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Open Educational Resources Integration in Colleges of Education, in Kwara State, Nigeria

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Abstract

This study investigates awareness, readiness, capacity training and challenges regarding the integration of Open Educational Resources (OER) in colleges of education in Kwara State, Nigeria. These colleges of education are: the College of Education Ilorin, College of Education Oro, and College of Education (Technical) Lafiagi. The study employed a mixed-method approach by combining quantitative data from a structured questionnaire with qualitative insights from semi-structured interviews, involving a sample of 72 participants drawn using a convenience sampling of lecturers from the three colleges of education in Kwara State. The findings revealed a moderate level of awareness (62.5%) about OER and its benefits; however, only 31.9% have received formal training in using and creating OER. Institutional readiness is identified as insufficient, with only 38.9% of respondents reporting adequate technical support for OER adoption. The study highlights significant gaps in capacity training and institutional support, which hinder effective OER utilisation. Recommendations include enhancing training programs, improving internet connectivity, and establishing robust institutional policies to enhance collaboration and sustainable OER integration. This research underscores the critical need for targeted interventions to bridge existing gaps and unlock the transformative potential of OER in enhancing educational access, quality, and equity in Kwara State.

Keywords

Open Educational Resources, collaborative approach, kwara state, colleges of education

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Introduction

Open Educational Resources (OER) has emerged as a transformative force in tertiary education, offering unprecedented opportunities to enhance learning through collaboration. The integration of OER into higher education curricula facilitates a more inclusive and dynamic academic environment, where knowledge is not only consumed but also created and shared among educators and students (Adeniyi, 2021). This collaborative approach aligns with the principles of open access and participatory learning, fostering a culture of innovation and continuous improvement in educational practices (Olusola & Abimbola, 2023). The potential of OER to revolutionize tertiary education lies in its ability to provide freely accessible, high-quality educational materials that can be adapted and reused to fit diverse learning contexts (Ojedokun, 2022). By embracing OER, institutions can overcome traditional barriers to education, such as high costs and limited access to resources, thereby promoting equity and democratization of knowledge (Afolabi & Ogundeji, 2022). Moreover, the collaborative nature of OER encourages active engagement and peer-to-peer learning, which are essential for developing critical thinking and problem-solving skills in students (Olaniyan, 2020). As the educational landscape continues to evolve, OER integration represents a strategic approach to enhancing the quality and relevance of tertiary education in the digital age. This approach not only democratizes learning by removing financial barriers but also encourages academic innovation through the collective development and refinement of educational content (Ibrahim & Balogun, 2021).

Open Educational Resources (OER) are freely accessible, openly licensed educational materials that can significantly enhance teaching and learning (Oladeji, 2023). As the cost of traditional textbooks continues to rise, educators, libraries, and institutions are increasingly turning to OER as a viable alternative (Oseni & Adigun, 2022). However, successful OER adoption requires strategic planning, collaboration, training and institutional support (Afolayan, 2021). Nigerian tertiary education faces several challenges, including the high cost of textbooks, which limits students' access to essential learning resources, and outdated materials that may not reflect current knowledge or diverse perspectives (Adeoye & Salami, 2022). Furthermore, there is often a lack of local content that reflects Nigerian-specific needs and contexts in existing educational resources (Ekanem & Uzo, 2023). The integration of OER into Nigerian tertiary education remains uneven and fragmented. While some institutions have embraced OER, others lag due to barriers such as low awareness, limited capacity building, quality assurance issues, inadequate policy frameworks, and insufficient collaboration among stakeholders, libraries, faculty, and students (Femi & Adeola, 2022). This study, therefore, seeks to address these challenges by promoting a collaborative ecosystem for OER integration in all Kwara State Colleges of Education in Nigeria. By engaging stakeholders, building capacity, and advocating for OER adoption, the study aims to enhance the quality of teaching and learning in these colleges while promoting affordability and accessibility.

