

Digital Reference Resources in Nigerian University Libraries: An Availability Survey

Felicia Angereke¹, Luter Henry Songu (CLN)², Yashim, Augustine Boniface³

¹Suleman Idachaba Library Joseph Sarwuan Tarkaa University, Makurdi.

²Department of Library and Information Science, University of Calabar.

³A.W. Ami Library, Kaduna state College of Education, Gidan Waya

DOI: <https://doi.org/10.47772/IJRISS.2026.100400197>

Received: 09 April 2026; Accepted: 14 April 2026; Published: 01 May 2026

ABSTRACT

This study investigates the availability of digital reference resources in university libraries within Benue State, Nigeria. Using a descriptive survey design, data were collected from all nine digital reference librarians across three universities via a structured questionnaire. Results indicated a 100% availability of a core set of fourteen digital reference resources, including CD-ROMs, e-journals, e-books, e-theses, internet infrastructure, databases, and essential hardware such as computers and scanners. The findings suggest a foundational level of digital resource provision exists within these libraries. However, availability does not equate to sufficiency, quality, or accessibility. The study concludes that while a basic digital infrastructure is present, significant challenges likely persist in terms of resource depth, currency, bandwidth, and user support. Recommendations focus on moving beyond basic provision to ensure sustainable, high-quality, and user-centric digital library services.

Keywords: Digital reference resources, University libraries, Resource availability, Academic libraries, Electronic resources, Digital infrastructure, Postgraduate education.

INTRODUCTION

The transformation of university libraries from traditional print-based repositories to dynamic digital hubs represents a global imperative in the twenty-first century. This shift proves particularly critical in supporting the tripartite mission of universities: teaching, learning, and research (Oriogu, Chukwuemeka, & Oriogu-Ogbuiyi, 2018). Academic libraries worldwide have embraced digital transformation as a strategic response to changing user expectations, technological advancement, and the exponential growth of scholarly publishing (Okiki, 2012). In Nigeria, where higher education seeks to enhance its global competitiveness and research output, the library's role as the "nerve centre" of academic scholarship remains paramount (Yusuf & Iwu, 2010). Digital reference resources encompass a broad spectrum of electronic materials and tools that facilitate access to and management of scholarly information. These include e-journals, e-books, databases, electronic theses and dissertations, CD-ROMs, and the requisite hardware and software infrastructure for access and utilization (Ukachi, 2011). Such resources offer unparalleled advantages in currency, accessibility, and breadth of available information, effectively collapsing geographical and temporal barriers to knowledge dissemination.

Unlike traditional print collections limited by physical boundaries and single-user access, digital resources enable simultaneous, remote, and twenty-four-hour access to vast repositories of scholarly content (Ani & Edem, 2012). For postgraduate students engaged in original research, access to current and comprehensive digital references is non-negotiable. The quality of theses, dissertations, and subsequent publications depends heavily on the researcher's ability to engage with existing scholarship, identify research gaps, and situate their work within ongoing academic conversations (Quadri, Adetimirin, & Idowu, 2014). In disciplines where knowledge evolves rapidly, access to up-to-date digital resources determines whether research outputs remain relevant and competitive on the global stage.

Despite these recognised potentials, a digital divide persists between developed and developing economies (Adams, King, & Hook, 2010). Nigerian universities often grapple with infrastructural deficits, chronic underfunding, erratic power supply, and limited bandwidth, all of which impede the effective deployment and utilisation of digital resources (Ndubuisi & Udo, 2013). While anecdotal evidence and prior localized studies have pointed to issues of access and use, there remains a need for focused, empirical data on the foundational question of availability. In Benue State specifically, preliminary observation by the researcher suggested a disconnect between postgraduate students' expressed information needs and their reported use of library digital resources. Students frequently complained about the difficulty of finding relevant materials, the time required to locate information, and their reliance on personal collections or informal networks to support their research. These observations raised fundamental questions about what digital tools are physically present in these libraries. Without a clear, verified inventory of existing resources, it becomes impossible to determine whether low utilisation stems from a genuine lack of resources, inadequate awareness of available materials, infrastructural barriers to access, skill deficits among users, or some combination of these factors.

