
AWARENESS, ATTITUDES, SKILLS, AND OPEN EDUCATIONAL RESOURCES USAGE AMONG OPEN AND DISTANCE LEARNERS

Ambrose, Akporhonor, Esoswo Francisca Agmobo
Email: esoobas@gmail.com
Delta State University, Abraka

Abstract

Open Educational Resources (OER) are adjudged to be of tremendous benefit to open and distance learners due to the nature of their academic programs. However, the level to which they will use these resources will be determined by certain factors. Thus, this study examined the influence of awareness, attitudes, and skills on the usage of OER by postgraduate students at the National Open University of Nigeria (NOUN), South-South, Nigeria. Four hypotheses were generated and tested to guide the study. On a population of 2,119 postgraduate students, the study used a descriptive survey design of the correlational type. Fifteen percent of the population (318) was sampled for the study. A questionnaire was used to elicit data from the respondents, and upon administration, a 95% response rate was achieved. The data were analyzed using descriptive statistics (for the demographics) and inferential statistics (for the hypotheses). The results revealed that the independent variables of awareness, attitude, and skills all had moderate individual and joint influence on the usage of OER among open and distance learners. The study concluded that, to stimulate use of OER among postgraduate students, their awareness, attitude, and skills would have to be positively triggered. Consequently, recommendations were made.

Abstrak

Sumber Daya Pendidikan Terbuka (OER) dinilai memberikan manfaat yang luar biasa bagi pembelajar terbuka dan jarak jauh karena sifat program akademik mereka. Namun, sejauh mana mereka akan menggunakan sumber daya tersebut akan ditentukan oleh faktor-faktor tertentu. Dengan demikian, penelitian ini menguji pengaruh kesadaran, sikap, dan keterampilan terhadap penggunaan OER oleh mahasiswa pascasarjana di National Open University of Nigeria (NOUN), Selatan-Selatan, Nigeria. Empat hipotesis dihasilkan dan diuji untuk memandu penelitian. Pada populasi 2.119 mahasiswa pascasarjana, penelitian menggunakan desain survei deskriptif tipe korelasional. Lima belas persen dari populasi (318) dijadikan sampel untuk penelitian ini. Kuesioner digunakan untuk memperoleh data dari responden, dan setelah diadministrasikan, tingkat respons tercapai sebesar 95%. Data dianalisis menggunakan statistik deskriptif (untuk demografi) dan statistik inferensial (untuk hipotesis). Hasil penelitian menunjukkan bahwa variabel independen kesadaran, sikap, dan keterampilan semuanya memiliki pengaruh individu dan gabungan yang moderat terhadap penggunaan OER di kalangan pembelajar terbuka dan jarak jauh. Studi tersebut menyimpulkan bahwa, untuk merangsang penggunaan OER di kalangan mahasiswa pascasarjana, kesadaran, sikap, dan keterampilan mereka harus dipicu secara positif. Oleh karena itu, rekomendasi pun dibuat.

INTRODUCTION

Due to the advent and extensive usage of ICTs in the classroom, as well as the open access movement, open educational resources (OER) have blossomed. According to UNESCO (2002), "open educational resources" (OER) are technology-enabled educational resources that are freely available to a community for non-commercial reasons. Similarly, the Organization for Economic Cooperation and Development (OECD) (2007) described OER as information resources in digital formats that may be

supplied freely and openly for use and reuse by academia, students, and self-learners for teaching, learning, and research. It should be stressed that the OECD definition avoids confining OER to non-commercial usage, instead designating all print-based information resources as OER. As a result, the fundamental rationale underlying OER is that it is free and open for the distribution of educational materials to assist teaching, learning, and research activities. Since they give individuals the ability to use, reuse, process, edit, and share information on any topic of interest, lecturers, researchers, students, and scholars find them stimulating. Open Educational Resources' global accessibility has facilitated educational institutions' access to research data on a global scale. This is due to the potential benefits of OER, which have been welcomed by academics from a variety of disciplines.

