

Awareness, attitudes, skills, and open educational resources usage among open and distance learners

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Abstract

Background of the study: 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, a number of factors will determine the extent to which they will use these resources. Thus, this study examined the influence of awareness, attitudes, and skills on the usage of OER by postgraduate.

Purpose: 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.

Method: 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 analysed using descriptive statistics (for the demographics) and inferential statistics (for the hypotheses).

Findings: The results revealed that the independent variables of awareness, attitude, and skills all had a moderate individual and joint influence on the usage of OER among open and distance learners.

Conclusion: The study concluded that, to stimulate the use of OER among postgraduate students, their awareness, attitude, and skills would have to be positively triggered. Consequently, recommendations were made.

Keywords: *Attitude, Awareness, National Open University of Nigeria, Open educational resources, Open and distance learners.*

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Introduction

The widespread integration of ICTs in classrooms and the rise of the open access movement have led to the flourishing of open educational resources (OER). [Sandanayake \(2019\)](#) notes that OER is widely adopted as a learning approach enabling learners to combine online digital materials with traditional classroom methods. Similarly, [Orr \(2015\)](#), aligning with the Organisation for Economic Cooperation and Development (OECD), defines OER as educational materials utilizing open licensing tools, allowing for their free reuse, continuous improvement, and repurposing for educational purposes. These resources, available in digital formats, are freely shared and open for use by academia, students, and self-learners in teaching, learning, and research.

The OECD's definition broadens the scope of OER beyond non-commercial usage, encompassing all print-based information resources. Therefore, the core principle of OER is its free and open nature, facilitating the distribution of educational materials to support teaching, learning, and research. OER's appeal lies in its capacity to empower individuals to use, reuse, modify, and share information on diverse topics, making it a valuable resource for lecturers, researchers, students, and scholars ([Inegbedion & Opataye, 2018](#)). The global accessibility of OER has enhanced educational institutions' access to research data on a worldwide scale, garnering widespread acceptance among academics across various disciplines.

Despite its benefits, the use of OER is influenced by several factors, including awareness, attitude, and skills (usage abilities). [Akpojotor \(2016\)](#) defines awareness as the understanding and comprehension of a concept based on information and experience. Increased public awareness of OER and the promotion of their use are crucial for maximizing their potential benefits. However, the poor adoption of OER by students in Nigeria suggests that awareness has not received the required attention, despite its growing popularity and benefits ([Sanjeeva & Powdwal, 2017](#)).

Attitude also plays a significant role in the utilization of OER. [Aiyebelehin et al. \(2017\)](#) state that attitude, influenced by past experiences, significantly impacts how individuals react to certain situations. Positive attitudes towards OER can significantly impact students' inclination to utilize these materials. Moreover, effective implementation of OER relies on students' competence in using them. [Basar et al. \(2021\)](#) highlight that inadequate proficiency limits students' ability to leverage sophisticated tools for accessing educational resources, emphasizing the importance of acquiring ICT skills, information literacy skills, media skills, and digital literacy skills ([Aiyebelehin et al., 2017](#)).

According to [Itasanmi \(2020\)](#), OER usage and awareness are strongly positively associated among postgraduate students. [Kumar and Raja \(2019\)](#) found that understanding of OER in the higher education sector is limited, with [Rolfe et al. \(2012\)](#) revealing that only 18% of students had heard of the phrase "open educational resources." [Keel \(2016\)](#) found a low percentage of awareness, whereas [Okonkwo \(2012\)](#) found a high percentage of awareness.

While these studies provide an overview of OER usage and awareness among postgraduate students and higher education in general, they do not focus on a specific institution or region. This study addresses this gap by investigating how awareness, attitude, and skills influence OER adoption among postgraduate students at the National Open University of Nigeria (NOUN) in the South-South region. Given the sporadic transition to electronic resources, it is crucial to assess how well postgraduate students are "skill-ready" to optimize available OER for academic progress. This study aims to fill this gap by focusing on the specific context of NOUN and providing insights into the factors influencing OER adoption among postgraduate students in this region. 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; 4) ascertain if awareness, attitude, and skills will jointly influence postgraduate students' usage of OER.

