

E-Information Resources in Northern Nigerian Federal College of Education Libraries: A Study of Provision and User Access

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ABSTRACT

The digital transformation of education necessitates robust access to electronic information resources (EIRs) in academic libraries. This study investigates the availability and accessibility of EIRs within federal college of education libraries in Northern Nigeria, a region facing unique infrastructural and socio-economic challenges. Employing a survey research design, the study assesses the types of EIRs available, the infrastructure supporting their access, and the perceptions of both library staff and users regarding their usability and utilization. Findings indicate a significant gap between the potential benefits of EIRs and their actual provision and seamless accessibility, often hampered by inconsistent power supply, limited internet bandwidth, and insufficient digital literacy among users and some staff. The study highlights the critical need for enhanced funding, improved infrastructure, continuous training programs, and proactive library policies to fully leverage EIRs for teaching, learning, and research in these institutions. Recommendations are provided to bridge the existing disparities and foster a more conducive environment for digital scholarship.

KEYWORDS

Electronic Information Resources, Availability, Accessibility, Federal College of Education, Northern Nigeria, Digital Libraries, Information Access.

INTRODUCTION

The landscape of higher education globally has been profoundly reshaped by the advent of information and communication technologies (ICTs). At the heart of this transformation lies the increasing reliance on electronic information resources (EIRs), which include e-journals, e-books, online databases, institutional repositories, and other digital content accessible via computer networks [3, 4]. These resources offer unparalleled advantages over traditional print materials, such as 24/7 access, remote usability, enhanced search capabilities, and the ability to access vast amounts of up-to-date information [3, 4, 9]. For academic institutions, particularly colleges of education tasked with training future educators, providing seamless access to quality EIRs is no longer a luxury but a fundamental necessity for fostering effective teaching, learning, and research [2, 9].

In Nigeria, the push towards digital libraries and the adoption of Web 2.0 technologies has been recognized as crucial for improving information access and bridging the digital divide [1, 6]. However, the implementation and effective utilization of EIRs in Nigerian academic libraries, especially in federal colleges of education, face a myriad of challenges. These challenges often stem from infrastructural deficits, such as unreliable power supply and limited internet connectivity, as well as human capacity issues, including varying levels of digital literacy among both library staff and users [1, 2, 5]. Previous studies have explored the accessibility and use of EIRs in selected Nigerian universities [2, 5, 9] and by postgraduate students [10, 11], highlighting both the potential and the existing barriers. However, a comprehensive understanding of the specific context of

federal colleges of education in Northern Nigeria, which often operate with distinct resource constraints and socio-cultural dynamics, remains underexplored.

Federal colleges of education play a pivotal role in Nigeria's educational system, serving as primary institutions for training teachers for basic and secondary education. The quality of education these institutions provide directly impacts the foundational learning experiences of millions of Nigerian students. Therefore, ensuring that their libraries are equipped with, and can effectively deliver, modern information resources is paramount. This study aims to fill this gap by providing a detailed examination of the availability and accessibility of electronic information resources within federal college of education libraries across Northern Nigeria. By doing so, it seeks to identify the current state of EIR provision, pinpoint the major impediments to their accessibility and utilization, and offer actionable recommendations to enhance digital scholarship in these vital educational centers.

METHODS

This study adopted a descriptive survey research design to investigate the availability and accessibility of electronic information resources in federal college of education libraries in Northern Nigeria. This design was deemed appropriate as it allows for the collection of data from a large population to describe the characteristics of a phenomenon as it exists [12].

Population and Sample

The target population for this study comprised all federal college of education libraries in Northern Nigeria. Given the geographical spread and the number of institutions, a multi-stage sampling technique was employed. First, a representative number of federal colleges of education were purposively selected from different states within Northern Nigeria to ensure geographical diversity. From each selected college, a sample of professional librarians, academic staff, and students (undergraduate and postgraduate where applicable) were randomly selected to participate in the study. The rationale for including these diverse groups was to gather comprehensive perspectives on both the provision (from librarians) and the actual use and accessibility challenges (from staff and students) of EIRs.

Instrumentation

The primary data collection instrument was a structured questionnaire, developed by the researchers and validated through expert review. The questionnaire was divided into three main sections:

1. **Demographic Information:** Collected data on respondents' gender, age, academic status/role, and years

of experience.

2. **Availability of EIRs:** Assessed the presence and types of various EIRs in the library (e.g., e-journals, e-books, online databases, institutional repositories, open access resources). This section utilized a checklist format.

3. **Accessibility and Utilization of EIRs:** Explored factors affecting access (e.g., internet connectivity, power supply, computer availability, technical support, digital literacy skills) and the frequency and purpose of EIR use. This section employed a Likert-type scale (e.g., 5-point scale ranging from "Strongly Agree" to "Strongly Disagree" or "Very Often" to "Never"). Open-ended questions were also included to capture qualitative insights into challenges and suggestions.