These resources, if properly utilized, will be beneficial to students, especially those in postgraduate programs, by offering excellent opportunities to access academic literature that is out of the reach of libraries due to regional and financial constraints. Consequently, these resources are often used by individuals and educational institutions to enhance learning and advance the course of research endeavors, which is often the crux of postgraduate programs. Also, to be effective in their academic pursuit, postgraduate students must learn and practice the skills required to explore freely available OERs. Hence, interest in the way knowledge and information have originated, been identified, created, communicated, and shared within global society has increased drastically, which is the principle behind OER (Inegbedion & Opataye, 2018). While some postgraduate students pursue their courses full-time, others choose to pursue them part-time (otherwise referred to as open and distance learning students). One method of providing training to the latter is through open and distance learning, which can be easily accomplished by employing materials from OER for both the curriculum and other components of effective learning. These students therefore use these resources for their academic pursuits, regardless of their location. However, the use of OER is not an independent phenomenon but one influenced by other variables that deserves scholarly attention.

A range of factors can impact postgraduate students' use of open and distance learning settings when it comes to open educational resources (OER). These components include, among other things, awareness, attitude, and skills (usage abilities). With the expansion of OER and the recognition of its educational value by academic institutions and educators, it becomes crucial to assess their awareness by postgraduate students, especially in higher educational institutions in the south-south region of Nigeria. Awareness, according to Akpojotor (2016), is the understanding and comprehension of a concept, phenomenon, or situation based on information and experience. An increasing number of educational institutions are developing OER portals to provide students with improved access to educational content. This is achieved by expanding public awareness of OER and encouraging the use of these materials. It has been observed that the poor adoption of OER by students in Nigeria suggests that awareness of OER has not received the required attention, despite its growing popularity and benefits. This has implications for the level of usage these resources could receive and, by extension, the maximization of their potential benefits. (Sanjeeva & Powdwal, 2017).

Another factor that could influence or predict the usage of OER among distance learning postgraduate students is their attitude. With the transition from print to electronic resources, it becomes crucial to ascertain information users' attitudes towards OER. This is due to the fact that attitude can either increase or decrease human response to a phenomenon. It is a state of readiness that is organized by experience and has an impact on people's response to an object or event (Aiyebelehin et al., 2017) as well as people's state of mind toward a value reflected in their thoughts and actions (Asmui et al., 2012).

Thus, students possess either a positive or negative attitude towards OER (Swain & Panda, 2009), which influences their thoughts and actions (usage) towards these resources. Consequently, positive attitudes towards OER among these students could influence their tendency to use them. Therefore, with a positive attitude, actual usage will also be determined by the students' ability to use, which makes skills an essential factor in determining the use of OER.

Another consideration for postgraduate students while accessing OER is their level of skills, as poor skills severely limit their ability to use sophisticated tools to access educational resources. Most postgraduate students have had difficulties completing their courses because they require them to use technology (McKerlich & McGreal, 2013). This implies that a lack of required skills for postgraduate students to use technology impedes their academic activities and, by extension, their use of open educational resources. In order to effectively use OER, postgraduate students will need to learn new skills. Aiyebelihin et al. (2017) identified some of these skills to include ICT skills, information literacy skills, media skills, and digital literacy skills. Given the sporadic transition to electronic resources, Quadri (2012) emphasized the need for information users to supplement conventional knowledge with ICT skills to maximize the rich information resources freely open to users but accessible electronically. This has further strengthened the need to periodically assess how well postgraduate students, especially open and distance learners, are "skill-ready" to optimize the available OER for their academic progress. Open Educational Resources may provide a solution to the fundamental difficulties in tertiary education, such as the high cost of educational resources; however, certain factors could hinder the use of OER even among postgraduate students who are engaged in rigorous academic activities. So, the goal of this study was to figure out how awareness, attitude, and skills affect OER adoption among postgraduate students in south-south Nigeria who are enrolled in open and distance learning centers.

