establish their own repositories to encourage knowledge sharing. As a result, the Nigerian National Universities Commission directed universities to establish their own repositories in order for lecturers to upload their learning contents and take advantage of the universality of knowledge so as to share and distribute knowledge. However, the successful adoption of OER depends on lecturers' awareness and readiness to effectively implement it. Following the directives, it was discovered that responses by lecturers were low in terms of compliance, and this may not be unconnected to lack of awareness of OER which influences lecturers' skillful readiness to use it for instructional purposes. In order to ameliorate the problem, this study checked distance learning lecturers' awareness and readiness to use OER for instruction. A descriptive survey design was used for the study out of which 104 distance learning lecturers from University of Abuja's Center for Distance Learning and Continuing were drawn as participants in the study through a multi-staged sampling technique. Lecturers' attitude towards OER and lecturers' readiness towards OER constructed on a four-point Likert scale which were validated by several experts and yielded a reliability figure of 0.81 and 0.79, respectively using Cronbach's alpha were used to obtain data. Descriptive statistics of mean and standard deviation was used to answer the research questions while inferential statistics involving an independent samples t-test was used to test the null hypotheses at 0.05 level of significance. Findings revealed that lecturers are aware (grand mean: 3.27) and ready (grand mean: 3.34) to use OER for instructional but no significant difference was found in terms of male and female lecturers' awareness (t = 2.164, p = 0.61) and readiness (t = 1.012, p = 0.76) to use OER for instructional purposes. It was recommended that lecturers should be trained on how to properly harness the invaluable opportunities brought about by OER repository to add value to their lectures and learning contents and more awareness should be created on the importance of OER and what it brings in terms of making learning universal, flexible and affordable. The results of the study provide insights into the current awareness and readiness levels of distance learning lecturers in relation to OER adoption.

Keywords: open educational resources, awareness, readiness, lecturers, universities, technology, open and distance learning |

INTRODUCTION

Technology has brought new changes in the education sector such that learning is now made flexible, interesting and interactive by closing the gaps occasioned by location and distance. In order to make learning flexible and widely available, most institutions are deploying the use of various technological means to plan, organize and execute learning to a wide range of audience as a result of expansion in education enrolment rate (Falode & Mohammed, 2023b). As a result of this development, different learner-centered approaches in the realms of 21st century pedagogies need to be prioritized to bring learning closer to the students with the aim of bringing the best in terms of performance (Mohammed & Ogar, 2023; Mohammed et al., 2023). One area educators now leverage on the breakthroughs provided by technology is the distance learning which eliminates location and time during teaching and learning.

Distance learning is a technology-facilitated teaching and learning where students, throughout the entire course of learning period, are physically separated from teachers at a given place (Falode & Mohammed, 2023a). It is a type of learning that takes place outside normal classroom where the tutors and learners interact with each other synchronously or asynchronously through email, e-learning, online activities, postal services and other means backed up by technology (Al-Mawee & Gharaibeh, 2021). Distance learning, which can be completely by distance or a combination of distance learning and traditional classroom instruction, helps tutors to access a wide audience which facilitates greater versatility in the curriculum for students. However,

the expansion in enrolment rate calls for the need to make education accessible and easy for everyone and this requires the Nigerian National Universities Commission (NUC) to key into the UNESCO open educational resources (OER) Declaration of Paris in 2012 in order to incorporate the OER policy into the Nigerian education settings to provide students and lecturers with a wide range of learning contents in various repositories for easy knowledge sharing, universality and diversification. Hence, consequent upon this, one of the ways technology can be very useful in terms of making learning available is through the advent of OER.