Data Collection Procedure

Permission was sought from the authorities of the selected federal colleges of education and their respective library administrations. Research assistants, trained on the objectives and administration of the questionnaire, were deployed to the selected institutions. Questionnaires were distributed to the sampled respondents, and adequate time was provided for completion. Confidentiality and anonymity of responses were assured. Completed questionnaires were collected on-site or at a pre-arranged time.

Data Analysis

The collected data were analyzed using descriptive statistics. Frequencies, percentages, means, and standard deviations were computed to summarize the demographic characteristics of the respondents, the availability of different types of EIRs, and the perceptions regarding their accessibility and utilization. The quantitative data were processed using Statistical Package for the Social Sciences (SPSS) software. Qualitative data from open-ended questions were analyzed thematically to identify recurring patterns and provide deeper context to the quantitative findings. The findings were then interpreted in relation to the research questions and existing literature on EIRs in academic libraries.

RESULTS

The analysis of the collected data provides a comprehensive overview of the availability, accessibility, and utilization of electronic information resources in federal college of education libraries in Northern Nigeria.

1. Availability of Electronic Information Resources

The findings indicate varying levels of availability of different types of EIRs across the surveyed libraries.

- **E-journals and E-books:** While most libraries reported having some form of e-journal and e-book collections, the breadth and depth of these collections were often limited. Many relied heavily on open-access journals and free e-book platforms rather than subscribed databases. This aligns with observations of digital library challenges in Nigeria [1].

- **Online Databases:** Access to commercial online databases (e.g., JSTOR, EBSCOhost, ScienceDirect) was reported as inconsistent. A significant number of libraries either had no subscriptions or had subscriptions that were frequently interrupted due to funding or technical issues.

- **Institutional Repositories:** Only a minority of the surveyed libraries had functional institutional repositories for archiving local research output. Where present, their content was often sparse or not regularly updated.

- **Other Digital Resources:** Resources such as educational software, multimedia learning materials, and online tutorials were generally less available compared to text-based EIRs.

Overall, the availability of a comprehensive and up-to-date suite of EIRs was found to be suboptimal, suggesting a significant gap in meeting the diverse information needs of academic staff and students.

2. Accessibility of Electronic Information Resources

Accessibility emerged as a major impediment to the effective utilization of EIRs, even where they were nominally available.

- **Internet Connectivity:** The most frequently cited barrier to accessibility was poor and inconsistent internet connectivity. Respondents reported slow internet speeds, frequent disconnections, and limited bandwidth, making it difficult to download large files or access multimedia resources efficiently. This resonates with broader issues of digital infrastructure in the region [6].

- **Power Supply:** Unreliable electricity supply was another significant challenge. Frequent power outages meant that computers and internet access points were often non-functional, severely limiting the hours during which EIRs could be accessed. Libraries often relied on generators, which added to operational costs and were not always available for extended periods.

- **Computer Availability:** The number of functional computers in library e-resource centers was often insufficient for the large student population. Many computers were old, slow, or lacked necessary software, further hindering access.

- **Technical Support:** Inadequate technical support

for troubleshooting hardware and software issues was also noted. This led to prolonged downtime for equipment and frustration among users.

- **Digital Literacy and Training:** A substantial proportion of both academic staff and students reported challenges related to their digital literacy skills. Many lacked the necessary skills to effectively search, retrieve, and utilize EIRs from various platforms. This finding is consistent with observations in other Nigerian universities [2, 9] and Ghanaian universities [3]. While some training was provided, it was often insufficient or not regularly updated to cover new resources or search techniques. Librarians also expressed a need for more advanced training in managing and promoting EIRs [8].

3. Utilization of Electronic Information Resources

Despite the challenges, there was a general awareness and desire among academic staff and students to use EIRs for their academic pursuits.

- **Awareness and Attitude:** A high percentage of respondents were aware of the existence of EIRs and expressed a positive attitude towards their importance for academic work [9]. This suggests that the problem is less about a lack of interest and more about practical barriers.

- **Frequency of Use:** The frequency of EIR use varied significantly. Academic staff reported using EIRs more often for research and teaching preparation, while students primarily used them for assignments and project work. However, the reported frequency was often lower than desired, directly attributable to the accessibility challenges.

- **Purpose of Use:** EIRs were predominantly used for research, assignment completion, and staying updated with current developments in their fields. Very few reported using them for collaborative learning or advanced data analysis, possibly due to limited availability of specialized software or lack of advanced digital skills [13].

In summary, while there is an acknowledged need and positive disposition towards EIRs, their actual availability is limited, and their accessibility is severely hampered by infrastructural and human capacity issues. These factors collectively restrict the full realization of the potential benefits of EIRs in federal college of education libraries in Northern Nigeria.