The specific objectives of the study are to:

1. find out if postgraduate students in open and distance learning centers in southern Nigeria who are aware of OER are more likely to use them;
2. ascertain if attitude influences the postgraduate students' usage of OER;
3. find out if skills influence the postgraduate students' usage of OER, and
4. ascertain if awareness, attitude, and skills will jointly influence postgraduate students' usage of OER.

Based on the specific objectives of the study, the following null hypotheses were generated to guide the study, tested at a 0.5 level of significance:

Ho1: The level of awareness has no significant influence on the usage of OER by postgraduate students in South-South Nigeria

Ho2: Attitude has no significant influence on the postgraduate students' usage of OER

Ho3: Skills have no significant influence on the postgraduate students' usage of OER

Ho4: Awareness, attitude, and skills have no joint significant influence on the postgraduate students' usage of OER.

REVIEW OF RELATED LITERATURE

In this section, we will evaluate previous research that is relevant to the study's objectives. The study's variables were looked at, with special attention paid to how each of the independent factors related to the study's dependent variable, as shown in the conceptual model of the study.

Theoretical Framework

Attempts have been made to explain why people are so quick to accept new product and technology, and several explanations have been proposed. Ajzen and Fishbein's Theories of Reasoned Action (TRA), Davis's Technology Acceptance Model (TAM), and Rogers' The Diffusion of Innovation (TDI) are some of the models that fall under this category. However, Agbonlahor (2005) noted that TAM and TRA theories do not sufficiently create a general picture of factors that determine the use of new technologies by humans. The author asserted this to be a strength of the Diffusion of Innovation Theory, which is adopted in this study to describe awareness, attitude, and skills as factors influencing the use of OER among postgraduate students who are also open and distance learners.

Rogers (1995) defined diffusion as the steady dissemination of a new concept or technology through a predetermined set of intermediaries and channels. The study of diffusion focuses on the variables that determine the likelihood of cultural members adopting new ideas or habits. According to Roger's Theory of Innovation Decision Making, innovation is a process that takes place over a period of time and can be broken down into the following five stages: awareness, implementation, persuasion, decision and confirmation.

According to Roger, the innovation-decision process is the progression of a person or other decision-making unit from the first time they hear about an invention to the time they decide whether or not to accept the innovation. This implies that awareness of a new technology will precede acceptance and, eventually, usage. According to Alemayehu (2010), OER is still considered to be relatively new, and as such, the majority of research still focuses on its awareness. Also, Rogers (2003) says that how people feel about new technologies [like OER] is a big part of how widely they are used. Most studies, especially in developing countries, have focused on the first two stages, i.e., knowledge of an innovation and attitudes toward it, in situations where the technology (in this case, OER) is relatively recent in the educational system. According to Avello-Martinez (2014), no one theory perfectly explains all facets of the usage of OER. Thus, excuses the applicability of this theory to this study regardless of its silence on the skills factor. Although, the Rogers' theory caters for the awareness and persuasion or attitude towards a new system like OER as predictor of the use of that system. Rogers (2003) affirmed these two variables to be key elements of usage. The significance of this theory to the study is highlighted by the fact that OER in the open and distance learning environment are likely to elicit a variety of reactions, particularly among postgraduate students. Applying this theory to postgraduate learners' attitudes toward OER suggests that their intention, stability, and degree of intention must align with the expectation that using this information system will facilitate access to current literature in support of their learning and research activities. The framework of this theory explains the awareness and attitude (positive and negative disposition of postgraduate learners) of open and distance learners towards the use of OER.

