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**FACTORS INFLUENCING OPEN EDUCATIONAL RESOURCES ON INSTITUTIONAL  
REPOSITORIES PERFORMANCE IN SELECTED UNIVERSITIES IN ABEOKUTA OGUN STATE,  
NIGERIA**

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**ABSTRACT**

*The study examines factors influencing open educational resources on institutional repositories performance in selected universities in Abeokuta Ogun State, Nigeria. Both questionnaire and interviewed techniques were used for data collection from 120 respondents chosen through stratified sampling techniques. In analyzing the data regression was employed in addition to conventional descriptive statistics such as tables, frequency distribution and percentages. The results showed that factors influencing open educational resources on institutional repositories performance is strongly influenced by gender, age, education, and marital status. Also, the statistics result from the model summary table revealed that the extent to which the variance, performance can be explained by factors influencing open educational resources is 27.1% ( $R^2 = 0.271$ ). The ANOVA table shows the  $F_{cal}$  48.579 at 0.000 significant levels. The table shows that factors influencing open educational resources have significant effect on institutional repositories performance. Based on the findings, it can therefore be concluded that awareness of OER among educators are relatively high, knowledge of OER repositories is on the lowest ebb. In view of the fact that Open Educational Resources (OER) are essential component resources which*

*support educators, students and researchers in searching for educational resources in a structured way as well as sharing their own materials, it was therefore recommended that more awareness should be created for*

*proper understanding of creative commons licencing levels used by OER repositories and awareness on how best to locate OER*

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## Introduction

Universities are institutions of higher learning place emphasis on research as one of their major functions apart from teaching and community services. The only way by which the quality of a university can be determined is through quantity of research output. A university that falters in the production of brilliant researches that can be applied in moving the society forward socio-economically and technologically, has lost its potentials. It is therefore pertinent that in expanding the frontiers of knowledge and imparting the society positively, maximum concentration should be placed on the intellectual output emanating from the universities. The situation whereby the totality of the research output coming out from a particular university cannot be ascertained nor determined will make it very difficult for evaluation to be conducted through the university output and could also impede the collation and onward transmission of such researches that can benefit different segments of the society. Based on this, there is the need for the establishment of institutional repositories (IRs) in the universities.

Open Educational Resources (OER) are educational resources that are offered freely, openly available to anyone (educators, students and self-learners), and, under some licences, allow others to reuse for teaching, learning and research, adapt,

and redistribute the resources with few or no restrictions. In other words, “open educational resources” refers to accumulated digital assets that can be adjusted and which provide benefits without restricting the possibilities for others to enjoy them.

In 2012, the World OER Congress, which was attended by governments and educational and OER experts, emphasized using OER as a means of providing equal access to knowledge. The Congress led to the adoption of the Paris OER Declaration, which calls on governments worldwide to license publicly funded educational materials openly for public use.<sup>2</sup> With adoption of the Ljubljana OER Action Plan at the Second World OER Congress in 2017 and subsequent drafting of an OER Recommendation for possible approval at the 2019 UNESCO General Conference, the concept of OER has achieved global recognition and, at least in principle, mainstream acceptance. Given these realities, and as pressure mounts on education systems due to rising costs and changing skill demands in the global economy, it becomes important for intergovernmental organizations to enter the next phase of critical engagement with the growth and potential of OER.

Open Educational Resources (OER) are electronic repositories developed by faculty of institutions where information is accessed freely and protected by copyright. OER supports learning in different subject modules and accessed through institutional portals and have been in existence for over a

decade. The emergence of OER have generated interest among institutions of higher learning worldwide and provided global exchange of knowledge as they do not only accessible, but usable by teachers in different formats. Higher institutions of learning now download these resources and make them available to users locally via intranet (internally within the environment) for those without stable internet connection. Open Educational Resources in a vital factor in achieving sustainable education for all, which is one of the Millennium Developmental Goals for quality Education in Nigeria, moreover the impact of OER cannot be underestimated as more countries and educational institutions are of the view that learning content belong to the people and must be accessible by all McGreal, (2017).