The Nigerian higher education landscape comprises federal, state, and private universities, each operating under distinct funding models and governance structures. These differences potentially influence the capacity of individual institutions to acquire and maintain digital reference resources. Federal universities typically receive allocations from the national government, state universities depend on state-level funding, and private universities rely on tuition and private investment (Okiki, 2012). Understanding how resource availability varies across these institutional types provides valuable insight into systemic patterns and disparities. This study focuses on Benue State in North-Central Nigeria, home to several universities representing all three institutional categories. It addresses a clear gap by providing a systematic, librarian-reported assessment of what is provisioned within these academic libraries, setting the stage for further inquiry into utilization patterns, challenges to access, and overall service effectiveness.

LITERATURE REVIEW

Conceptual Framework: Digital Reference Resources in Academic Libraries

Digital reference resources encompass the electronic information materials and associated technologies that libraries provide to support user information needs. These resources exist along a continuum from purely digital content to the hardware and software infrastructure that enables access (Okiki, 2012). Understanding this ecosystem requires attention to both the informational and technological components. Content-based resources include electronic journals, which provide access to peer-reviewed scholarly articles across disciplines; electronic books, offering full-text access to monographs and textbooks; electronic theses and dissertations, capturing graduate research output; databases, aggregating content from multiple sources with advanced search capabilities; and CD-ROMs, representing earlier forms of digital storage still relevant for certain archival materials (Ukachi, 2011). Each content type serves distinct research purposes and requires different access mechanisms.

Infrastructure resources comprise the technological backbone enabling content access. Computers serve as the primary access points for digital content, whether located in library buildings or accessed remotely through personal devices. Internet connectivity determines the speed and reliability with which users can retrieve information. Printers and scanners facilitate the transition between digital and physical formats, supporting diverse user preferences and work patterns. Storage devices enable users to save and transport digital materials (Ani & Edem, 2012). Human resources, termed "humanware" in the digital library literature, represent perhaps the most critical component of the digital reference ecosystem. Digital reference librarians possess the expertise to guide users through complex information landscapes, teach searching strategies, troubleshoot access problems, and mediate between users and resources (Kadir, Dollah, & Singh, 2015). Their availability and competence directly influence whether available resources achieve their intended impact.

THEORETICAL FRAMEWORK

Connectivism and Library 2.0

This study draws theoretically on two complementary perspectives: Siemens' (2005) Connectivism and the Library 2.0 paradigm articulated by Maness (2006). Connectivism posits that learning in the digital age occurs through the process of creating connections and navigating networks. Knowledge resides not solely within individuals but within specialised nodes and information sources distributed across networks. The ability to see connections between fields, ideas, and concepts represents a core skill for contemporary learners.

From a Connectivist perspective, digital reference resources function as critical nodes in postgraduate students' personal learning networks. Databases, e-journals, and e-books provide the authoritative content that students must locate, evaluate, and integrate into their own knowledge structures. The availability of these resources determines whether students can access the nodes necessary for advanced learning and research.

The Library 2.0 paradigm extends this connective function by emphasizing user-centeredness, interactivity, and the library's presence in users' own spaces (Maness, 2006). This perspective argues that libraries must move beyond simply acquiring resources to ensuring those resources are discoverable, accessible, and integrated into users' natural workflows. Availability, from a Library 2.0 perspective, represents a necessary starting point rather than a sufficient endpoint for effective service provision. These theoretical perspectives together suggest that the mere presence of digital resources accomplishes little unless those resources are effectively connected to users through appropriate interfaces, adequate infrastructure, and skilled human intermediation. This study addresses the foundational question of availability, upon which these higher-level considerations depend.

Empirical Review: Availability Studies in Nigerian Context

Several empirical studies have examined the availability of digital resources in Nigerian academic libraries, providing context for the current investigation. Okiki (2012) surveyed academic staff at the University of Lagos and found that while electronic resources were available, awareness and utilisation remained suboptimal. The study highlighted the distinction between availability and effective use, noting that resources present in libraries often remained unknown or inaccessible to potential users.