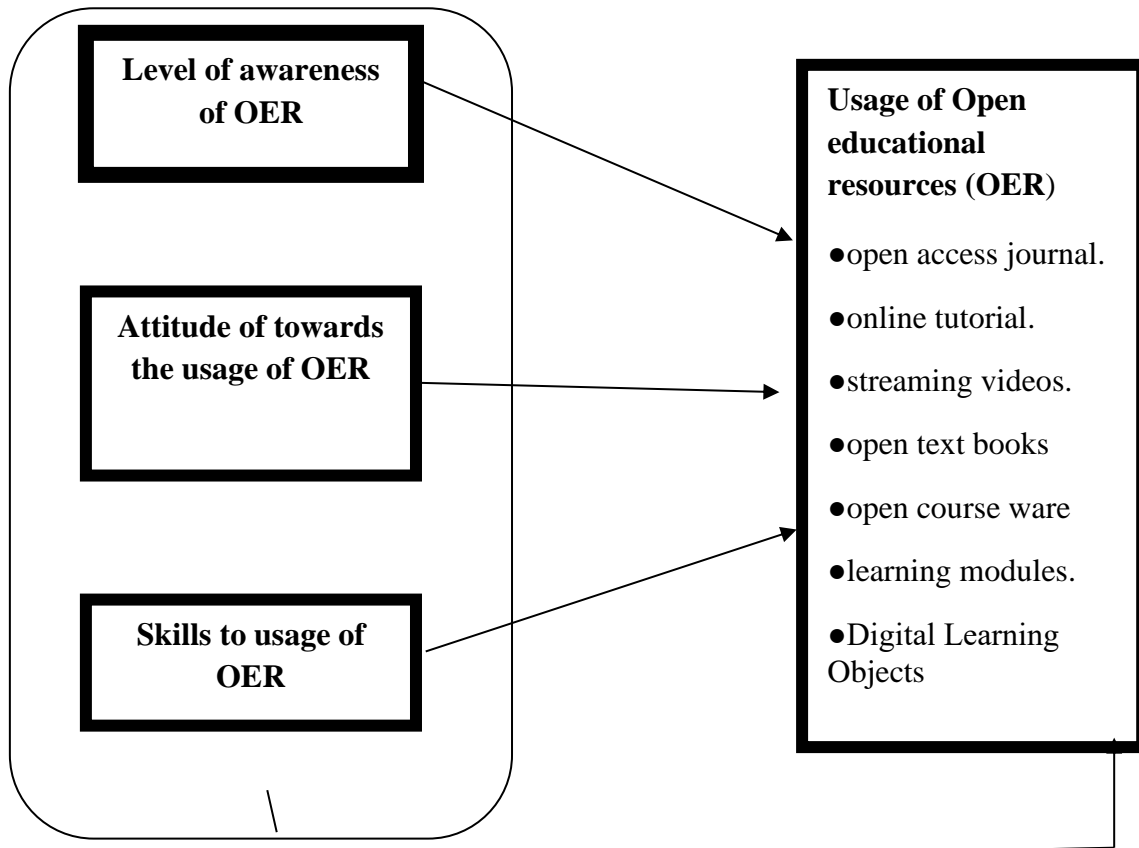


Figure 1:
Conceptual Model on Awareness, Attitudes and Skills towards OER Usage

The Figure 1 shows the variables of the study, both the independent (awareness, attitude and skills) and the dependent variable (use of OER). Based on the direction of the arrow, the model suggests that awareness, attitude and skills are likely to influence usage of OER among postgraduate students.

Awareness and usage of Open Educational Resources

At all levels of education, there is a considerable emphasis on raising awareness of the changes in teaching and learning brought about by open educational resources (OER). This is based on the idea that if there is an increase in awareness of a phenomena, trend, or occurrence, there will surely be an increase in its corresponding usage.

