

# CHALLENGES FACED BY LECTURERS AND STUDENTS IN ACCESSING AND USING OPEN ACCESS MATERIALS IN COLLEGES OF EDUCATION IN OSUN STATE, NIGERIA

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## **Abstract**

The phenomenon of Open Access (OA) has become a sort of paradigm shift in academic communication as it removes the obstacles of subscriptions and increases access to academic publications. Although the open access usage is adopted around the world, the implementation of open access materials in Nigeria Colleges of Education is below ideal. This research paper examined the issues related to the access and utilization of Open Access materials by lecturers and students in the selected Colleges of Education in Osun State, Nigeria. A descriptive survey research design was followed with the aid of structured questionnaires, interviews, and observation checklists used to collect data. Four hundred and twenty respondents made up of lecturers and students of five NCCE-approved Colleges of Education took part in the research. Quantitative data were examined through descriptive statistics and chi-squares, whereas qualitative data were examined through the use of themes. The results showed that the moderate awareness of Open Access resources, the insufficiency of ICT infrastructure, the weak internet connection, the low level of digital literacy, and the apprehension about the credibility of OA publications were identified as the issues. The paper comes to a conclusion that Open Access materials can improve the process of teaching, learning, and research, but there is an important potential, which is hampered by institutional and infrastructural barriers. It offers better ICT infrastructure, better education of users and the formulation of institutional policies of Open Access to enhance sustainable access and use.

**Keywords:** Open Access, Academic Libraries, Digital Literacy, Colleges of Education, Nigeria

## Introduction

The high rate of development of information and communication technologies (ICTs) has changed scholarly communication by reinventing the ways academic knowledge is being generated, spread, and consumed in the world. Among the greatest changes that have unfolded as a result of this change is the Open Access (OA) movement which advocates the free and unhindered access of scholarly literature online without any financial, legal, or technical restrictions. Open Access seeks to make research more visible, facilitate knowledge sharing, and lower the cost pressure of the conventional subscription-based research publication (Suber, 2012; Tenopir et al., 2017).

The issue of Open Access in developing countries, Nigeria inclusive has gained a lot of recognition across the world as a strategic tool that can be used to close information gaps and enhance access to scholarly resources in higher learning institutions. OA helps in curriculum building, productivity of research, and evidence-based teaching and learning activities by facilitating easy access to the latest academic journals and books by both lecturers and students. Research has revealed that the further use of Open Access materials leads to the rise of the citation rate, the better academic performance and the increase in the institutional popularity (Piwowar et al., 2018; Akpojotor and Ekuerehare, 2024).

Although these are the benefits, there is still an unequal distribution of the adoption and the effective use of Open Access materials in the African higher institutions of learning. Other researchers have cited infrastructural drawbacks, weak internet access, insufficient

ICT infrastructure, and institutional under-supportiveness as the key obstacles to the implementation of Open Access (Ezema, 2013; Ezema and Eze, 2024). Moreover, OA resources cannot be found, assessed, and utilized due to the low rates of digital literacy among academic members, students (Osisanwo et al., 2023; Tenya et al., 2024). The perception of Open Access publications and their credibility and quality, which is often undermined by the growth of predatory journals, is one more factor that discourages scholarly use of OA platforms (Shen and Bjork, 2015; Espen and Henrik, 2024).

Although some studies have been conducted regarding Open Access awareness and adoption in the Nigerian universities, not a lot of empirical research has been done on Colleges of Education. These are the institutions that are important in training and national development of education, although they tend to have more infrastructural and funding limitations than universities. To comprehend the need to create more specific interventions that will enhance fair access to scholarly resources, it is consequently necessary to understand how lecturers and students in Colleges of Education access and use Open Access materials.

This paper is a research project that aims to uncover issues inhibiting access and utilization of Open Access resources by lecturers, and students in the selected Colleges of Education in the Osun State, Nigeria. With the evaluation of the awareness, infrastructural barriers, digital literacy challenges, and the perception of credibility, the study will provide

empirical evidence that will guide the institutional policies and library practices in an effort to increase effective use of Open Access.

### **Problem Statement**

Despite the increased open access efforts being spread across the globe in an effort to enhance access to academic resources, it is evident that most institutions of higher learning in Nigeria still face immense challenges in terms of their ability to access and utilize the same resource. The available literature has mainly been on the Universities, little attention has been paid to Colleges of Education which are the centre of teacher preparation and educational development in Nigeria. The chronic challenges, which include poor ICT infrastructures, unreliable internet access, low digital literacy, and features of poor credibility of Open Access publications are seen to curtail the maximization of the use of OA materials in these institutions. Lack of context-related empirical evidence on Colleges of Education makes it difficult to develop effective policies and interventions to facilitate the adoption of Open Access. The present research therefore aims at investigating the difficulties of accessing and utilising Open Access material by lecturers and students in Colleges of Education in the Osun State of Nigeria.