Ani and Edem (2012) investigated access and usage of online databases in Nigerian universities for teaching and research. Their findings indicated that while universities subscribed to various databases, access was frequently hampered by inadequate bandwidth, irregular power supply, and limited user training. The study emphasised that availability must be understood in conjunction with accessibility, as resources technically present may prove functionally unavailable due to infrastructural constraints.

Quadri et al. (2014) studied availability and utilisation of library electronic resources by undergraduate students in private universities in Ogun State. They found that while basic resources were available, students faced challenges related to slow internet speed, inadequate computer terminals, and insufficient orientation programmes. The study recommended increased investment in infrastructure and user education.

Urhiewhu (2014) examined availability and use of digital information resources by undergraduates in Delta and Edo States. Results showed variation across institutions, with federal universities generally better resourced than state institutions. The study documented challenges including irregular power supply, limited bandwidth, and inadequate searching skills among users.

Adeleke and Nwalo (2017) investigated availability, use, and constraints to use of electronic information resources by postgraduate students at the University of Ibadan. They found that while some resources were available, others remained inaccessible due to subscription lapses or technical problems. The study highlighted the importance of sustainable funding for digital collections.

These empirical studies collectively suggest that availability of digital resources in Nigerian universities presents a mixed picture. Some institutions have made significant progress in acquiring electronic content and infrastructure, while others lag considerably behind. Even where resources exist, utilisation often falls short of expectations due to multiple interacting barriers. The current study contributes to this literature by providing focused data from Benue State and by capturing the perspective of reference librarians directly responsible for these resources.

Research Questions

The study was guided by the following research question:

What are the types of digital reference resources available in universities in Benue State?

METHODOLOGY

Research Design

This study employed a descriptive survey research design. This design was appropriate for collecting data from a defined population to describe the current status of a phenomenon, in this case, the availability of digital reference resources (Creswell, 2014). Descriptive surveys enable researchers to systematically document existing conditions without manipulating variables or testing causal relationships.

Area of the Study

The research was conducted in Benue State, North-Central Nigeria. Benue State hosts several universities representing the three categories of Nigerian higher education institutions: federal, state, and private. This diversity enabled the study to capture potential variations in resource availability across different funding and governance models. The specific institutions studied were Joseph Sarwuan Tarkaa University, Makurdi (federal); Benue State University, Makurdi (state); and University of Mkar, Mkar (private). These institutions were purposively selected because they possess functional, well-established libraries serving substantial postgraduate populations.

Population and Sample

The population for this segment of the study comprised all digital reference librarians in the three selected universities. A census sampling technique was used, as the total population was small and manageable. All nine identified digital reference librarians across the three institutions participated in the study, yielding a 100% response rate. This approach eliminated sampling error and ensured that the data reflected the complete population of librarians responsible for digital reference services in these institutions.

Instrument for Data Collection

Data were collected using a structured questionnaire titled "Availability and Utilization of Digital Reference Resources and Services Questionnaire" (AUDRRSQ). The instrument was developed based on extensive review of relevant literature (Kadir et al., 2015; Tutu, 2016; Urhiewhu, 2014) and the core constructs of the theoretical framework. The section relevant to this paper contained a list of fourteen digital reference resources derived from previous studies and the researcher's understanding of the Nigerian academic library context.

Librarians were asked to indicate, for each item, whether it was "Available" or "Not Available" in their library. The resources listed included Compact Disk Read Only Memory (CD-ROM), Electronic Journals (e-journals), Electronic Books (e-books), Electronic Theses (e-theses), Internet, Databases, Printers, Scanners, Television, Telephone, Storage devices (e.g., Flash Drives), Humanware (Digital Reference Librarians), Electronic Dictionaries, and Computers. This comprehensive list captured content resources, access infrastructure, and human resources essential for digital reference service provision.

Validity and Reliability

The questionnaire underwent face and content validation by three experts in Library and Information Science and Educational Measurement. These experts assessed the instrument for clarity, comprehensiveness, and cultural relevance within the Nigerian context. Their feedback led to minor revisions in item phrasing to enhance clarity and ensure that terminology would be uniformly understood by respondents.