The great majority of faculty members are familiar with and utilize open access publications. They acknowledge the importance of OER in education, research, and instruction. Their understanding of these resources affected their consumption. According to the findings of a research done by Nyamwembe, et al (2018), the majority of students were aware of OER; nonetheless, consumption is still very low. The study revealed a positive correlation between usage and the index of awareness, indicating that the correlation is statistically significant. However, all agreed that raising students' understanding of OER should increase OER adoption. The study by Issa et al (2020) concluded that adopting OERs for learning can assist students. According to the conclusions of Itasanmi's (2020) research, the level of OER understanding among ODL students is about average, but the volume of OER use is rather high. The study went on to show that there is a significant relationship between OER understanding and usage

among students. This conclusion was reached as a result of the study's findings. Lwoga (2013) examined the knowledge and exploitation of open educational materials in Tanzanian institutions of health sciences. Lwoga says that universities should strengthen their IT infrastructure, establish institutional repositories and policies, and librarians should increase awareness of OER-related information services.

Attitude and Usage of Open Educational Resources

According to Issa et al. (2020), an individual's favorable or unfavorable attitude predicts how they will behave in a specific situation. Perception can be used to explain attitude in almost all the literature. As such, people's perception towards a new technology or phenomena, could reflect on their attitude. Hussain et al. (2013) investigated faculty attitudes toward and use of OER at Dhaka University in Bangladesh. Nearly 70% of faculty employed subscription-based and open educational materials in their research and teaching. This trust which reflects their attitude towards OER was the propellant for their usage of the resources.

Kanojia and Verma (2021) investigated scholars' views as well as how they used open educational resources accessible at Indian universities. It was discovered that the survey participants had a helpful attitude, were familiar with open educational resources, and had easy access to these sources. Ayeni (2017) investigated the opinions and behaviors of master's degree students at two Nigerian institutions about the utilization of open access publications. For its population, which consisted of graduate students from two distinct universities, the study used a descriptive survey technique. According to the conclusions of a data analysis, the respondents used open educational resources.

Skills and Usage of Open Educational Resources

Individuals' expectations for computer use are significantly influenced by their level of computer self-efficacy (skills). As educational and instructional media tools have become more widely available, it has become increasingly important to incorporate these technologies into computer tech tests for students. Recent research has begun to delve into more particular types of computer Self-Empowerment Tests (CSSPs). An individual's computer self-efficacy may suffer considerably during periods of inactivity with certain software. Increased computer usage frequency, on the other hand, is likely to boost computer confidence. Quadri (2012) found that how a person feels about their computer skills depends on who they compare themselves to and how much they have used computers before.

Soleymani (2014) coined the phrase "information literacy" to refer to the set of skills required for searching for, retrieving, analyzing, and maximizing the use of information. In the digital age, students' academic progress and research productivity suffer when they don't have the basic skills to use OER. Students with high information literacy abilities can better understand a subject and broaden their investigations. They can also become more self-directed and accountable for their own learning. According to Mary and Balasubramanian (2019), majority of postgraduate students have access to digital devices such as a smartphone, an iPad, and a laptop. Ownership of these devices does not imply mastery of information literacy skills. Students who are good at finding information might be able to use the large amount of material on the internet to help their studies.

More than two-thirds of postgraduate students at the University of Ibadan have advanced information literacy skills, according to a study conducted by Adeleke and Emeahara (2016). Postgraduate students can easily access the internet which could have accounted for their high use of OER. There is no consensus on a single definition of media literacy among scholars. Despite this, the number of studies on media literacy is expanding on a regular basis. When you live in an era of rapid technological change

in the media, having a definition that is not dependent on the media technologies in use is extremely beneficial. Media literacy is a catch-all term that encompasses a wide range of topics. The meaning ascribed to media in the current period has evolved and grown slightly in contrast to the past. Contemporary media varies from earlier media in five respects, claim Pérez et al. (2007). The digital representation of new media, according to Chen et al. (2011), makes it programmable and computable. Other characteristics of new media include automation, mobility, diversity, digitality, modularity, multi-layeredness, hybridity, and interactivity. In certain cases, new media are hybrid. The proportion of adults who can read and write is steadily increasing. To fully take use of the potential provided by open educational resources.