OER are teaching, learning and research materials in any medium be it digital or otherwise that are in the public domain or have been released under an open license that permits free access, use, adaptation, and redistribution with no or limited restrictions (UNESCO, 2021). OER are material resources available for use by everyone under an open copyright license. These materials vary from images, books, research publications, audio, multimedia, videos, etc. (Arcebuche, 2022). OER may 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). Under the OER policy, materials can be used along the 5Rs of OER which include retain, reuse, revise, remix and redistribute which gives everyone the opportunity to have access to learning materials (Sandanayake, 2019). The concept of OER also closes the gaps through the provision of a level-playing field for every student and even tutors to have access to learning materials either locally or globally. Reacting in tandem with the aforementioned view, Kanwar and Mishra (2017) noted that open content provides a means of accessing remote learning resources in a variety of media (text, audio, video, and animated graphics) freely, anytime, anywhere and to an unlimited number of students. Consequently, lecturers and students are no longer constrained by the availability of physical resources in libraries and educational resource centers for their educational needs. Following the OER declaration by UNESCO in Paris licensed under creative commons open licenses of which Nigeria is a signatory, universities are mandated to key into the OER policy which will make the sharing, utilization and universality of learning contents quite easily and accessible thus enhancing learning. In view of this, for most lecturers to key into this laudable policy, they need to be aware of its existence.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Lecturers' Awareness of OER for Instruction

Awareness is the ability to know about available technologies and resources and how they can be used in carrying out academic activities. Awareness is the state or level of consciousness about something (Abba & Adamu, 2019). The implication of being unaware in the context of the digitalization of university lecturers for distance learning is the missed opportunity to effectively utilize digital tools, resources, and innovative practices, leading to suboptimal instructional delivery and limited engagement with students (Ekpo & Aiyedun, 2019). In most cases, lack of proper awareness about a given technological tool reduces the chances of usage and by extension, affects students' performance. Conversely, proper awareness makes students to adopt certain technologies for instruction and this increases efficiency, performance and attitude to learning by making learning interesting. Studies on awareness towards the use of technology in instruction have varying views. For example, a study by Falode et al. (2018) revealed that lecturers are more aware and ready to use OER; however, the finding revealed that male lecturers are more aware and ready to use OER than their female counterpart. Arcebuche (2022) also found in his study that students are aware of OER. Hendawi and Nosair (2020) investigated students' technological awareness in Qatar and findings revealed that students are aware of technological tools for instruction, but no significant difference was found on the basis of gender. Ode et al. (2020) studied colleges of education students' awareness of information and communication technologies (ICT) facilities during COVID-19 pandemic in Nigeria and findings revealed that lecturers were aware of ICT facilities for instruction, but no significant difference was found in the awareness level based on gender. D'Souza (2021) discovered in his study that students and faculty members are aware of OER. A study by Nannim et al. (2018) shows that lecturers are partially aware of ICT facilities for teaching purpose, but no significant difference was found on the basis of gender. On the contrary, a study by Onasanya et al. (2011) revealed low level of ICT awareness among secondary school teachers and that male students are more aware of computer literacy than their female counterpart. Seboka et al. (2021) revealed that lecturers' awareness and readiness to use tele-monitoring facilities in Ethiopian teaching hospitals was very low. A study by Bindu (2017) revealed that lecturers are aware of ICT facilities and that female students are more aware of ICT than their male counterpart. As a result of the inconsistencies noticed in the aforementioned studies, more studies need to be conducted to close the gaps. This can also extend to students' readiness for it is only when students are aware of a given technology, which in this case the OER is, that they will be ready to use it for instructional purposes.

As a result, we formed this hypothesis:

Ho₁. There is no significant difference in the awareness level of male and female distance learning lecturers towards OER for instructional purposes

Lecturers' Readiness to Adopt OER for Instruction

Readiness entails the state of preparedness in acquiring the needed cognitive and psychomotor skills to do something. It is the state of being prepared for something or the state of being willing to do something. Readiness towards using novel technology can be due to understanding of the new technology and the acquisition of skills and awareness needed to operate it (Soetan & Coker, 2018). Olatunde-Aiyedun et al. (2021) noted that distance learning involves preparing lecturers with the much needed skills and resources to be effectively ready to utilize digital platforms, online resources, and communication tools in order to take learning to remote learners. Studies on readiness to adopt technology for instruction are not consistent in terms of findings. For example, Falode et al. (2018) found that lecturers are aware and ready to use OER for instruction, but no significant difference was found on the basis of gender. A study by Balakrishnan et al. (2022) showed that lecturers are ready to adopt technology for

instruction and no significant difference was found in the level of lecturers' readiness by gender. Samad et al. (2019) also revealed that lecturers are ready to use ICT for instruction. In contrasting terms, the studies of Alazzam et al. (2012) and Badri et al. (2014) found that the male were more ready to adopt technologies for instruction than their female counterparts. In view of the inconsistencies noticed, more studies need to be studied to level the gender gap in terms of technology usage in learning.

