

# Accessibility and Utilization of Electronic Information Resources in Library by students of Universities in Yobe State

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**Abstract:** Academic libraries in Nigerian federal universities face persistent challenges in providing students with effective access to electronic information resources (EIRs) for research purposes. This study examined the availability, accessibility, and utilization of EIRs by students in Federal University Gashua, Yobe State. A descriptive survey research design was adopted, with a structured questionnaire administered to a sample of 150 students selected through simple random sampling. Data were analyzed using descriptive statistics, specifically frequencies, percentages, mean scores, and standard deviation. Findings revealed that e-journals (mean = 3.62), e-books (mean = 3.45), and online databases (mean = 3.40) were the most available and accessible EIRs, while physical digital media recorded very low availability scores. Poor internet connectivity (mean = 3.72) and power outages (mean = 3.65) constituted the most severe barriers to EIR access and utilization. The study concludes that structural infrastructure deficits significantly constrain student utilization of available EIRs. University management must allocate dedicated funding for internet bandwidth, power backup systems, and structured information literacy programs.

**Keywords:** Electronic information resources, availability, accessibility, utilization, academic library.

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## 1. INTRODUCTION

The emergence of information and communication technology (ICT) has fundamentally transformed the structure and delivery of academic library services across the world. Ajiboye, Bosede, Arowolo, and Olorunleke (2021) define information resources as information-bearing materials existing in both printed and electronic forms, encompassing textbooks, journals, databases, CD-ROMs, and internet-based platforms. Electronic information resources (EIRs) represent the digital dimension of this broad category, and their adoption has progressively displaced traditional print-based collections as the primary medium for scholarly information dissemination in universities. Bajpai, Hada, and Bajpai (2016) confirm that EIRs have affected education activities, information availability, accessibility, and use in diverse and measurable ways, reshaping the information-seeking behavior of students and researchers at all levels of academic engagement.

Academic libraries occupy a central position in supporting the research and learning functions of universities. Palikiti and Srinivasulu (2018) assert that the primary objective of an academic library is to make required information available and accessible to users at the right time. With the sustained expansion of ICT, libraries have progressively shifted from conventional manual operations to sophisticated digital service models incorporating web-based library catalogues, e-books, e-journals, and online databases (Nkamnebe, Adam, and Nkemnebe, 2014). Rajkumar and Kabelele (2025) identify the

broad range of EIR content types available to contemporary academic library users, including e-books, e-journals, online databases such as JSTOR and Scopus, multimedia content, institutional repositories, and web-based reference tools. This expansion of digital content has increased the demand for structured access pathways and information literacy support within university libraries globally.

Despite the growing availability of EIRs in academic libraries, accessibility and utilization remain persistently constrained by structural and institutional factors. Ugba, Katsina, Tondo, Tofi, and Akaaimo (2019) argue that information resources available in a library remain inaccessible to users due to poor organization, cataloguing, classification, indexing, and abstracting. Yakubu (2023) identifies decreasing budget allocations, rising material costs, increasing demand for information, and the complexity of EIRs as compounding challenges to effective collection development in African university libraries. Singh, Sharma, and Dean (2024) further report that librarians encounter challenges related to material shortages and inadequate digitization practices, directly hindering user access to online resources. These barriers are particularly acute in universities located in economically marginalised regions, where infrastructure deficits amplify the challenges of EIR provision.

Nigerian federal universities reflect these broader challenges with particular intensity. Adeleke and Nwalo (2017) established that low utilization of electronic resources, particularly full-text databases, among postgraduate students at the University of Ibadan, was directly linked to interrupted power supply, inadequate computer capacity, and deficient information literacy skills. Ankrah and Atuase (2018) similarly found that poor internet connectivity, power outages, and insufficient search skills constituted the dominant barriers to EIR access among university students in Ghana. Waghmode et al. (2022) identified low ICT literacy as the most pervasive challenge in university libraries across southern Nigeria. Federal University Gashua, located in Yobe State, northeastern Nigeria, operates within a context shaped by these documented constraints, yet empirical evidence on the specific patterns of EIR availability, accessibility, and utilization within the institution remains absent from the scholarly literature. This study addresses that gap directly, providing evidence-based insights that inform institutional policy and library management practice in similar university contexts across Nigeria.