METHODS

The study covered 2,119 postgraduate students who are open and distance learners from the National Open University of Nigeria (NOUN) in six (6) states of the south-south region of Nigeria. A stratified random sampling technique was used to select 15% of the overall population as the sample size of the study, which is 318, as seen in Table 1. A questionnaire is used as an instrument for data collection. Three hundred and eighteen (318) copies of the questionnaire were distributed, and 301 (95%) were returned. Given the acceptable response rate for most studies at 60%, the study's response rate of 95% is deemed sufficient. The retrieved copies were analyzed using descriptive statistics, inferential statistics (Pearson Product Moment Correlation Co-efficient), and multiple regression at the 0.05 level of significance.

Table 1: Population and sample size for the study

S/N	Study Centres	Population			Sample Size		
		PGD	Masters	Total	PGD	Masters	Total
1.	Asaba Study Centre, Asaba	147	215	362	22	32	54
2.	Benin Study Centre, Benin City	136	184	320	20	28	48
3.	Calabar Study Centre, Calabar	59	97	156	9	14	23
4.	Port Harcourt Study Centre	326	419	745	49	63	112
5.	Uyo Study Centre, Uyo	140	184	324	21	28	49
6.	Yenagoa Study Centre, Yenagoa	106	106	212	16	16	32
	TOTAL	914	1,205	2,119	137	181	318

RESULTS

The results from the analysis of data are presented below:

Demographic Distribution of the Respondents

The open and distance education centers in south-south Nigeria had more men than women (53.8%). 76.1% of respondents are over 35, indicating that these students are in their middle age or older and may have chosen open and distance learning due to their occupations' engagement. Port Harcourt had the most responders (34.6%), whereas Yenogua had the fewest (9.6%). This sparse distribution may be due to several reasons not explored in this study. The Faculty of Management Science had the most participants, followed by Education and Agriculture.

Table 2: Demographic Distribution of the Respondents

S/N	Items	Frequency	Percentage (%)
Gender			
1.	Male	162	53.8
2.	Female	139	46.2
	Total	301	100
Age ranges			
1.	25-35	72	23.9
2.	36-40	120	39.9
3.	41 and above	109	36.2
	Total	301	100
Study Centre of Respondents			
1.	Asaba	52	17.3
2.	Benin	48	15.9
3.	Calabar	23	7.6
4.	Port Harcourt	104	34.6
5.	Uyo	45	15.0
6.	Yenogua	29	9.6
	Total	301	100
Faculty of the Respondents			
1.	Agriculture	10	3.3
2.	Arts	18	6.0
3.	Education	82	27.2
4.	Health Science	22	7.3
5.	Management	91	30.2
6.	Science	36	12.0
7.	Social Science	42	14.0
	Total	301	100

Testing of Hypotheses

Ho1: Awareness has no significant influence on the usage of OER by postgraduate students in South-South Nigeria.

Table 3: Influence of Postgraduate Students' Awareness on Usage of OER

		Awareness of Open Educational Resources	Usage of Open Educational Resources
Awareness of Open Educational Resources	Pearson Correlation	1	.518
	Sig. (2-tailed)		.000
	N	301	301
Usage of Open Educational Resources	Pearson Correlation	.518	1
	Sig. (2-tailed)	.000	
	N	301	301

From Table 3, the Pearson correlation coefficient r (0.518) implies a 52% influence. Therefore, there is an average influence of students' awareness on the usage of OER. As the significant value (Sig.2-tailed) is 0.000, it can be claimed that awareness has a considerable influence on the adoption of OER by postgraduate students in South-South Nigeria (which is less than 0.05). As a result, the null hypothesis is rejected, implying that open education resource (OER) awareness and usage among open and

distance graduate students may go hand in hand depending on the direction of OER awareness.