Literature Review

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 products 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' Diffusion of Innovation (TDI) are some of the models that fall under this category. However, [Halton \(2023\)](#) 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 ([Halton, 2023](#)). According to Roger's Theory of Innovation Decision Making, innovation is a process that takes place over some time and can be broken down into the following five stages: awareness, implementation, persuasion, decision, and confirmation. According to [Halton \(2023\)](#), 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. [Al Abri and Dabbagh \(2018\)](#) assert that open educational resources (OER) are still seen as a relatively recent phenomenon, and hence, the majority of research mostly concentrates on increasing their level of recognition.

Moreover, according to [Halton \(2023\)](#), individuals' sentiments toward new technologies, such as Open Educational Resources (OER), significantly influence their widespread adoption. Previous research, especially in developing nations, has predominantly focused on the initial stages of awareness and attitude, particularly in scenarios where the technology (OER, in this case) is relatively recent in the educational system. Despite the theory's silence on the skills factor, its applicability to this study is justified. Rogers' theory addresses awareness and persuasion or attitude as predictors of new system usage. Rogers (2003, as cited in Halton, 2023) underscored these two variables as key elements influencing usage. The relevance of this theory to the study is emphasized by the likelihood that OER in an open and distance learning environment will evoke diverse reactions, especially among postgraduate students. When applied to postgraduate learners' attitudes toward OER, the theory suggests that their intention, stability, and degree of intentionality must align with the expectation that using this information system will facilitate access to current literature supporting their learning and research activities. The theoretical framework thus elucidates the awareness and attitudes, both positive and negative, of postgraduate learners in open and distance learning settings regarding the utilization of OER.