DISCUSSION

The findings of this study on the availability and accessibility of electronic information resources in federal college of education libraries in Northern Nigeria resonate with, and further contextualize, existing literature on digital library development in developing

countries. The observed limitations in the breadth of EIR collections and the pervasive accessibility challenges underscore a critical gap between the aspirations of digital transformation in education and the realities on the ground.

The reliance on open-access resources rather than subscribed databases for e-journals and e-books indicates significant funding constraints faced by these institutions. While open access is valuable, it cannot fully substitute for the comprehensive and peer-reviewed content available through commercial subscriptions, which are crucial for high-level research and teaching [4]. This financial limitation directly impacts the quality and depth of information available to academic staff and students, potentially hindering their research output and the overall academic standards of the colleges [2].

The most prominent barriers to accessibility identified—poor internet connectivity and unreliable power supply—are systemic infrastructural challenges prevalent across many parts of Nigeria [1, 5, 6]. These issues render even available resources effectively inaccessible for significant periods, creating a frustrating experience for users and undermining the very purpose of digital libraries. This aligns with Ibrahim's (2014) findings on accessibility challenges in Nigerian university libraries [5]. Without consistent and reliable infrastructure, any investment in EIRs will yield limited returns.

Furthermore, the study's emphasis on the varying levels of digital literacy among both staff and students is a critical insight. Even with improved infrastructure and resource availability, a lack of skills in navigating, searching, and critically evaluating electronic information can severely limit utilization [3, 9]. This highlights the need for continuous, structured training programs that go beyond basic computer literacy to encompass advanced information retrieval strategies, database navigation, and the ethical use of digital resources. The findings echo the importance of user perception and training observed in other contexts [4, 9]. Librarians, as key facilitators of information access, also require ongoing professional development in managing and promoting EIRs to effectively support their user communities [8].

The implications of these findings are profound for academic productivity and the quality of education in Northern Nigerian federal colleges of education. Limited access to current research and scholarly materials can impede academic staff's ability to conduct cutting-edge research, publish in reputable journals, and integrate the latest knowledge into their teaching. For students, it restricts their capacity to engage in in-depth research for assignments and projects, potentially leading to reliance on outdated or less credible sources. This directly impacts the quality of future teachers being trained, perpetuating a cycle of limited access to information.

Compared to studies in more developed regions or even better-funded universities within Nigeria, the federal colleges of education in Northern Nigeria appear to face more acute and interconnected challenges. While the importance of EIRs is recognized universally [2, 3, 9], the practical implementation in these specific contexts requires targeted interventions that address fundamental infrastructural and human capacity deficits first. The study reinforces the notion that effective utilization of EIRs is a complex interplay of availability, accessibility, and user competence.

CONCLUSION

This study has provided a critical assessment of the availability and accessibility of electronic information resources in federal college of education libraries across Northern Nigeria. The findings reveal a landscape where the potential of EIRs to transform teaching, learning, and research is significantly hampered by a combination of inadequate resource provision, severe infrastructural limitations, and gaps in digital literacy among both library staff and users. While there is a strong desire and awareness regarding the importance of EIRs, the practical barriers to their seamless access and effective utilization remain substantial.

The primary challenges identified include insufficient subscriptions to comprehensive online databases, unreliable internet connectivity, frequent power outages, and a scarcity of functional computing facilities. These infrastructural deficits, coupled with varying levels of digital information literacy, collectively restrict the full integration of EIRs into the academic fabric of these institutions. The study underscores that simply acquiring EIRs is not enough; their effective delivery requires a robust supporting ecosystem.

To bridge these existing disparities and unlock the full potential of electronic information resources in federal college of education libraries in Northern Nigeria, the following recommendations are crucial:

1. **Increased Funding and Strategic Investment:** Government and institutional authorities must significantly increase funding allocated to college libraries specifically for acquiring and maintaining subscriptions to a wider range of high-quality, relevant EIRs.
2. **Infrastructure Development:** Prioritize investment in reliable internet infrastructure and alternative power solutions (e.g., solar power, robust generators) to ensure consistent and uninterrupted access to EIRs.
3. **Enhance Computing Facilities:** Libraries should be adequately equipped with a sufficient number of modern, functional computers and ensure regular

maintenance and technical support.

4. Continuous Digital Literacy Training: Implement mandatory and ongoing digital literacy training programs for both academic staff and students, focusing on advanced search strategies, database navigation, and information evaluation. Librarians should also receive specialized training in EIR management and promotion.

5. Collaboration and Resource Sharing: Encourage inter-library collaboration and resource-sharing initiatives among federal colleges of education and other higher institutions to maximize access to diverse EIRs and share best practices.

By addressing these fundamental issues, federal college of education libraries in Northern Nigeria can move closer to becoming true digital hubs, effectively supporting the academic and research needs of their communities and contributing significantly to the quality of education in the region. Future research could explore the specific impact of improved EIR access on student academic performance and faculty research output in these institutions.

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