Bell, Foster, and Gibbons (2005) define an Institutional Repositories (IR) as "an electronic system that captures, preserves and provides access to the digital work products of a community." McMillen and Tucker (2010) define the IR as an "Open Access archive that facilitates the deposit of scholarly research in a centrally accessible online database." IRs typically store searchable and index-able institutional content online such as peer-reviewed articles (pre- and post-print), subject to copyright conditions, theses, dissertations, projects, course notes, seminar papers, conference proceedings, administrative documents, learning objects and other forms of grey literature, technical reports and many more institution specific materials.

Resources in institutional repository are referred to as local content, because it originates from the same institution. Local content comprises published and unpublished works such as research reports, thesis, journal articles, conference

proceedings, inaugural lectures, seminar papers, vice chancellors speech. Hence, institutional repositories make electronic published scholarly work visible and freely available, and this improves access (Van Wyk&Mostert, 2011). More importantly, library act as an information center that provides information through institutional repository where information is accessed, retrieved and disseminated to users, and this makes libraries pacesetters in the creation and management of institutional repository since they have no option than to embrace technology in order to perfect the dissemination effectively to the world at large.

According to Dhanavandan and Tamizhchelvan (2013), contributors enjoy several benefits from utilizing IRs such as self-archiving and free access to articles. This increases the impact of a researchers' work due to increased citation. Other benefits include improved visibility of content through abstracting and indexing databases and through availability in library collections and web-based publishing.

According to Omeluzor (2014) and Bhardwaj (2014) adopting IRs has the following benefits at institutional level: a) It makes the research outputs of an institution available timeously; b) It increases the visibility of an institution's research which raises the prestige and public value of the institution; c) It increases the ranking of the institution both locally and internationally; d) It enhances learning, online teaching and research which facilitates knowledge creation and sharing; e) It stimulates innovation in a disaggregated publishing structure, and f) It enhances resource sharing. Additionally, institutional repository promotes interaction and partnership with other universities by way of consortium,

mutual esteem, and admiration of scholars in an academic environment.

Despite these findings on the adoption of IR, studies done to date show generally that, academic staff do not deposit their research outputs in their academic institutions IRs. While studies such as Yang and Li (2015), Makori, Njiaine, and Talam (2015) and Dhanavandan and Tamizhchelvan(2013) attributed that non deposit of research outputs of the academic staff was based on lack of awareness of their universities IRs as an information resource, other studies differ from this assertion. De Hart, Chetty and Archer (2015) established that academic staffs' awareness and knowledge of IRs does not translate to active participation or utilization of IRs on their part. In Nigeria, the establishing and operating of an IR, are bound to have some obstacle ranging from inadequate funds, unstable power, inadequate infrastructure, and issues of copyright. In view of this it is therefore pertinent to examine factors influencing open educational resources on institutional repositories in selected universities in Abeokuta Ogun State, Nigeria

### **Literature Review**

Bojelo (2020) examined factors influencing adoption of institutional repositories in tertiary education institutions: librarians' perspective in University of Botswana. The report has it that, one way of improving visibility and accessibility of national research is for institutions of higher learning to use Institutional Repositories (IRs). This study adopted an interpretivist approach and used Engeström's Third Generation Activity Theory to guide the investigation. The research data was obtained through semi-

structured interviews with librarians in two tertiary institutions.

The findings of the study show that there is need for institutional repository advocacy and outreach programs by academic librarians to familiarise academic staff on utilisation of IRs. The study also established the need for librarians to reconsider their information resource capturing and dissemination practices, including user support services.

Nwakaego, (2017) studied factors influencing institutional repository in some universities in Nigeria. The study adopted the descriptive survey research design using a self-developed structured questionnaire. A multistage sampling procedure was employed to sample 751 staff (436 males and 315 females) of universities in Nigeria. Two research questions were raised. Data generated were analysed using descriptive statistics. The finding revealed that the development and sustenance of institutional repositories in university libraries in Nigeria have been very slow and quite uneven, due to the numerous institutional and external factors affecting the sustenance of institutional repositories. Based on the findings, some recommendations were made. Keywords: Institutional repositories; universities; libraries, institutional and external factors.