As a result of the foregoing, we formed this hypothesis:

Ho$_2$. There is no significant difference in the readiness level of male and female distance learning lecturers towards the adoption of OER for instructional purposes

Current Study

As a result of the OER declaration of 2012 in Paris by UNESCO which mandated institutions and academics to upload their learning contents to the repository in different courseware formats to suit learners' abilities and styles and also to serve as a knowledge sharing hub and cross-fertilization of learning contents, the NUC, occasioned by Nigeria's signatory of the declaration, mandated all Nigerian universities to follow suit and this was followed with the directives to establish their repositories and upload their contents. In the light of this commendable effort to make learning easy and knowledge sharing conveniently universal along the 5Rs of retain, reuse, revise, remix and redistribute learning contents, the responses from most lecturers to upload their learning materials across the various institutional repositories in Nigeria have been unfortunately very low. This problem is not unconnected to lack of awareness towards OER which can affect their readiness to adopt it in line with the directives of the NUC. In order to ameliorate this logjam, this therefore calls for the need to investigate whether lecturers are actually aware and ready to use the OER repository for knowledge sharing in the realms of the 21st century pedagogy.

METHODOLOGY

The study adopted the use of descriptive survey design which collects data based on people's responses in order to make an informed decision. A survey research design provides a quantitative description of trends, attitudes and opinions of a population, or tests for associations among variables of a population by studying a sample of that population (Creswell & Creswell, 2018).

Participants

The population of the study comprised of all the distance learning lecturers at University of Abuja's Center for Distance Learning and Continuing Education. A multi-staged sampling technique was used to select 104 distance learning lecturers for the study. First, stratified random sampling technique was used to group the lecturers into strata, and from each of the strata, a simple random sampling was used to select the respondents used in the study.

Instrumentation

The instruments for the study were lecturers' attitude towards OER (LATOER) and lecturers' readiness towards OER (LRTOER) with two sections: section A which deals with demographic data and section B which consists of 10 items meant to solicit for responses. LATOER and LRTOER were validated by four experts in the field of educational technology, educational psychology and science education in both University of Abuja and Federal University of Technology Minna. The experts checked the face, content and construct validity to make sure the items measure what they were expected to measure. All their corrections and observations were carefully affected in the final draft of the instrument. In order to check the internal consistency of the items, LATOER and LRTOER were admitted once and a reliability figure of 0.81 and 0.79, respectively were obtained using Cronbach's alpha formula.

Method of Data Analysis

Descriptive statistics of mean (M) and standard deviation (SD) was used to answer the research questions while inferential statistics of independent samples t-test was used to test the null hypotheses at 0.05 level of significance. Any mean rating above 2.50 was considered to be "aware" and "ready" for LATOER and LRTOER, respectively. Any mean rating below 2.50 was considered to be "not aware" and "not ready" for LATOER and LRTOER, respectively. As for the null hypotheses, the data was transformed from ordinal to interval scale in order to be paired using t-test statistics.

RESULTS

Table 1 shows the mean responses of lecturers' awareness towards OER for instructional purposes. The responses show a very high mean and when the grand mean was computed, it was 3.27 and this figure is above the decision mean of 2.50. This shows that distance learning lecturers were actually aware of OER for instructional purposes.

Table 2 shows the mean responses of lecturers' readiness to use OER for instructional purposes. The responses show a very high mean and when the grand mean was computed, it was 3.34 and this figure is above the decision mean of 2.50. This shows that distance lecturers were actually aware of OER for instructional purposes.

Testing of Hypotheses

Ho$_1$. There is no significant difference in the awareness level of male and female distance learning lecturers towards OER for instructional purposes.