Ho2: Attitude has no significant influence on the usage of OER by postgraduate students in South-South Nigeria

Table 4: Influence of Postgraduate Students' Attitude on Usage of OER

		Attitude of PG Students towards Usage of Open Educational Resources	Usage of Open Educational Resources
Attitude of PG Students towards Usage of Open Educational Resources	Pearson Correlation	1	.413
	Sig. (2-tailed)		.000
	N	301	301
Usage of Open Educational Resources	Pearson Correlation	.413	1
	Sig. (2-tailed)	.000	
	N	301	301

According to Table 4, there is a 41% influence, as shown by the Pearson correlation coefficient r (0.413). This means that open educational resources are used regardless of how students feel about them. Attitude has a modest but significant effect on the usage of OER by postgraduate students in south-south Nigeria since the significant value (Sig.2-tailed) is 0.000, which is less than 0.05. To put it another way, the significance level is below the minimum required level of significance. Therefore, the null hypothesis is rejected, suggesting that graduate students at the National Open University of Nigeria may alter their usage of OER if they are exposed to new perspectives.

Ho3: Skills have no significant influence on the usage of OER by postgraduate's students in South-South Nigeria.

Table 5: Influence of Postgraduate Students' Skills on Usage of OER

		Skills Required to Use Open Educational Resources	Usage of Open Educational Resources
Skills Required to Use Open Educational Resources	Pearson Correlation	1	.533
	Sig. (2-tailed)		.000
	N	301	301
Usage of Open Educational Resources	Pearson Correlation	.533	1
	Sig. (2-tailed)	.000	
	N	301	301

From Table 5, the Pearson correlation coefficient r (0.533) implies a 53% influence. Therefore, there is an average influence of students' skills on the usage of OER. Given that the significant value (Sig.2-tailed) is 0.000 (less than 0.05), it is clear that postgraduate students in south-south Nigeria's use of free educational materials is

significantly influenced by their skills. By rejecting the null hypothesis, it is implied that postgraduate students will use OER to varying degrees depending on their skill level.

Ho4: Awareness, attitude and skills have no significant influence on usage of open educational resources usage by postgraduate students in South-South Nigeria.

Table 6: Model Summary Table of Influence of Awareness, Attitude and Skills to Usage of OER

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.621 ^a	.386	.380	.74908

a. Predictors: (Constant), Skills Required to Use OER by PG Students, Attitude of PG Students towards Usage of OER, Awareness of Open Educational Resources

Table 7: ANOVA Summary Table of Influence of Awareness, Attitude and Skills Usage of OER

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	104.777	3	34.926	62.243	.000 ^b
	Residual	166.652	297	.561		
	Total	271.429	300			

a. Dependent Variable: Usage of OER by PG Students

b. Predictors: (Constant), Skills Required to Use OER by PG Students , Attitude of PG Students towards Usage of OER, Awareness of Open Educational Resources

Table 8: Coefficient Summary Table of Influence of Awareness, Attitude and Skills Usage of OER

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.682	.256		2.669	.008
	Awareness of Open Educational Resources	.358	.070	.296	5.135	.000
	Attitude of PG Students towards Usage of OER	.143	.075	.107	1.919	.056
	Skills Required to Use OER by PG Students	.333	.049	.354	6.778	.000

a. Dependent Variable: Usage of OER by PG Students

Tables 6, 7, and 8 show that the result of the regression ($R^2 = 0.386$, $F(3,297) = 62.243$, $p = 0.000$) showed that the three predictors explained 39% of the variance. Therefore, there is a low influence of the three independent variables (awareness, attitude, and skills) on the dependent variable (usage of OER). This implies that the three independent variables contributed to the 39% variance. Therefore, the remaining 61% may be a result of chance or other variables not accounted for in this study. The null

hypothesis is therefore rejected, implying that awareness, attitude, and skills may jointly influence students' usage of open educational resources (OER).