Aim and Objectives of the Study

This study aims to investigate awareness, readiness, capacity training and challenges regarding the integration of Open Educational Resources (OER) in colleges of education in Kwara State, Nigeria. These colleges are: the College of Education Ilorin, College of Education Oro, and College of Education (Technical) Lafiagi. To achieve this aim, the following specific objectives were set:

1. Assess the level of awareness and training among lecturers regarding the use of Open Educational Resources (OER);
2. Examine the readiness of the Kwara State colleges of education to adopt and implement OER;
3. Identify the challenges in integrating OER in colleges of education in Kwara State.

Research Questions

1. What percentage of lecturers are aware and have received training on how to use and create Open Educational Resources in colleges of education in Kwara State?
2. How prepared are the colleges of education in integrating OER-based teaching practices?
3. What are the major challenges faced by lecturers in integrating OER into teaching and learning in Kwara State Colleges of Education?

Literature Review

The integration of Open Educational Resources (OER) into tertiary education has gained significant traction as a strategy to enhance the accessibility and quality of education. In the context of Kwara State Colleges of Education, exploring the readiness of these institutions to adopt OER involves an evaluation of infrastructure, faculty expertise, and institutional policies. While Adeniyi (2022) highlights the importance of these factors, the extent to which lecturers are adequately trained to create and adapt OER for effective teaching remains underexplored. Similarly, the institutional mechanisms that support faculty in leveraging OER, such as incentives, recognition, and access to technological resources, require further examination.

Olusola and Ibrahim (2021) emphasize the transformative potential of OER in enriching curriculum content and increasing student engagement. However, their study provides limited insight into the specific challenges that educators face when implementing OER, such as inadequate technical support or a lack of familiarity with digital tools. Adeoye (2023) argues for the necessity of comprehensive training programs to empower faculty in OER creation and utilization. Yet, questions remain regarding the effectiveness of existing training frameworks in equipping lecturers with the requisite skills for

sustainable OER integration. The establishment of quality assurance mechanisms for OER, as advocated by Oladimeji and Adigun (2020), is essential for aligning educational materials with learning objectives. However, the implementation of such mechanisms in resource-constrained settings like Kwara State Colleges of Education has not been sufficiently investigated. While Afolayan (2022) proposes the development of OER policies collaboratively designed by stakeholders, the study does not address the practical challenges of policy adoption and its impact on faculty engagement and teaching practices.

Recent studies, such as those by Johnson *et al.* (2023) and Mehta and Singh (2023), underscore the growing recognition of OER as a tool for educational equity. Johnson *et al.* (2023) explore the relationship between institutional support and faculty motivation in adopting OER, noting that the absence of structured incentives can hinder effective implementation. Mehta and Singh (2023) further examine how access to technological resources and ongoing technical support significantly influence educators' ability to integrate OER into their teaching practices. These insights suggest a need to investigate how such support systems can be adapted to the unique context of Kwara State colleges of education.

Despite the growing body of research on OER, there is a clear gap in understanding the interplay between faculty awareness, institutional support, and the availability of technological resources in the adoption of OER. This study aims to address these gaps by assessing lecturers' levels of training and awareness regarding OER, evaluating the institutional support systems in place, and examining the availability of technological resources and their influence on teaching effectiveness. By focusing on these dimensions, the research seeks to provide actionable insights that can guide policymakers and educators in enhancing a more effective and sustainable OER ecosystem.

Methodology

The research methodology for the study on awareness, readiness, and capacity training on the use of open educational resources integration in colleges of education in Kwara State, Nigeria adopted a mixed-method approach, combining both qualitative and quantitative techniques. A descriptive research design was employed to evaluate the awareness, readiness and challenges of OER adoption. The population of the study is 115 which included lecturers from the colleges of education in Kwara State, with a convenience sample of 72 drawn from the three colleges of education in Kwara State. Data were collected using a structured questionnaire and semi-structured interview. The questionnaire gathered quantitative data on awareness, readiness and challenges faced by the faculty expertise, while interviews explored qualitative insights on challenges for OER integration. Data were collected over four weeks, with copies of

questionnaire distributed across the colleges and interviews conducted face-to-face with selected lecturers. Quantitative data were analysed using descriptive statistics in SPSS, and qualitative data were analysed thematically to identify patterns related to challenges in OER adoption. This mixed-method approach provided a comprehensive understanding of OER integration in the colleges of education.