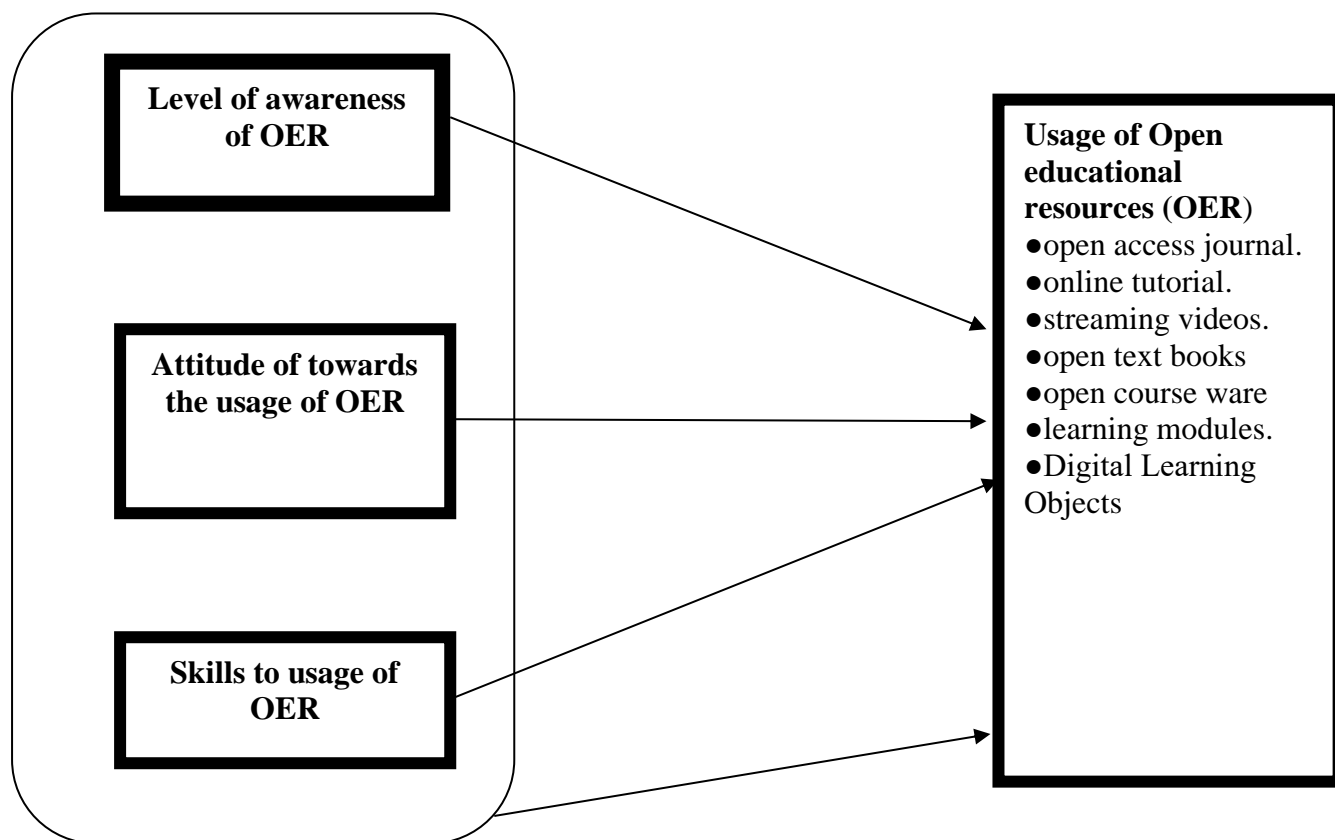


Figure 1: Conceptual Model on Awareness, Attitudes and Skills towards OER Usage

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

Across all educational levels, there is a substantial focus on enhancing awareness regarding the transformations in teaching and learning introduced by open educational resources (OER). This emphasis stems from the belief that heightened awareness of a phenomenon, trend, or occurrence correlates with an increase in corresponding utilization. Faculty members, for the most part, are acquainted with and make use of open-access publications, recognizing the significance of OER in education, research, and instruction. Their awareness significantly influences their engagement with these resources. [Nyamwembe et al.'s \(2018\)](#) research findings indicate that while the majority of students are aware of OER, the actual consumption remains relatively low. The study establishes a positive correlation between usage and the awareness index, signifying its statistical significance. Despite this, there is unanimous agreement that elevating students' understanding of OER should result in increased OER adoption. [Issa et al.'s \(2020\)](#) study concludes that the adoption of OERs for learning can be beneficial for students. Additionally, [Itasanmi's \(2020\)](#) research reveals that while the level of OER understanding among Open and Distance Learning (ODL) students is moderately average, the actual volume of OER use is quite high. The study establishes a noteworthy relationship between OER understanding and usage among students. [Haule \(2015\)](#) examined the knowledge and utilization of open educational materials in Tanzanian health sciences institutions. Haule recommends that universities enhance their IT

infrastructure, establish institutional repositories and policies, and librarians should actively promote awareness of OER-related information services. This approach aims to further facilitate the integration and utilization of OER within educational institutions.

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

Attitude and Usage of Open Educational Resources

[Issa et al. \(2020\)](#) found that an individual's attitude, whether positive or negative, may accurately predict their behaviour in a given circumstance. The concept of perception is widely employed in literature to elucidate attitude. Consequently, individuals' attitudes may be influenced by their views of a novel technology or phenomena. Itasanmi (2020) observed that open and distant learning students engage with many materials online or in the library without restrictions to enhance their learning. However, their degree of familiarity with the content within the Open Educational Resources (OER) framework is moderate. [Kanojia and Verma \(2021\)](#) examined the perspectives of researchers and their use of free educational materials available in Indian universities. The study revealed that the participants exhibited a cooperative disposition, possessed a comprehensive understanding of open educational resources, and enjoyed convenient accessibility to these materials. [Ayeni \(2017\)](#) examined the perspectives and actions of master's degree students at two Nigerian schools on the usage of open-access publications. The study employed a descriptive survey approach to gather information from its sample, which comprised graduate students from two separate universities. Based on the findings of a data analysis, the participants utilised open educational materials.

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

Skills and Usage of Open Educational Resources

The degree of an individual's computer self-efficacy (skills) has a significant impact on their expectations for computer use. As educational and instructional media tools have become more widely available, it has become increasingly important to incorporate these technologies into computer technology 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.

[Avello-Martinez \(2014\)](#) coined the phrase "information literacy" to refer to the set of skills required for searching for, retrieving, analysing, and maximising 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 \(2019\)](#), the 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.

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.

Method

Research Type

A correlational research design was adopted for the study. In correlational research, researchers seek to identify patterns, associations, or correlations between variables to determine if they are related. This type of research does not establish causation but rather highlights whether and how variables are connected.

Study Area

The study covered all the 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.

Population and Sample

The population of the study consists of 2,119 postgraduate students. Using a stratified random sampling technique, 15% of this population was selected, resulting in a sample size of 318 students.

Data Collection

A questionnaire was 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.

Data analysis

The study utilized descriptive statistics (frequencies) and inferential statistics (Pearson Product Moment Correlation Coefficient), and multiple regression at the 0.05 level of significance.