Reliability was established using the Cronbach Alpha method on a pilot test conducted with forty-five postgraduate students from universities not included in the main study (Federal University of Agriculture, Makurdi, and Kwararafa University, Wukari). The analysis yielded a reliability coefficient of 0.85, indicating high internal consistency and confirming that the instrument reliably measured the constructs of interest.

Data Collection Procedure

The questionnaires were administered personally by the researcher with the assistance of trained research assistants over a six-week period. Each librarian received the questionnaire with clear instructions and an assurance of confidentiality. Completed questionnaires were collected immediately or within agreed timeframes to ensure high response rates. Follow-up visits were made where necessary to retrieve outstanding questionnaires.

Data Analysis

Data analysis was performed using SPSS version 25. Descriptive statistics, specifically frequency counts and percentages, were employed to present the proportion of librarians affirming the availability of each listed resource. This analytical approach aligned with the descriptive purpose of the study and provided clear, interpretable results.

RESULTS

Demographic Characteristics of Respondents

All nine digital reference librarians participated fully in the study. By institution, three librarians came from the federal university, three from the state university, and three from the private university. Regarding qualifications, six held master's degrees in Library and Information Science, while three held bachelor's degrees with significant professional experience. Experience ranged from five to eighteen years in library practice, with a mean of 9.3 years.

Availability of Digital Reference Resources

The analysis of data from the nine digital reference librarians revealed a unanimous response regarding the availability of the listed resources. As presented in Table 1, all fourteen digital reference resources received a 100% "Available" response rate. This indicates that, according to the librarians, each of the following resources was present in the university libraries under study.

Table 1: Availability of Digital Reference Resources (N=9 Librarians)

S/N	Digital Reference Resource	Available (Frequency)	Available (%)	Not Available
1	CD-ROM	9	100	0
2	Electronic Journals (e-journals)	9	100	0
3	Electronic Books (e-books)	9	100	0

4	Electronic Theses (e-theses)	9	100	0
5	Internet	9	100	0
6	Databases	9	100	0
7	Printers	9	100	0
8	Scanners	9	100	0
9	Television	9	100	0
10	Telephone	9	100	0
11	Storage Devices	9	100	0
12	Digital Reference Librarians	9	100	0
13	Electronic Dictionaries	9	100	0
14	Computers	9	100	0

SUMMARY OF FINDINGS

The study revealed that all fourteen digital reference resources investigated were unanimously reported as available by the nine digital reference librarians across the three university libraries. These resources encompassed content resources (e-journals, e-books, e-theses, databases, CD-ROMs, electronic dictionaries), access infrastructure (computers, internet, printers, scanners, televisions, telephones, storage devices), and human resources (digital reference librarians).

DISCUSSION OF FINDINGS

Interpreting the Unanimous Availability Finding

The finding of 100% availability for all listed core digital resources presents an encouraging picture that requires careful interpretation. On a positive note, this result suggests that university libraries in Benue State have made significant strides in establishing a basic digital infrastructure. The presence of e-journals, e-books, and databases aligns with global trends and represents an essential foundation for supporting contemporary academic research (Okiki, 2012). The reported availability of hardware such as computers, scanners, printers, and internet connectivity indicates an institutional commitment to providing the necessary tools for accessing and processing digital information.

This finding contrasts with some earlier studies in Nigeria that documented significant gaps in resource availability. For instance, Adeleke and Nwalo (2017) reported the unavailability of resources like e-books and specialized databases in their study context. The unanimous positive response in this study could reflect genuine progress in resource acquisition over time, a focused effort by the sampled libraries to address previous deficiencies, or the specific perspective of reference librarians who may be most familiar with available resources.

The multi-institutional nature of the sample strengthens confidence in these findings. The inclusion of federal, state, and private universities suggests that the reported availability transcends institutional type and funding model. This consistency across institutional categories may indicate either that all three types have achieved comparable levels of basic digital provision or that external factors such as donor programmes, consortium subscriptions, or national initiatives have supported resource acquisition across sectors.

From a theoretical perspective, these findings partially align with Connectivism's emphasis on non-human nodes in learning networks (Siemens, 2005). The libraries have, in principle, provided the content nodes necessary for postgraduate students to access authoritative information. The presence of databases, e-journals, and e-books means that the raw materials for scholarly engagement exist within these institutional contexts.