## Research Questions

The following research questions were used to guide the study:

- i. How aware are lecturers and students of Open Access materials in Colleges of Education in Osun State?
- ii. What are the barriers to the use and access of Open Access materials in these institutions?
- iii. Do lecturers and students differ significantly on their awareness of Open Access materials?
- iv. Do lecturers and students have any significant differences in the perceived barriers to using Open Access?

## Literature Review

Open Access has been known to be a revolutionary paradigm of academic communication, which improves information-sharing and fairness of access to research. According to Suber (2012), Open Access refers to the free and unlimited access of scholarly literature on the internet and enables the user to read, download and even use content with due credit. The empirical literature has always shown that Open Access enhances the visibility of research and the citation impact, especially among scholars of developing regions (Swan, 2010; Piwovar et al., 2018).

The knowledge and use of Open Access sources are moderate to low in the African context of higher education. Fabunmi and Umar (2023) noted that students of one of the Nigerian universities showed a lack of awareness about Open Access and Open Educational Resources, which could be explained by a lack of sensitization by academic libraries. In a similar vein, Nwagwu (2013) discovered that poor institutional advocacy and lack of unification of Open Access into academic processes are barriers to their widespread adoption.

The digital literacy has become a key factor in the use of Open Access. Tenya et al. (2024) have found that poor ICT competence in academic staff is one of the main limitations to effective use of digital scholarly resources. Okiki (2013) also noted that in spite of the availability of Open Access resources, the practical use among the users is curtailed by their inability to navigate in digital platforms. These results suggest the presence of the mediating variable of user capacity between access and utilization.

The literature is also characterized by institutional and infrastructural issues. Ezema (2013) and Ezema and Eze (2024) proposed internet connection, unstable power supply, and limited ICT infrastructure as the primary challenges to the Open Access practice in Nigerian higher education institutions. Financial constraints and non-favourable institutional policies only contribute to the underperformance of OA initiatives (Christian, 2008; Quadri & Idowu, 2016).

Academic libraries are cited as significant agents of Open Access that leads to awareness, training of users, and handling of institution repositories (Abrizah, 2010; Jain, 2016). Nevertheless, lack of resources and less engagement in institutional decision-making tend to limit the impact of libraries the effort to facilitate Open Access.

Issues about the quality and reliability of Open Access publications have also been much publicised. According to Njagi and Njoroge (2024), the misconceptions about Open Access as a low-quality deter scholarly interactions. Academic distrust has also been supported by the increase in the number of predatory journals which use the OA model (Shen and Bjork, 2015; Beall, 2016).

Although the available research is very extensive, the larger number of empirical studies is concentrated on the universities leaving a massive gap in regard to Colleges of Education. Besides, not many studies simultaneously examine the attitudes of lecturers and students in institutions of teacher education. This paper fills these gaps by offering specific evidence of the challenges of Open Access in Colleges of Education in Osun State, Nigeria.

### **Research Method**

In this paper, the descriptive research design that was used was a survey that aimed at exploring the issue of using and accessing Open Access (OA) materials among lecturers and students in selected Colleges of Education in Osun State, Nigeria. The descriptive survey design has been deemed suitable due to the fact that it allows systematically

gathering data of a given population with the aim of describing a given situation, perceptions and practices without having to manipulate any variables. This method has been massively used in the research on the access of information and use of Open Access in universities.

The study population consisted of lecturers and students in five Colleges of Education that were accredited by the National Commission of Colleges of Education (NCCE) in Osun State. These colleges were to be federal, state and private Colleges of Education to have a good representation of various forms of ownership and infrastructural capabilities in the state. The main respondents that were chosen included lecturers and students due to the fact that they are the greatest users of scholarly information resources in teaching, learning, and research activities.

To maintain proportional representation of the respondents in terms of institutions and category of users, a stratified random sampling method was used. Institution and respondent group (lecturers and students) were first stratified and simple random sampling was then applied to extract respondents within each stratum. It was by this that 420 respondents were chosen consisting of 120 lecturers and 300 students. It was deemed that the sample size was adequate in improving the reliability and generalizability of the findings in the context of Colleges of Education in Osun State.

The collection of data was conducted with the help of various instruments to provide triangulation and enhance the quality of the study. The main tool was a semi-

structured questionnaire that was to be used in data collection to obtain quantitative data regarding the degree of awareness of the respondents on the subject of Open Access materials, the habits of access and use, and the perceived obstacles. The questionnaire prepared was closed-ended and Likert-scale statements grouped in the pertinent sections. Further, semi structured interviews were carried out on the chosen librarians and ICT personnel to gain qualitative data on the infrastructure in the institutions, internet connectivity, Open Access and tools of assisting the users. The availability and state of ICT facilities, including computers, internet, power supply and digital library facilities were also to be evaluated using an observation checklist.

In a bid to achieve validity of the research instruments, the questionnaire was content and face validated by the experts in library and information science and educational research. These recommendations were integrated into make them clear and relevant and consistent with the study objectives. The reliability of the instrument had to be tested with a pilot study involving 40 respondents who were not part of the study area which was a College of Education. Cronbachs alpha reliability analysis showed the coefficient of 0.82 which is a high degree of internal consistency.