Table 1. Population and sample size for the study

No	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

Result and Discussion

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

No	Items	Frequency	Percentage (%)
<i>Gender</i>			
1.	Male	162	53.8
2.	Female	139	46.2
	Total	301	100
<i>Age ranges</i>			
1.	25-35	72	23.9
2.	36-40	120	39.9
3.	41 and above	109	36.2
	Total	301	100
<i>Study Centre of Respondents</i>			
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
<i>Faculty of the Respondents</i>			
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

H₀₁: 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
	Pearson Correlation	.518	1
	Sig. (2-tailed)	.000	

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

Usage of Open Educational Resources	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		Sig.
		B	Std. Error	Beta	t	
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

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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 findings suggest that awareness holds a moderate influence on the utilization of Open Educational Resources (OER) among postgraduate students in south-south Nigeria. Consequently, variations in the knowledge levels of open educational resources may correspondingly impact the usage patterns of postgraduate students, either positively or negatively. This discovery aligns with [Itasanmi's \(2020\)](#) observation of a substantial positive correlation between OER awareness and usage among postgraduate students. It also resonates with the findings of [Nyamwembe et al. \(2018\)](#), who explored the connection between students' awareness of free educational materials and their academic utilization at private Kenyan universities. Their study revealed a significant positive association between utilization and awareness index, indicating statistical significance. The implication is that heightened awareness of OER positively influences usage, as individuals tend to utilize systems or resources they are most aware of. Conversely, insufficient awareness may hinder OER utilization, even though these resources are freely available. Therefore, instilling postgraduate students with ample awareness of OER is likely to positively influence their inclination 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. Thus, the disposition or attitude of these students whether positive or negative will affect their intention to use OER. Oftentimes, 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. 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 towards 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 favourably manipulated as a means towards boosting the use of OER by postgraduate students in open and distance learning environments.

Conclusion

Open educational resources have in a great measure contributed to the educational endeavours 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. The degree to which the students are aware of these resources will, however, determine how much they will use them. 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 constitutes 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 set up structures (like targeted campaigns) that create and raise awareness on the available OER and also the benefits of using these resources. 2) Open universities should provide tools and systems that facilitate the use of these resources to stimulate positive attitudes 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 have a gateway on their website to the vast amount of OER with a friendly and easy interface that postgraduate students can easily navigate.

This study have some limitation: 1) Sample and Generalizability: The study included 318 of 2,119 postgraduate students. This is a representative sample, but the findings may not be applicable to all NOUN or other Nigerian open and remote learning postgraduate students. 2) Self-Reported Data: The study relied on questionnaires, which may be subject to social desirability bias or inaccurate self-assessment. 3) Geographic scope: The study was conducted in South-South Nigeria. This may not represent the experiences and perspectives of students from other parts of the country.

Practical Implications

Policy and Administration: University administrators and policymakers should work to increase postgraduate students' OER awareness, attitudes, and skills. This could entail incorporating OER training into the curriculum and hosting workshops or seminars. **Curriculum Development:** Educators and curriculum developers can use the study's findings to create OER-integrated educational programmes that keep students informed and proficient in them. **Support Services:** Academic support services, like as libraries and resource centres, can give students with manuals, tutorials, and one-on-one assistance when using OER.

Theoretical Implications

Extending Existing Models: The study adds awareness, attitudes, and skills to the Diffusion of Innovation Model for OER, open and distance learning environments. **Framework for OER Adoption:** The findings suggest that awareness, positive attitudes, and appropriate skills are required for effective OER adoption among postgraduate students. **Behavioural Insights:** The study highlights OER adoption behaviour, setting the path for further research into how these variables influence student participation.

Suggestions for Further Research

The following suggestions for further research aim to shed light on key areas that can significantly impact OER utilisation among postgraduate students. **Comparative Studies:** Comparative studies of postgraduate students from various places or institutions might help

explain OER use and identify regional or institutional differences. The impact of specific interventions: Training programmes and awareness campaigns to enhance OER use among postgraduate students could be investigated. Technology and Infrastructure: Technical infrastructure and access to digital resources may influence OER utilisation, particularly in areas with varying technological levels

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Authors' Contributions

All authors have contributed to the final manuscript. The contribution of all authors: conceptualization, methodology, formal analysis, writing original draft preparation, writing review and editing. All authors have read and agreed to the published version of the manuscript.

Conflict of Interest

All authors have no conflict of interest related to this study.

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