Results

Research Question One: What percentage of lecturers are aware and have received training on how to use and create Open Educational Resources in Colleges of Education in Kwara State?

Table 1: Percentage of awareness and training of lecturers

S/N	ITEMS	N	Percentage (%)	Decision
1.	Lecturers level of awareness of OER	72	62.5	Moderately Aware
2.	Lecturers are trained to use and create OER	72	31.9	Disagreed
Grand Mean		72	47.2%	

Table 1 shows the response of lecturers of colleges of education on the level of awareness and training regarding the use of Open Educational Resources (OER). A significant portion (62.5%) of lecturers is aware of OER and its benefits, but 37.5% remain unaware, underscoring the need for awareness campaigns through workshops, seminars, and institutional communications to enhance engagement. Additionally, only 31.9% of lecturers have received formal training on using and creating OER, with the majority lacking such capacity. The grand mean further shows that the awareness and training received by lecturers on integrating OER is low. To address this critical barrier, institutions should implement structured and accessible training programs to equip lecturers with the skills needed to effectively utilize and contribute to OER platforms.

Research Question Two: How prepared are the colleges of education to integrate OER-based teaching practices?

Table 2: Institutional readiness in adopting OER

S/N	Items	Population	Percentage	Decision
1.	Availability of technical support for OER	72	38.9%	Insufficient support; needs improvement.
2.	Access to necessary technology infrastructure	72	61.1%	Adequate infrastructure, but improvements are needed.
3.	Support from the college administration for OER initiatives	72	38.9%	Low support; requires institutional commitment.
	Grand Mean	72	46.3%	

The findings from Table 2 revealed the institutional readiness for adopting Open Educational Resources (OER)-based teaching practices. While 61.1% of respondents reported adequate access to necessary technology infrastructure, suggesting a fair level of preparedness in this area, only 38.9% indicated sufficient technical support and administrative backing for OER initiatives. This indicates significant gaps in institutional support and highlights the need for targeted interventions, such as enhanced administrative commitment and improved technical assistance, to fully transition to OER-based practices. Overall, the grand mean underscores a moderate but insufficient readiness, emphasizing the necessity for strategic institutional actions to bridge these gaps.

Research Question Three: What are the major challenges faced by lecturers and institutions in integrating OER into teaching and learning in Kwara State Colleges of Education?

Table 3: Major challenges faced by lecturers and institutions in integrating OER

S/N	Items	Population	Percentage	Decision
1.	Regular evaluation of OER effectiveness	72	20.8%	Low
2.	Accessibility to digital infrastructure and Internet connectivity	72	50%	Moderate
3.	Formal institutional policy on OER adoption	72	52.8%	Moderate
	Grand Mean	72	56.3%	

Table 3 highlights key challenges in the integration of Open Educational Resources (OER) in Kwara State colleges of education. Regular evaluation of OER effectiveness is notably low, with only 20.8% of respondents indicating its occurrence, suggesting a need for systematic assessment mechanisms. Accessibility to digital infrastructure and Internet stands at a moderate 50%, reflecting uneven availability that requires targeted improvement. Similarly, the existence of formal institutional policies on OER adoption is moderate at 52.8%, indicating that while progress has been made, more comprehensive and universally implemented policies are needed.

Discussion of Findings

The study's findings in Table 1 indicate a moderate level of awareness (62.5%) but a significant training gap (31.9%) among lecturers in Kwara State regarding Open Educational Resources (OER). This highlights the need for comprehensive awareness campaigns and structured training programs to bridge the knowledge gap. While supportive studies, such as those by Atenas *et al.* (2020) and Mishra (2017), reinforce the importance of awareness and training, others, like Czerniewicz *et al.* (2018), argue that policy support and informal learning pathways may play equally critical roles. Addressing both awareness and training is crucial for fostering effective OER engagement, requiring a multifaceted approach that includes diverse training methods, institutional support, and incentives to maximize educational benefits. The findings from Table 2 indicate a moderate institutional readiness among lecturers and administrative staff for adopting Open Educational Resources (OER)-based teaching practices, with 61.1% reporting adequate access to necessary technology infrastructure but only 38.9% indicating sufficient technical support and administrative backing. This disparity highlights significant gaps in institutional support, underscoring the need for targeted interventions to fully transition to OER-based practices.