The Distinction Between Availability and Sufficiency

Despite the positive finding of universal availability, several critical distinctions must inform interpretation. The binary available/not available measure employed in this study captures presence but fails to capture essential qualitative dimensions that determine whether resources meaningfully support research.

Depth and breadth represent one such dimension. Having "databases" or "e-journals" does not indicate the number of subscriptions, the relevance of content to diverse academic disciplines offered at each institution, or the inclusion of high-impact, peer-reviewed titles essential for rigorous research. A library might report databases available while subscribing to only one or two general-interest collections insufficient to support specialized postgraduate work across multiple faculties.

Currency and continuity present another crucial dimension. Availability at a single point in time does not reveal whether subscriptions remain current, whether content is regularly updated, or whether funding commitments ensure sustainable access. Libraries in developing countries often face challenges maintaining subscriptions when funding fluctuates or when foreign exchange rates make renewals unaffordable (Ndubuisi & Udo, 2013). A resource available today may become unavailable tomorrow, and this volatility undermines research planning.

Accessibility represents perhaps the most critical dimension distinguishing nominal availability from functional availability. Resources technically present in the library may prove functionally unavailable due to inadequate internet bandwidth, insufficient numbers of working computer terminals, restricted hours of access, or lack of remote access capabilities (Ani & Edem, 2012). Postgraduate students who cannot access resources from their residences or departmental offices, or who face hours-long waits for computer terminals, experience these resources as effectively unavailable regardless of library inventories.

Humanware efficacy further complicates the availability picture. While "Digital Reference Librarians" are listed as available, this binary indicator does not capture their number relative to the user population, their expertise in specialized database searching, their familiarity with disciplinary resources, or their capacity to provide timely and effective support. A single librarian serving hundreds of postgraduate students cannot provide the individualized guidance that transforms resource availability into successful research outcomes.

These distinctions align with the Library 2.0 paradigm's emphasis on user-centered service rather than mere resource accumulation (Maness, 2006). Availability without accessibility, without user awareness, without effective intermediation, and without integration into user workflows represents an incomplete and ultimately inadequate form of provision.

Comparison with Previous Research

The findings of this study both align with and diverge from previous research in the Nigerian context. The 100% availability reported here exceeds levels documented in several earlier studies. Urhiewhu (2014) found variation in availability across institutions in Delta and Edo States, with some resources present in federal universities but absent in state institutions. Quadri et al. (2014) reported that while private universities had made progress in acquiring electronic resources, gaps remained in both content and infrastructure. Several factors may explain these differences. First, the intervening years since earlier studies may have witnessed genuine improvements in resource availability as Nigerian universities respond to accreditation requirements, competitive pressures, and the growing recognition that digital resources are essential for research productivity.

Second, the specific institutions sampled in this study may represent relatively well-resourced cases within the Nigerian landscape, benefiting from leadership commitment or external support not available to all universities.

Third, the perspective of reference librarians may differ from that of end users; librarians may be aware of resources that students do not know exist, leading to different assessments of availability. The findings partially support Okiki's (2012) observation that electronic resources are increasingly present in Nigerian universities even as utilisation lags. This study's exclusive focus on availability cannot address whether the documented resources achieve meaningful use, but the unanimous availability finding provides the necessary foundation for subsequent investigation of utilisation patterns.

Implications for Connectivism and Library 2.0 Frameworks

The findings carry implications for the theoretical frameworks underpinning this study. From a Connectivist perspective, the presence of digital content nodes represents a necessary condition for learning networks to function effectively (Siemens, 2005). Postgraduate students cannot connect to information that does not exist within their institutional context. The documented availability therefore satisfies this foundational requirement.

Connectivism, however, emphasizes not merely the existence of nodes but the learner's ability to navigate connections between them. This navigation depends on factors beyond content presence, including the structure of information systems, the clarity of interfaces, the availability of guidance, and the learner's prior experience with similar environments. The current study's findings do not speak to these higher-order considerations, but they establish that the content nodes are present for subsequent connection-building.

