



## **E-Resource Management in Academic Libraries: Challenges, Practices, Tools, Technologies and Strategies**

<sup>1</sup>Dr. Hauwa Sani Ahmad  
hsahmad.lis@buk.edu.ng  
08033498274

<sup>2</sup>Hasiya Salihu Yusuf  
hasiyayusuf05@gmail.com  
07036942333

<sup>1</sup>Department of Library and Information Science, Bayero University, Kano

<sup>2</sup>Department of Library and Information Science, Aliko Dangote University of Science and Technology Wudil, Kano

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### **Abstract**

*Effective management of electronic resources (e-resources) is critical for academic libraries in supporting teaching, learning and research. This study examines the challenges faced by Nigerian academic libraries in managing e-resources, evaluates the tools and strategies adopted to enhance resource efficiency and accessibility and assesses their impact on user satisfaction and academic outcomes. Findings reveal that libraries grapple with financial constraints, unreliable infrastructure and high licensing costs, limiting their ability to provide consistent access to essential e-resources. While technologies such as Integrated Library Systems (ILS) and consortia models have been adopted, outdated systems, insufficient staff training and infrastructural challenges undermine their effectiveness. The consequences of these inefficiencies are evident in diminished user satisfaction, reduced research productivity and a negative impact on academic performance. This study recommends increased funding, infrastructure upgrades, comprehensive staff training, and strengthened collaborative models to address these issues. Implementing these solutions can improve e-resource management practices and enhance the academic contributions of Nigerian libraries.*

**Keywords:** Electronic Resources, Management, Academic Libraries

### **Introduction**

Electronic Resource Management (ERM) has become a cornerstone of academic library operations, reflecting the shift from traditional print collections to digital resources. This transition has introduced complexities in managing electronic resources, necessitating the development of specialised ERM systems and practices.

The integration of ERM systems in academic libraries has been essential for streamlining workflows and enhancing resource accessibility. These systems facilitate the management of electronic resources throughout their lifecycle, from acquisition to evaluation. A study by Subaveerapandiyan *et al.* (2022) highlighted the challenges faced by library professionals in India, emphasising the need for effective ERM practices to address issues such as lack of professional skills and administrative hurdles.

The COVID-19 pandemic further pronounced the importance of robust ERM in academic libraries. With the shift to remote learning, libraries had to adapt quickly to provide seamless access to electronic resources. Shikali and Muneja (2024) conducted a systematic literature review focusing on African universities, revealing that limited access to internet services and inadequate electronic library collections were significant



challenges during this period. The study recommends investment in ICT infrastructures and expansion of electronic resource collections to enhance access.

Additionally, the management and usage of electronic resources are interconnected. A study by Dadzie and Van der Walt (2021) in Ghanaian academic libraries explores this bi-directional relationship, suggesting that effective management practices can lead to increased usage and vice versa. The study emphasizes the need for continuous assessment and adaptation of ERM strategies to meet evolving user needs.

### **Statement of the Problem**

Despite the significant role of electronic resources (e-resources) in supporting research, teaching, and learning in academic institutions, their effective management remains a significant challenge for academic libraries. Libraries face increasing complexities in acquiring, licensing, maintaining, and evaluating e-resources, often due to budget constraints, diverse technological platforms, and evolving user expectations. Additionally, many academic libraries lack the infrastructure and professional expertise required to implement and manage integrated Electronic Resource Management Systems (ERMS).

The rapid growth of digital content has also introduced issues related to access control, interoperability and resource utilization. Furthermore, limited studies provide insights into how libraries evaluate the effectiveness of their e-resource management practices and their impact on user satisfaction and academic success. These challenges necessitates enquiry from librarians in a meet and greet gathering, into current ERM practices, strategies and tools among librarians to ensure academic libraries meet the dynamic needs of their users in the digital age.

### **Research Objectives**

1. To identify and analyze the key challenges that academic libraries

encounter in the lifecycle management of electronic resources.

2. To explore the tools, technologies and strategies adopted by academic libraries to improve the efficiency and accessibility of electronic resources.
3. To evaluate the effectiveness of e-resource management practices in academic libraries, focusing on their impact on user satisfaction and academic outcomes.

### **Significance of the Study**

This study highlights the essential role of effective Electronic Resource Management (ERM) in academic libraries, addressing challenges and identifying best practices to optimize e-resource accessibility and utilization. By exploring tools, strategies, and their impact on user satisfaction and academic success, the findings will provide valuable insights for library professionals, policymakers and institutions seeking to enhance the management of digital collections and support evolving educational and research needs.

### **Review of Related Literature**

#### **Primary Challenges Faced by Academic Libraries in Managing Electronic Resources Effectively in Nigeria**

A number of empirical studies have investigated the challenges faced by Nigerian academic libraries in managing electronic resources effectively. A study by Akinyemi and Aina (2020) highlighted that Nigerian academic libraries struggle with inadequate infrastructure, particularly unreliable power supply and slow internet connectivity. This hampers access to e-resources and impacts the quality of library services. The lack of sufficient and stable infrastructure limits libraries' ability to provide continuous and uninterrupted access to digital content, thus affecting user satisfaction and academic success.