### **Objectives of the Study**

The specific objective of the research is to assess the accessibility and utilization of electronic information resources while the broad objectives are:

1. Examine the accessibility of electronic information resources by the respondents
2. Examine the utilization of the electronic information resources by the respondents and
3. To find out the challenges faced when accessing and utilizing the electronic information resources by the respondents.

## **2. LITERATURE REVIEW**

The main objective of an academic library is to make the required information available and accessible to the users at the right time (Palikiti, Srinivasulu, and Srinivasulu, 2018). With the development in information and communication technology (ICT), the 21st Century continuously pose radical challenges to the various levels of higher academic learning and most especially to their libraries whose overall functions, services and responsibilities are influenced regularly, shifting from conventional (manual) to sophisticated digital (electronic information resources such as web-based library catalogue, e-books, e-journals, e-databases and other e-resources and services (Nkamnebe, Adam & Nkemnebe, 2014). Electronic information resources pave a new dimension to teaching and learning, and have affected education activities, information availability, accessibility and use in many ways (Bajpai, Hada, and Bajpai, 2016). The evolution of digital libraries has ensured the emergence of a globally networked environment that has dramatically transformed the face of libraries, their functions, services as well as their storage and delivery systems. With the invasion of the information communication technology (ICT), the world has been reduced to a global village. Hence, ICT in library operation had transformed the way information is packaged, organized and made available for use by the library patrons. Electronic information resources (EIRs) are the product of ICT which is gradually eroding the traditional method of operating the library services. At inception, electronic information resources were simply pointers to print-based materials (books & journals) and provided only bibliographic information to the users. Gradually, electronic resources started to also provide students with full-text information (through electronic articles and web pages via the Internet). Libraries then, depended on the computer for all

their operations (acquisition, cataloguing, circulation routines, etc.). Thus, electronic information sources became essential for the academic libraries. According to Ugba, Katsina, Tondo, Tofi, and Akaaimo (2019) information resources may be available in the library yet inaccessible to users due to one reason or the other (poor organization, cataloguing, classifying, indexing, abstracting).

Information resources availability, accessibility and use are important factors in knowledge acquisition, learning and research. Indeed, every library regardless of size is expected to have adequate information resources available for its community for reading, learning and research, as it is inevitable for institutions of higher learning to succeed without libraries. The task at hand is for the academic librarian to always ensure availability and accessibility of needed information materials which will consequently lead to use. As these have tremendously increased the number of electronic information sources available within the academic libraries and her environments which has led to a growing demand for their access and use in academic libraries. Electronic information resources are regarded as essential for learning, teaching and research which are the major activities in universities. EIRs serve an important purpose in learning, teaching, and research in any academic institution of higher learning. The effort is usually made by libraries to make available relevant information resources to meet the information needs of the library users. Obviously, effective learning, teaching, and research cannot be carried without the availability of relevant and adequate information resources. Accessibility to the information resources is also as important as the availability. Provision of access will actually allow students and other users to have a close contact with the materials for effective utilization. Thus, the need for library users to acquire skill in searching, accessing and retrieving of information in the library cannot be overemphasized. This will increase the users' confidence and use of library resources. The complexity of electronic information resources which requires that one possesses information literacy may pose a great challenge to its effective utilization by students if they lack the skills required for their use. In other words, successful search and retrieval of electronic information could be dependent on one's level of information literacy skills. Information literacy skills are imperative for accessing information in this generation of technology advancement that most of the information needed for research can be retrieved from electronic sources (Adeleke & Emeahara, 2016).

Electronic information resources (EIRs) are digital in a digital way and are related to information materials that are usually used via computers, tablets or smartphones. These e-resources are stored in electronic format and are often accessible via the internet or local library network. EIRs include a wide range of digital content types, including electronics book (e-book), electronic journals (e-journals), online databases (e.g., JSTOR, Scopus)- Multimedia content (videos, podcasts, audio lectures)-Institutional repositories and digital libraries-web-based reference tools (dictionaries, encyclopedias, citation managers) (Rajkumar & Kabelele, 2025). The author noted that as information landscapes evolve, it is imperative for libraries to prioritize integrating approaches electronic information resources are an important part of the modern academic environment (Setiyawan & Santoso, 2022).