The library 2.0 paradigm pushes beyond Connectivism's focus on nodes to emphasise the relational and interactive dimensions of library service (Maness, 2006). From this perspective, the unanimous availability finding represents a starting point rather than an endpoint. The real measure of library success lies not in inventory lists but in whether resources are discoverable, accessible, and integrated into users' research workflows. The present study's findings suggest that the foundational infrastructure for Library 2.0 services exists, but they cannot confirm whether libraries have successfully made the transition from resource collections to interactive service platforms.

Refining the Concept of Availability

The findings of this study suggest the need for a more nuanced conceptualisation of availability in digital library research. A binary available/unavailable framework proves inadequate for capturing the complex reality of digital resource provision in developing country contexts. The following multi-level model may better serve future research.

First-level availability refers to the presence of resources within the library's inventory or subscription portfolio. This is what the current study measured, and it represents the most basic form of provision. Resources at this level exist in principle but may not be functionally accessible to users. Second-level availability encompasses the accessibility of resources through functional infrastructure. Resources at this level are not only present but can be reliably accessed through working computers, stable internet connections, adequate bandwidth, and reliable power supply. Many resources present at the first level fail to achieve second-level availability due to infrastructural constraints documented extensively in Nigerian research (Ndubuisi & Udo, 2013).

Third-level availability involves the discoverability of resources through effective interfaces and user support. Resources at this level are not only present and accessible but can be located by users through intuitive search systems, well-designed websites, and skilled librarian assistance. This level corresponds to the Library 2.0 emphasis on user-centered design and proactive intermediation (Maness, 2006). Fourth-level availability concerns the usability of resources for actual research tasks. Resources at this level not only exist, can be accessed, and can be discovered, but also prove relevant, current, and comprehensive enough to support sophisticated scholarly work. This level addresses the depth, breadth, and quality dimensions that binary measures cannot capture. This multi-level model suggests that the current study's findings of unanimous availability should be interpreted as establishing first-level availability only. Considerable work remains to elevate these resources through the subsequent levels to achieve meaningful support for postgraduate research.

Implications for Policy and Practice

The findings carry several implications for policy and practice in Nigerian university libraries. First, librarians and university administrators should recognise that availability represents only the beginning of effective digital service provision. Celebrating the presence of resources without attending to accessibility, discoverability, and usability may create a false sense of accomplishment while users continue to struggle. Second, assessment frameworks employed by universities and accrediting bodies should move beyond simple availability checklists. The National Universities Commission and other oversight bodies should develop metrics that capture depth of collections, currency of subscriptions, reliability of access infrastructure, and evidence of user engagement. Such frameworks would incentivise institutions to focus on meaningful provision rather than nominal availability.

Third, libraries should conduct regular user-centred audits that complement librarian-reported data with systematic investigation of user experiences. Understanding which resources students actually use, which they find helpful, and which they cannot access despite nominal availability provides actionable intelligence for collection development and infrastructure investment. Fourth, investment strategies should balance content acquisition with infrastructure development and human capacity building. A library with excellent databases but inadequate computers, unreliable internet, or insufficient trained librarians fails to achieve its mission as surely as one with ample infrastructure but limited content.

CONCLUSION

This study documented the state of availability of digital reference resources in three university libraries in Benue State, Nigeria. Based on the reports of digital reference librarians, a core suite of fourteen essential digital resources, from content resources including e-journals, e-books, and databases to access tools including computers and internet connectivity to human resources in the form of digital reference librarians, is unanimously available across all three institutions. This represents a significant and positive development, indicating that these libraries have moved beyond purely print-based collections and have invested in the foundational infrastructure of modern academic libraries. The consistency of this finding across federal, state, and private universities suggests that institutional type does not determine basic resource availability in this context. All three categories have achieved comparable levels of digital provision, at least as measured by the binary available/not available metric employed in this study.

However, the study demonstrates that the mere presence of resources represents only the first step toward effective digital library service. The 100% availability finding, while positive, serves primarily as a starting point for more critical evaluation. It shifts the focus from whether resources exist to more pressing questions of how well they serve the academic community, how reliably they can be accessed, and whether they actually support the research productivity of postgraduate students. The real measure of a library's digital success lies not in inventory lists but in the accessibility, relevance, and utilisation of these resources by students and faculty to produce high-quality research. This study establishes that the necessary foundation exists; subsequent research must address whether this foundation supports the scholarly outcomes that justify continued investment.