The analysis of the quantitative data collected on the questionnaires was carried out by the means of descriptive statistics with the help of frequencies and percentages to summarize the level of awareness of the respondents and issues related to the use of Open Access. The analysis using inferential statistics, especially chi-square test of independence,

was used to compare the differences between lecturers and students in terms of awareness and perceived challenges. Thematic analysis of qualitative data derived through interviews, which was transcribed, was utilized to determine common patterns and institutional effects on the accessibility of Open Access materials. The outcome of observation checklist was combined with the results of questionnaire and interview to help through contextual support and to increase the credibility of the analysis.

## Results and Discussion

Research Question 1: What is the level of awareness of Open Access materials among respondents?

Table 1: Overall Awareness of Open Access Materials

Awareness Level	Frequency	Percentage (%)
High	118	28.1
Moderate	202	48.1
Low	100	23.8
Total	420	100.0

The results show that the majority of the respondents (48.1) were moderate users of Open Access materials with 28.1% having high awareness. But almost a quarter (23.8%) of those interviewed expressed poor awareness, indicating that a large percentage of lecturers and students are still not well aware of OA resources. This is consistent with prior research that recorded moderate awareness of the same in the institutions of higher learning in Nigeria (Fabunmi and Umar, 2023; Nwagwu, 2013).

Research Question 2: Is there a significant difference in awareness between lecturers and students?

Table 2: Awareness of Open Access Materials by User Category

Awareness Level	Lecturers (n = 120)	Students (n = 300)	Total
High	46 (38.3%)	72 (24.0%)	118
Moderate	54 (45.0%)	148 (49.3%)	202
Low	20 (16.7%)	80 (26.7%)	100
Total	120	300	420

Note:  $\chi^2 = 12.47$ ,  $df = 2$ ,  $p < .05$

The chi-square test shows that there is statistically significant difference in the awareness of the lecturers and students. There was a better awareness of lecturers, probably because they were more involved in research and exposed to academic communication systems. This conclusion favors previous studies by Tenopir et al. (2017).

Research Question 3: What challenges affect access and use of Open Access materials?

Table 3: Challenges Affecting Access and Utilization of Open Access Materials

Challenge	Agree (%)	Disagree (%)
Poor internet connectivity	79.3	20.7
Inadequate ICT infrastructure	74.5	25.5
Limited digital literacy	66.2	33.8
Credibility concerns	58.9	41.1

The greatest obstacles to the use of Open Access were found to be poor internet connectivity and poor ICT infrastructure. Poor digital literacy also resulted in low use of digital technology especially by the students. These results are consistent with the previous research that highlighted structural and skills-based limitations in developing nations (Ezema, 2013; Tenya et al., 2024).

Research Question 4: Are there differences in perceived challenges between lecturers and students?

Table 4: Perceived Challenges by User Category

Challenge	Lecturers Agree (%)	Students Agree (%)	$\chi^2$	p-value
Poor internet connectivity	75.0	81.0	3.84	< .05
Limited digital literacy	52.5	71.3	9.67	< .05
Credibility concerns	61.7	57.7	1.12	> .05

There were vast disparities when it comes to internet connectivity and digital literacy with students having greater problems. A significant difference was not established with regard to the issue of credibility, which means that there is mutual skepticism between the two groups.

## Conclusion

This paper has discussed the issue of access and use of Open Access (OA) materials by lecturers and students in chosen Colleges of Education in Osun State, Nigeria. The results showed that despite the moderate level of awareness about Open Access resources

among the respondents, the same did not correlate with optimal use because of continuing infrastructural, technological and perceptual barriers. Internet connectivity and lack of proper ICT infrastructure became the most significant impediments and hindered the availability of consistent access to online scholarly resources. Besides this, a lack of digital literacy specifically in students was also a major hamstring on users being able to locate, evaluate and utilize Open Access resources to facilitate academic use.

The research also indicated that issues of credibility and quality of OA publications still affect the attitudes and willingness of the users to use the OA materials in teaching and learning and in conducting research. The resulting lack of trust, which is, in great part, caused by the spread of predatory journals and disinformation regarding the Open Access publishing models, highlights the necessity of user education and institutional assistance in determining reliable OA sources.

On the whole, the results imply that the enhancement of the usage of Open Access in Colleges of Education should be a holistic institutional solution. This involves long-term investment in ICT infrastructure, quality internet connectivity, well-organized digital literacy training courses and the creation of favourable Open Access policies. Academic libraries, especially, cannot fail to play a strategic role in creating awareness, training users and accessing credible Open Access platforms.

By considering such complex issues, Colleges of Education can become more supportive in using Open Access resources to improve the quality of teaching, increase the

research effectiveness, and achieve the fair access to academic information. The research paper adds to the existing literature on the adoption of Open Access in developing societies by offering context-sensitive information on the adoption of Open Access among teacher education institutions and provides a viable contribution to policymakers, administrators and librarians who seek to enhance scholarly communication practices in the Nigerian higher education system.

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