Table 1. Mean and standard deviation of the responses of lecturers' awareness of OER for instructional purposes

S/N	Item	N	Mean	SD	Decision
1	I am aware that I can use OER for instruction.	104	3.01	0.88	Aware
2	I am aware that I can use OER to update my lesson contents.	104	3.33	0.77	Aware
3	I am aware that OER fosters collaboration between students and lecturers.	104	2.99	1.78	Aware
4	I am aware that OER makes learning universal in terms of accessibility.	104	3.55	0.95	Aware
5	I am aware that materials can be obtained on OER free of charge based on created common license.	104	3.46	0.82	Aware
6	I am aware that I can retain materials freely on OER.	104	2.89	1.56	Aware
7	I am aware that I can redistribute materials freely on OER.	104	3.05	1.09	Aware
8	I am aware that I can re-use materials freely on OER.	104	3.66	0.74	Aware
9	I am aware that I can revise materials to suit my learning contents on OER.	104	3.44	0.69	Aware
10	I am aware that I can remix materials on the OER repository to suit my lesson contents.	104	3.29	0.91	Aware
	Grand mean		3.27		Aware

Table 2. Mean and standard deviation of lecturers' readiness to adopt OER for instructional purposes

S/N	Item	N	Mean	SD	Decision
1	I am ready to use OER for instruction.	104	3.22	0.81	Ready
2	I am ready to collaborate with tutors and students using OER for instructional delivery.	104	3.54	0.68	Ready
3	I am ready to use OER in line with the directives of the NUC.	104	3.01	0.57	Ready
4	I am ready to use OER to update my learning contents.	104	3.68	0.73	Ready
5	I am ready to retain materials for usage on the OER repository.	104	2.92	1.08	Ready
6	I am ready to re-use use materials on OER.	104	3.02	0.61	Ready
7	I am ready to redistribute materials on OER repository.	104	3.58	0.64	Ready
8	I am ready to remix materials for usage on OER repository.	104	3.76	0.59	Ready
9	I am ready to revise materials for lecture purposes on the OER repository.	104	3.35	0.77	Ready
10	I am ready to use OER to upload my learning contents since it is free under creative common license.	104	3.81	0.52	Ready
	Grand mean		3.34		Ready

Table 3. Independent samples t-test result of male and female lecturers' awareness on OER

Group	N	Mean	SD	df	t-value	p-value	Decision
Male	67	76.71	9.47	102	2.164	0.61*	Accepted
Female	37	73.56	6.81				

Note. *Not significant p > 0.05

Table 4. Independent samples t-test result of male and female lecturers' readiness to adopt OER

Group	N	Mean	SD	df	t-value	p-value	Decision
Male	67	72.54	10.37	102	1.012	0.760*	Accepted
Female	37	70.81	12.91				

Note. *Not significant p > 0.05

Table 3 shows the t-test summary of male and female lecturers' awareness on OER. From **Table 3**, t = 2.164, p = 0.61. Since p > 0.05, the null hypothesis is hereby accepted, and this shows there is no significant difference in awareness of male and female lecturers towards OER. It means both male and female distance learning lecturers were equal in terms of their awareness of OER.

Ho$_2$. There is no significant difference in the readiness level of male and female distance learning lecturers towards the adoption of OER for instructional purposes.

Table 4 shows the t-test summary of male and female lecturers' readiness to use OER. From **Table 4**, t = 1.012, p = 0.76. Since p > 0.05, the null hypothesis is hereby accepted, and this shows there is no significant difference in the readiness of male and female lecturers towards OER. This means that both of male and female distance learning lecturers were equal in terms of their readiness to use OER for instructional purposes.

DISCUSSION

The findings of the study revealed that lecturers are aware of OER for instructional purposes. Most of the responses showed a high mean in terms of awareness and this means that lecturers are quite aware of OER for instruction. This finding agrees with Arcebuche (2022) whose study revealed that lecturers are quite aware of OER. The finding is also in conformity with D'Souza (2021) who discovered that students and faculty members are aware of OER. It also agrees with Falode et al. (2018) whose study revealed that lecturers are aware of OER for instruction. The result is also in agreement with the earlier findings of Hendawi and Nosair (2020) whose study investigated students' technological awareness in Qatar and findings revealed that students are aware of technological tools for instruction. It also agrees with Ode et al. (2020) who studied colleges of education students' awareness of ICT facilities during COVID-19 pandemic in Nigeria and findings revealed that lecturers were aware of ICT facilities for instruction. It also agrees with Nannim et al. (2018) whose results showed that lecturers are partially aware of ICT facilities for teaching purpose. On the contrary, this finding contradicts that of Onasanya et al. (2011) whose finding revealed low level of ICT awareness

among secondary school teachers. It also disagrees with Seboka et al. (2021) whose finding revealed that lecturers' awareness and readiness to use tele-monitoring facilities in Ethiopian teaching hospitals was very low. The finding is also not in concordant with Bindu (2017) who found that that lecturers are aware of ICT facilities for instruction.