RECOMMENDATIONS

Based on the findings and conclusions of this study, the following recommendations are offered.

- Move beyond binary metrics. Assess quantity, quality, currency, and sustainability of digital collections through regular audits.
- Conduct user-focused audits. Survey students and faculty on awareness, usage, satisfaction, and perceived relevance of resources.
- Invest in accessibility infrastructure. Advocate for adequate bandwidth, reliable power, sufficient computers, and remote access.

- Enhance humanware capacity. Provide continuous training for librarians in database searching, information literacy, and emerging technologies.
- Develop awareness programmes. Use orientations, workshops, online guides, and social media to inform users about available resources.
- Treat library resources as strategic investments. Ensure adequate, predictable funding for digital collections.
- Address infrastructure challenges. Invest in stable power and high-bandwidth connectivity prioritised for academic use.
- Support library advocacy. Engage actively with librarian proposals and champion them within university governance.
- Develop sophisticated standards. Move beyond availability checklists to include depth, currency, accessibility, and utilisation metrics.
- Require sustainability plans. Institutions should document how they maintain subscriptions and replace obsolete infrastructure.
- Include user data in assessments. Gather evidence from students and faculty to verify service quality.

REFERENCES

1. Adams, J., King, C., & Hook, D. (2010). Global research report: Africa. Thomson Reuters.
2. Adeleke, D. S., & Nwalo, H. I. N. (2017). Availability, use and constraints to use of electronic information resources by postgraduates students at the University of Ibadan. *International Journal of Knowledge Content Development and Technology*, 7(4), 51-69.
3. Ani, O., & Edem, N. (2012). Access and usage of online databases in Nigerian universities in teaching and research. *Library and Information Practitioner*, 5(1&2), 475-486.
4. Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.
5. Kadir, W. A., Dollah, K. W., & Singh, D. (2015). Digital reference services in academic libraries. *Malaysian Journal of Library and Information Science*, 20(1), 1-13.
6. Maness, J. (2006). Library 2.0 theory: Web 2.0 and its implications for libraries. *Webology*, 3(2). <http://www.webology.org/2006/v3n2/a25.html>
7. Ndubuisi, C. J., & Udo, N. (2013). Empirical study of motivation, challenges and strategies in the use of electronic information resources by postgraduate library users in South-east Nigerian federal universities. *International Journal of Library and Information Science*, 5(11), 468-473.
8. Okiki, O. C. (2012). Electronic information resources awareness, attitude and use by academic staff members of University of Lagos, Nigeria. *Library Philosophy and Practice* (e-journal), 834.
9. Oriogu, C. D., Chukwuemeka, A. O., & Oriogu-Ogbuiyi, D. C. (2018). Faculty awareness, perception and use of information resources and services in a private university in Nigeria. *Covenant Journal of Library and Information Science*, 1(2), 32-44.
10. Quadri, G. O., Adetimirin, A. E., & Idowu, O. A. (2014). A study of availability and utilization of library electronic resources by undergraduate students in private universities in Ogun State, Nigeria. *International Journal of Library and Information Science*, 6(3), 28-34.
11. Siemens, G. (2005). Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning*, 2(1). http://www.itdl.org/Journal/Jan_05/article01.htm
12. Tutu, J. (2016). Provision of digital reference services in academic libraries in Kenya: A review. *Regional Journal of Information and Knowledge Management*, 2(1), 16-28.

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13. Ukachi, N. B. (2011). Electronic information resources and undergraduate users' patronage in University of Lagos library: A survey. *Madonna Journal of Research in Library and Information Science*, 1(2), 21-34.
 14. Urhiewhu, L. O. (2014). Availability and use of digital information resources by undergraduates of universities in Delta and Edo States, Nigeria. *International Journal of Advanced Research*, 2(12), 1054-1066.
 15. Yusuf, F., & Iwu, J. (2010). Use of academic library: A case study of Covenant University, Nigeria. *Chinese Librarianship: An International Electronic Journal*.