Anenene, et al. (2017) estimated factors contributing to the adoption of institutional repositories in Universities in South-West Nigeria: perspectives of Library staff. Descriptive survey research design was adopted and the population consisted of 32 library staff in seven universities in South-West Nigeria. The total enumeration method was used and the questionnaire was the data collection method used. Results

showed that most of the respondents (86.7%) had high level of awareness and also majority had a favourable perception of IR. Most of the respondents also acknowledged that IR is easy to use and also very useful. Majority of the library staff also identified licensing agreement, deposit and withdrawal services and issues relating to copyright and intellectual property as factors that could influence adoption of IR. It was recommended that capacity workshops should be organised to educate relevant stakeholders on issues of IR adoption.

Aghwotu&Ebiere (2016) also examined the awareness and attitude of lecturers towards establishing IR in Niger Delta University, Bayelsa State Nigeria and reported that (90%) of the respondents stated that they were aware of IR. Bamigbola (2014) noted that there is fundamental relationship between awareness and use of institutional repository, besides if there is an increase in institutional repository, there will be a synonymous increase in the level of awareness.

Introduction and use of OER in educational institution is a welcome development and so librarians in academic library assist in advancing, supporting and upholding OER via sensitizing the university community on the need to incorporate OER in teaching, learning and research through resource description, resource dissemination, information management, information literacy and efficient management of intellectual property rights (Robertson, 2010 and Peet, 2016).

Dhanavandan&Tamizhchelvan (2013), reported from their study conducted on attitude and awareness of institutional repositories by faculty members that most of

the respondents appreciated the role of the library. They expressed that library professionals supported and coordinated the design and the archival activities of the institutional repositories. This shows that staff of libraries is major actors in the establishment of IRs and their views should be treated with all seriousness. Study by Davis et al (2016) was that librarians play advisory roles to faculty members by influencing the integration of OER in their courses. On the other hand, it was recommended that developing a collection or a catalog of available OER is appropriate in academic programmes.

In a recent study, Ukwoma& Dike (2017) studied 491 academics' attitudes towards the utilisation of IRs in five Nigerian universities with IRs according to Open DOAR. They reported that the fact that academics disagreed with the negative statements in the null hypotheses showed that they had a positive attitude towards submission of their publications. Ivwighrehweta (2012) carried out a study in six universities in Nigeria where the opinions of 300 researchers and policy makers were sampled. Results showed that 150 (50%) and (47%) agreed and strongly agreed that funding was the major problem confronting the establishment of IRs in most Nigerian universities.

### **Methodology**

This study was carried out on factors influencing open educational resources on institutional repositories performance in selected Universities, located in National Open University of Nigeria, Oke- Mosan, Chrisland University, and Federal University of Agriculture, Abeokuta, Alabata in Abeokuta, Ogun State, Nigeria. A well-structured questionnaire was designed to

obtain relevant information from 120 respondents chosen through stratified sampling techniques. This is to ensure that every respondent was given the opportunity to be part of the sample.

The primary data were analyzed using such as descriptive statistics analysis table presentation, percentage, and frequency distributions. The method is employed to analyze the respondents visa-a-viz, the gender, educational status, age, and marital status of the respondents. In other to examine the association between factors influencing open educational resources on institutional repositories performance in selected Universities, regression was employed because of the quantitative nature of most of the variables.