Supporting this view, a study by Bossu *et al.* (2014) emphasizes the importance of clear policies and guidelines to ensure long-term OER adoption, including the development of funding strategies, curricular integration, and quality assurance processes. These policies should prioritize the development and sustainability of high-quality OER, especially in resource-constrained disciplines. However, some research suggests that institutional readiness for OER adoption is more favorable. For instance, a report by Bay View Analytics (2023) indicates that nearly two-thirds (64%) of U.S. higher education faculty are aware of OER, and nearly one-third (29%) require an OER in their course, reflecting a higher level of preparedness.

The integration of Open Educational Resources (OER) in Kwara State Colleges of Education faces significant challenges, as evidenced by both quantitative research and qualitative accounts. Findings from evaluations indicate infrequent assessments of OER

effectiveness (20.8%), moderate accessibility to digital infrastructure and internet (50%), and limited formal institutional policies on OER adoption (52.8%). These align with broader studies in Nigeria and sub-Saharan Africa, which highlight inadequate infrastructure, limited internet access, and insufficient policy frameworks as critical obstacles (Okojie *et al.*, 2020). For example, Okojie *et al.* (2020) observed that unreliable internet connectivity in Nigerian universities significantly hinders effective OER usage.

Qualitative insights from interviews further reinforce these findings. Respondents identified financial constraints as a major barrier, restricting access to the tools and resources necessary for implementing OER effectively. The lack of interconnectivity between departments and inadequate internet facilities was noted as a critical hindrance, disrupting resource sharing and access to online platforms vital for OER development. Additionally, limited access to data, unreliable electricity supply, and insufficient orientation programs were highlighted as significant challenges, obstructing the ability to create, share, and utilize OER effectively while disrupting continuity in academic and digital learning activities. Despite these barriers, researchers like Adeoye and Adanikin (2023) suggest that with sufficient investment in infrastructure, internet connectivity, and supportive institutional policies, OER has the potential to improve educational outcomes. This optimistic perspective underscores the importance of addressing these challenges systematically to unlock the transformative potential of OER in Kwara State and beyond.

Conclusion

The study underscores the critical role of awareness, readiness, and capacity training in the successful integration of Open Educational Resources (OER) in colleges of education in Kwara State, Nigeria. It reveals that while moderate awareness exists among lecturers, significant gaps in capacity training and institutional support hinder the effective adoption and utilization of OER. This highlights the need for targeted interventions, such as structured training programs, robust institutional policies, and improved technical and administrative support, to bridge these gaps and enhanced greater engagement with OER.

The findings also emphasize the importance of addressing infrastructural challenges, including internet accessibility and digital tools, alongside developing comprehensive evaluation mechanisms to ensure the effectiveness of OER initiatives. By adopting a holistic approach that combines investment in resources, policy enhancement, and capacity building, institutions can unlock the transformative potential of OER to improve educational access, quality, and equity. This conclusion serves as a call to action for stakeholders to collaborate and implement sustainable strategies to support OER integration in teaching and learning practices.

Recommendations

Based on these findings, the following recommendations were made:

- i. The institutions should develop training programs for faculty and staff to raise awareness of OER and equip them with the skills needed to create, adapt, and utilize these resources effectively.
- ii. The institutions should enhance internet connectivity across all departments by installing reliable wireless networks, power supply, and funding to facilitate seamless access to OER platforms and resources.
- iii. Management of various institutions should establish an institutional OER policy that encourages collaboration among faculty, library staff, and administration to ensure sustainable implementation and quality assurance.

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