Interestingly, another major discovery of this finding is that no significant difference was found in the awareness of both male and female lecturers towards OER for effective instructional purposes. This finding indicates that male and female lecturers have equal awareness in terms of OER usage since majority of the responses reported higher means, with the grand mean indicating that both of them are quite aware of OER for instructional purposes. This finding agrees with Falode et al. (2018) whose study revealed no significant difference in the awareness of male and female lecturers towards OER. The finding is equally in conformity with Ode et al. (2020) whose study revealed no gender difference in lecturers' awareness of ICT facilities during COVID-19 pandemic in Nigeria. The finding is also in tandem with Nannim et al. (2018) whose study revealed no significant gender difference in terms of lecturers' ICT awareness. Conversely, this finding disagrees with Onasanya et al. (2011) whose result revealed that male students are more aware of computer literacy than their female counterparts. The result also contradicts that of Bindu (2017) whose study revealed that female students are more aware of ICT than their male counterparts.

Furthermore, this study revealed that lecturers are equally ready to adopt OER for instructional purposes. This was seen when majority of the responses revealed a higher mean and also, the computed grand mean of the total responses revealed that lecturers are ready to adopt OER for instructional purposes. This finding agrees with Falode et al. (2018) whose study found that lecturers are ready to adopt OER for instructional purposes. The result also agrees with Balakrishnan et al. (2022) whose finding showed that lecturers are ready to adopt technology for instruction. The finding is also in uniformity with Samad et al. (2019) whose study revealed that lecturers are ready to use ICT for instructional purposes.

Going further, this study equally revealed that there is no significant difference in the readiness of male and female lecturers to adopt OER for instructional purposes. This was noticed when majority of the responses recorded higher mean and when the grand mean was cumulatively computed, it was discovered that both male and female lecturers are equal in terms of their readiness to adopt OER for instructional purposes. This finding agrees with Falode et al. (2018) whose result revealed that no significant gender difference in terms of lecturers' readiness to use OER for instructional purposes. It also agrees with Balakrishnan et al. (2022) whose study showed that no significant difference in the level of lecturers' readiness by gender in terms of readiness to adopt technology. Contrary to the aforementioned results, this finding disagrees with Alazzam et al. (2012) and Badri et al. (2014) whose study revealed male gender were more ready to adopt technologies for instruction than their female counterparts.

CONCLUSION AND IMPLICATION OF THE STUDY

The conclusion arising from this study is that lecturers are aware and ready to use OER for instructional purposes and that no significant gender difference was found in terms of lecturers' awareness and readiness towards OER for instructional purposes, indicating that both male and female lecturers were aware and ready to adopt OER for instruction.

The study has some implications for educational institutions and policymakers about the factors that affect distance learning lecturers' readiness to adopt OER. The study underscores the importance of providing adequate institutional support and training opportunities to enhance lecturers' technological proficiency and pedagogical understanding of OER. Moreover, the findings emphasize the need to address perceived barriers and promote the perceived benefits of OER adoption among lecturers.

Recommendation

By understanding the awareness and readiness levels of distance learning lecturers regarding OER adoption, this study provides evidence-based recommendations for stakeholders in the field of science education and educational technology particularly those involved in open and distance learning. These recommendations can guide the development of effective strategies and interventions aimed at promoting OER integration in distance learning instructional practices. Ultimately, this research contributes to the ongoing efforts to leverage on OER for improved teaching and learning outcomes in distance learning environments. In line with the findings of this study, the following recommendations are hereby made:

1. Lecturers should be trained on how to effectively harness and implement the digital skills needed in assessing the invaluable opportunities brought about by OER repository to add value to their lectures and learning contents. More awareness should be created through the training on the importance of OER and what it brings in terms of making learning universal, flexible and affordable.
2. Efforts should be made by the NUC, TetFund, and other relevant stakeholders to ensure that lecturers in all universities have access to OER through the provisions of laptops and reliable internet access to support their digitalization efforts in distance learning. This will enhance their ability to effectively integrate digital tools and resources into their instructional practices and promote equitable access to quality education for all both lecturers and students.

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