The model is in explicit form:

$$Y = f(X_1 X_2 X_3 \dots X_n) + e$$

**Where**

- Y = Performance
- X<sub>1</sub> = Age (years)
- X<sub>2</sub> = Level of Education (formal (1) informal (0))
- X<sub>3</sub> = Gender (Dummy variable, male (1) female (0))
- X<sub>4</sub> = Marital Status (Single (1) otherwise (0))
- X<sub>5</sub> = Funding (Naira)
- X<sub>6</sub> = Awareness(Dummy variable, Awareness (1) otherwise (0))
- X<sub>7</sub> = Technology for advancement(Technologyfor advancement (1) otherwise (0))
- X<sub>8</sub> = Institutional repositories Policy(Dummy variable, IR Policy (1) otherwise (0))
- X<sub>9</sub> = Electricity(Dummy variable, Electricity (1) otherwise (0))

X<sub>10</sub> = Advocacy (Technology for advancement (1) otherwise (0))

U<sub>i</sub> = error term

**Results and Discussions**

The variables that are expected to have important implications for factors influencing open educational resources on institutional repositories performance is presented in Table 1. About 70% of the respondents were male from the sample size, while 30% of the respondents were female from the sample size. This implies that the number of males outnumbered that of the females. This shows that female respondents should be encouraged to work along with the male counterpart to the productivity of their institutions.

The Table 1, also shows that 25% of the respondents were within 20 – 29 age group, while 58.3% were between 30 – 39 years age cohort, 16.7% were more than 40 years old. This revealed that the population sampled was predominantly middle aged. This age – groups are known to be energetic and therefore expected to be entrepreneurial and economically active in exploring avenue for opportunities.

The result of the educational status of the respondents is in Table 1 revealed that 17% had post primary education, 21% had vocational/Technical education while the remaining 62% had attended either polytechnics or Universities. The distribution clearly reveals that, all the respondents (100%) had acquired one level of education or the other. About 21% of the respondents were single while 79% were married. This shows that married were generally more than single.

**Table 1: Frequency and Percentage Distribution of Respondents by their socio-economic characteristics N = 120**

Socio-Economic characteristics	Frequency	Percentage %	Cumulative
<b>Gender</b>			
Male	84	70.0	70.0
Female	36	30.0	100.0
	120	100.0	
<b>Age</b>			
20 – 29	30	25.0	25.0
30 – 39	70	58.0	83.0
40 above	20	17.0	100.0
	120	100.0	
<b>Educational Status</b>			
Post primary	20	17.0	17.0
Vocational/Technical	25	21.0	38.0
Tertiary	75	62.0	100.0
	120	100.0	
<b>Marital Status</b>			
Single	25	21.0	21.0
Married	95	79.0	100.0
	120	100.0	

**Source:** Field Survey, 2021

Table 2 shows regression of factors influencing open educational resources on institutional repositories performance. Testing of Hypotheses 2: there is no

significant relationship between factors influencing open educational resources on institutional repositories performance.

**Table 2.1 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.520 <sup>a</sup>	.271	.265	.38640

a. Predictors: (Constant), Factors influencing open educational resources

**Table 2.2 ANOVA<sup>a</sup>**

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	7.253	1	7.253	48.579	.000 <sup>b</sup>
Residual	19.559	131	.149		
Total	26.812	132			

a. Dependent Variable: Performance

b. Predictors: (Constant), Factors influencing open educational resources

### Interpretation of Results

The result from the model summary table revealed that the extent to which the variance, performance can be explained by factors influencing open educational resources is 27.1% (R Square = 0.271). The

ANOVA table shows the Fcal 48.579 at 0.000 significant levels. The table shows that factors influencing open educational resources have significant effect on institutional repositories performance.

**Table 2.3 Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.895	.339		5.588	.000
<sup>1</sup> Factors influencing open educational resources	.550	.079	.520	6.970	.000

a. Dependent Variable: Performance

The coefficient table above shows that the simple model that expresses how factors influencing open educational resources has a significant effect on institutional repositories performance. The model is shown mathematically as follows:  
 $Y = a + bX$

**where**

y is performance and x is factors influencing open educational resources, a is a constant factor and b is the value of coefficient. From this table therefore, Performance = 1.895 + 0.550 OER. Therefore, a unit increases in factors influencing open educational resources will lead to 0.550 increases in institutional repositories performance.

**Decision**

The above result implies that factors influencing open educational resources, has a significant effect on institutional repositories performance i.e. since our P (0.000) is less than 0.05. Thus, the decision is that factors influencing open educational resources have significant effect on institutional repositories performance.

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