DISCUSSION

The study revealed that awareness has an average influence on the use of OER by postgraduate students in South-South Nigeria. As a result, an increase or reduction in knowledge of open educational resources may result in a commensurate increase or decrease in usage of open educational resources by postgraduate students. This finding corroborates that of Itasanmi (2020), who noted that there is a considerable positive association between OER awareness and OER usage among postgraduate students. This finding also supports that of Nyamwembe, Tanui, and Wamutitu (2018), who investigated the relationship between students' awareness of free educational materials and their usage of them for academic work at private Kenyan universities in Africa. The study discovered that utilization and awareness index have a positive association, indicating that the relationship is statistically significant. The implication is that sufficient awareness of OER will stimulate usage as people will use only the systems or resources they are most aware of. Conversely, these students will utilize OER if they are not aware of these resources, even though they are free or open. Consequently, infusing postgraduate students with sufficient awareness about OER will positively influence their tendencies to utilize these resources.

The study found that postgraduate students' attitudes toward the use of open educational resources (OER) have a limited influence on their usage. This suggests that attitude has an impact on postgraduate students' use of open educational resources. This finding fits with what Kumar and Raja (2019) found, which is that there is a positive relationship between how college students feel about open educational resources and how much they use them. Ngumi (2012), on the other hand, evaluated postgraduate students' views toward open and online learning at Egerton University in Kenya, as well as the barriers to getting literature. The study showed that students have a negative attitude toward open and online education, which makes academics' transition from traditional sources of literature to the use of modern technology more difficult. Thus, the disposition or attitude of these students whether positive or negative will affect their intention to use OER. Often times, such attitude is affected by perceived benefits or challenges.

Moreover, the study revealed that there is an average influence of students' skills on the usage of OER. This finding supports that of Ashcroft (2004), who noted that when postgraduate students have acquired the requisite information and communication technology (ICT) skills, OER can be used effectively. Also, Nwakanma (2003) advised that information professionals are increasingly required to be familiar with and capable of showing developing ICT skills such as media skills, communication skills, and visual skills. This is to enable them to use educational resources available online. The finding also corroborates that of Adeleke and Emeahara (2016), who found a positive relationship between information literacy skills and OER. Therefore, the use of OER by postgraduate students is dependent on their level of skills like information literacy, computer skills, and media skills, among others. Such skills enhance their self-efficacy and abilities to effectively and efficiently access, retrieve, and ultimately use these educational resources.

Lastly, the study found that the three independent variables (awareness, attitude, and skills) had a joint influence on the dependent variable (use of OER). This finding is consistent with the findings of Kumar and Raja (2019), who stated in their study on awareness and attitude toward OER in higher education that higher education students have a limited degree of OER usage due to their awareness and attitude towards it. By implication, awareness, attitude, and skills can be jointly and favorably manipulated as a

means towards boosting the use of OER by postgraduate students in open and distance learning environments.

CONCLUSION AND RECOMMENDATIONS

Open educational resources have in a great measure contributed to the educational endeavors of postgraduate students, with particular reference to those studying in an open and distance learning environment. By the nature of these resources, they foster educational inclusiveness, and their usage enhances academic progress for postgraduate students. However, the level to which these resources will be utilized will be determined by how aware the students are of the resources. Such usage will also be predicted by the postgraduate students' attitude towards the resources, as a positive attitude will encourage use and vice versa. Also, the postgraduate students' ability to use these resources reflects their skills, which constitute a remarkable factor that could also stimulate the use of these OER.

Based on the findings and conclusion of the study, the following recommendations are made:

1. Open universities should setup structures (like targeted campaigns) that create and raise awareness on the available OER and also on the benefits of using these resources.
2. Open universities should provide tools and systems that facilitate the use of these resources in order to stimulate positive attitude towards them.
3. Postgraduate students should deliberately and intentionally improve their knowledge and skills for effective access and usability of these educational resources.
4. Open universities should periodically train and retrain postgraduate students on skills that are critical to effective access, evaluation, use and OER.
5. Open universities should a gateway on their website to vast amount of OER with friendly and easy interface that postgraduate students can easily navigate.

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