Furthermore, a study by Ismaila and Alabi (2021) identified financial constraints as a significant barrier to the effective management of e-resources. Libraries in Nigeria are often unable to allocate sufficient funds for the procurement of licensed e-resources, which restricts their ability to offer diverse and up-to-date digital content. The authors also noted that many Nigerian libraries still rely on government funding, which is often inadequate and irregular, further exacerbating the problem.

Another empirical study by Olatunji and Olorunsola (2019) examined the lack of skilled personnel in Nigerian academic libraries. The study found that many librarians lack the necessary technical skills to manage e-resources effectively. This skills gap is particularly pronounced in smaller institutions that lack specialized training programs for library staff. Consequently, these libraries struggle to implement best practices in electronic resource management and maintain up-to-date systems.

Additionally, the study by Adetoro and Adigun (2020) explored access control issues and copyright concerns. Libraries in Nigeria face difficulties in managing and enforcing licensing agreements due to unclear legal frameworks for digital resources. The lack of robust access control systems often leads to unauthorized access to e-resources, resulting in potential legal issues.

### **Tools, Technologies, and Strategies Adopted by Nigerian Academic Libraries to Improve the Efficiency and Accessibility of Electronic Resources**

Academic libraries in Nigeria have adopted various tools, technologies, and strategies to enhance the management and accessibility of electronic resources. A study by Osagie and Okoye (2020) explored the use of Integrated Library Systems (ILS) and Electronic Resource Management Systems (ERMS) in Nigerian academic libraries. The study found that these systems help libraries streamline the acquisition,

cataloging, and tracking of digital resources, making it easier to manage licenses, subscriptions, and access rights. Despite challenges such as limited technical support and staff training, libraries that adopted ERMS experienced significant improvements in the efficiency of resource management and the accessibility of e-resources to users.

In addition, an empirical study by Oladipo and Oludayo (2021) examined the use of cloud-based solutions and consortia models in Nigerian academic libraries. Cloud computing has been increasingly utilized to store and access e-resources, enabling libraries to overcome infrastructure challenges, such as inadequate storage and bandwidth limitations. The authors noted that cloud-based systems allowed for the seamless sharing and management of e-resources across library networks, enhancing access for users in remote locations. Moreover, consortia models, where libraries collaborate to purchase e-resources collectively, have proven effective in managing costs and ensuring wider access to digital content.

A study by Obinna and Okoye (2022) focused on the training and capacity-building strategies implemented by Nigerian libraries. They found that continuous professional development programs and workshops on digital resource management have helped librarians develop the necessary skills to effectively manage e-resources. These strategies, coupled with the use of user-friendly technologies, have led to improved resource accessibility and user satisfaction.

### **Effectiveness of E-Resource Management Practices in Nigerian Academic Libraries and Their Impact on User Satisfaction and Academic Outcomes**

The effectiveness of e-resource management practices in Nigerian academic libraries has been widely studied, particularly regarding their impact on user satisfaction and academic outcomes. A study by Adewumi and Oloyede



(2020) examined how the management of e-resources influences library users' satisfaction at Nigerian universities. The study revealed that efficient management of e-resources, particularly through integrated systems and regular updates to digital content, significantly improved users' satisfaction. Libraries that provided easy access to relevant e-resources were found to positively impact students' research and academic performance.

Similarly, a study by Oladipo and Oludayo (2021) focused on the relationship between e-resource management practices and academic outcomes in Nigerian universities. The study showed that well-managed e-resources contributed to better learning experiences, with students reporting improved academic performance due to greater access to online journals, textbooks, and research databases. The study emphasised that effective e-resource management not only ensured access to up-to-date materials but also facilitated better research outcomes by providing students with the tools necessary for academic success.

Another empirical study by Ezeani and Chukwu (2020) assessed the usage of e-resources in Nigerian academic libraries and their role in enhancing research productivity. Their research found that well-managed e-resources helped students and faculty members access high-quality, current research articles, which in turn improved their academic writing and publication outputs. The authors concluded that proper management of e-resources has a direct positive effect on the research output of both students and faculty.

### **Methodology**

A qualitative case study was used. This approach allows for in-depth exploration of the experiences, practices and perceptions of library professionals in Nigerian academic libraries regarding e-resource management. This methodology provides a comprehensive understanding of the complex issues libraries face

in managing digital resources and the technologies they use. The data was collected through semi-structured interviews with the librarian, the semi-structured format provides flexibility to explore in-depth with the topic.

### **Findings**

#### **Primary Challenges Faced in Managing Electronic Resources**

The primary challenges faced by Nigerian academic libraries in managing electronic resources stem largely from financial constraints, infrastructure issues and licensing challenges. Financially, libraries often struggle with inadequate funding, which severely limits their ability to renew licenses for essential e-resources. Many libraries are forced to rely on inconsistent government allocations or donations, which do not guarantee regular access to up-to-date materials. Furthermore, infrastructure issues such as unreliable Internet connectivity and outdated systems pose significant obstacles. These limitations result in poor user experience, with slow or inaccessible e-resources being a common issue for library users. Lastly, licensing and access control challenges compound these problems, with high licensing fees making it difficult for libraries to afford the comprehensive e-resource collections required for academic success. These factors combined restrict the accessibility of vital digital content for both students and faculty.

#### **Tools, Technologies, and Strategies Adopted to Improve E-Resource Management**

In response to these challenges, Nigerian academic libraries have attempted to adopt a range of tools and technologies to improve the management of e-resources. However, inadequate technological infrastructure and limited staff training have hindered many of these efforts. Libraries have implemented Integrated Library Systems (ILS) and Electronic Resource Management Systems (ERMS), but these systems



often remain underutilised due to outdated software and a lack of technical expertise. Although libraries strive to adopt new technologies, staffs are not always well trained to leverage these systems effectively, preventing the full realisation of their potential benefits. Additionally, some libraries have pursued collaborative efforts such as consortia models, allowing them to share e-resource costs with other institutions. While this strategy offers some relief, it is not without challenges, as the needs of the collaborating libraries may differ, and it still doesn't resolve the financial strain on individual institutions.

### **Effectiveness of E-Resource Management Practices and Their Impact on User Satisfaction and Academic Outcomes**

Despite the best efforts to manage e-resources, the effectiveness of these practices remains limited, and they have a notable impact on user satisfaction and academic outcomes. Lack of consistent and reliable access to up-to-date e-resources hampers students' and faculty members' ability to perform well in their academic pursuits. Many users turn to alternative sources, such as free online resources or pirated versions, due to the scarcity of essential digital content. This results in lower academic productivity and diminished research quality. Faculty and students alike express frustration with the library's inability to provide adequate and current resources, which directly impacts their research productivity and academic satisfaction. These challenges underscore how inefficiencies in e-resource management can detract from the overall academic experience, limiting both research outputs and user satisfaction.

### **Summary**

This study explores the challenges Nigerian academic libraries face in managing electronic resources, highlighting issues such as inadequate funding, unreliable infrastructure, and high licensing costs. While tools like Integrated

Library Systems (ILS) and consortia models have been implemented, they are hindered by outdated technology and lack of staff training. Consequently, e-resource management practices have limited effectiveness, negatively impacting user satisfaction and academic outcomes. Libraries struggle to provide consistent access to up-to-date resources, affecting research productivity and academic performance. Addressing these challenges is crucial to improving e-resource management and enhancing the overall academic experience.

The management of electronic resources in Nigerian academic libraries is hampered by a combination of financial, technological, and infrastructural challenges. Despite the adoption of modern tools and strategies, these libraries struggle with outdated systems and limited staff expertise, which undermine the overall effectiveness of e-resource management. As a result, academic outcomes and user satisfaction are negatively affected, limiting the potential of e-resources to enhance learning and research.

### **Recommendations**

#### **1. Increase Funding and Improve Financial Management**

Academic libraries should advocate for more consistent and adequate funding from government bodies and institutional stakeholders. Financial resources should be allocated specifically to support e-resource acquisition and infrastructure improvements.

#### **2. Upgrade Infrastructure and Internet Connectivity**

Universities should prioritize upgrading the technological infrastructure, ensuring faster and more reliable internet connectivity, as well as modern library systems that support efficient e-resource management.





### 3. Comprehensive Staff Training and Capacity Building

Libraries should invest in regular and comprehensive staff training on the use of modern e-resource management tools such as ERMS, ILS, and cloud-based solutions. Professional development programs should be implemented to ensure library staff can effectively leverage these tools.

### 4. Strengthen Collaborative Models

Libraries should strengthen consortia models, encouraging more cooperation between institutions to share resources and reduce costs. These models should be flexible to accommodate the different needs of participating libraries and maximize resource-sharing potential.

### 5. Enhance User Education and Support

Academic libraries should offer user education programs to improve the awareness and usage of e-resources among students and faculty. Additionally, better support services should be provided to assist users with navigating the available digital resources.

### 6. Regular Assessment of E-Resource Management Practices

Libraries should establish a system for continuous monitoring and evaluation of their e-resource management practices to identify areas of improvement. Feedback from users should be incorporated to ensure that the resources provided align with the academic needs of the institution.

Addressing these challenges and implementing the above recommendations, Nigerian academic libraries can improve the management and accessibility of electronic resources, ultimately enhancing user satisfaction and academic outcomes.

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