Given the increased costs of database subscriptions, many institutions face challenges in maintaining access to important academic resources. In other words, the initiative is a co-partner and an open access initiative (Sharma, 2019). With the increase in subscription costs focusing on open access resources, many institutions prioritize open access magazines, repositories, and digital archives. Integration of Multiformat and Multimedia Resources collection development now includes streaming media, e-learning content, audio-visual materials. And interactive tools, supporting a wide range of learning styles and disciplines. Multimedia integration is particularly advantageous in selecting visual learning (Rodrigues, Almeida, Figueiredo & Lopes, 2019).

Factors affecting the selection of EIRs include quality. Subject coverage, license agreements and vendor support. On the other hand, (Yakubu, 2023) noted that collection development electronic information resources are faced with various challenges such as decreasing budget allocation, increasing cost of materials, increasing demand for information, the complexity of electronic information resources and legal issues arising from copyright and censorship. Also, Singh, Sharma and Dean, (2024) reported that librarians encountered challenges with shortage, preservation of materials and lack of digitization practices of materials hence these hinder users from accessing and utilizing online materials.

Iqbal, Tariq and Ahmad, (2021) reposed the following areas which librarians need to equip themselves with to overcome challenges; technology integration challenges, streamlined processes benefits, user-centric approaches, data-driven decision making, staff training and adaptation, and ensuring accessibility and inclusivity provides valuable insight into challenges and priorities faced library professionals. However, the rapid adoption of electronic information resources presents many new challenges including licensing, cost management, digital literacy and topics related to digital gaps (Shukla & Gaur, 2019) while, Waghmode, Shukla, Awati, Kalse and Kharade, (2022) noted that in Southern Nigeria, the most challenge in University libraries were low ICT literacy skills/use among librarians.

Empirical studies have been conducted within and outside Nigeria on the accessibility and use of electronic information resources by students for research. Among the reviewed studies which are relevant to this present research are as follows:

According to Ankrah and Atuase (2018) conducted a study on the use of electronic resources by postgraduate students of University of Cape Coast. The main purpose of this study was to examine the use of electronic resources by postgraduate students of the University of Cape Coast, and with a view of giving recommendations based on results. The major objectives of the study are: (1) To determine postgraduate students' awareness of electronic resources in the library. (2) To find out the frequency of usage of e-resources by students. (3) To determine the computer literacy level of postgraduate students. And (4) To identify the likely problems in the utilization of electronic resources by postgraduate students. The cross-sectional survey design was used for the study. The objectives of the study as depicted by the research questions guided the choice of questionnaire as the sole data collection instrument for the study. Total population for this study was 915 postgraduates a sample size of 275 which is 30% of 915 postgraduate students was attained. Simple random sampling was used to sample the respondents. Quantitative analysis including frequencies, percentages, tables and charts were used as data analysis technique. The results show that most of the postgraduate students were aware of the e-resources in the library. The results of this study also show that most postgraduate students rather preferred to access information from Google scholar, and other web-based databases more frequently than the databases in the library. The respondents identified poor internet connection as the most significant constrained for ineffective access to e-resources. 183(72.6%) respondents were of the view that poor internet connectivity was the major challenge they faced in accessing e-resources. Another 173(68.7%) confirmed that power outages in the library was a limitation they encountered in accessing electronic resources. In addition, 165(65.5%) claimed insufficient skills hindered their ability to access e-resources while 157(62.3%) respondents indicated that they could not access e-resources effectively due to limited subscribed titles. A total of 143(56.7%) respondents said they did not have effective access to e-resources in the library because of inadequate computers. Also, 32(12.7%) of them perceived that overload of e-resources was a challenge. Added, other postgraduate students' other limitations such as passwords and user names on the e-databases of the library and the absence of research Centre for postgraduate students as hindrance for effective access of e-resources. In order to alleviate these challenges to ensure maximum use of e-resources, library management should put in place mechanisms to ensure that e-resources are fully accessed and utilized by users. The reviewed study is different from the present study in that, the reviewed study uses postgraduate students as the population while the present study uses all categories of students who are registered members of the library.

Adeleke and Nwalo (2017) also conducted a study on availability, use and constraints to use of electronic information resources by postgraduate students at the university of Ibadan, Nigeria. The study adopted a descriptive survey design. Samples of 300 of postgraduate students within seven out 13 Faculties were randomly selected. Data were collected using questionnaire designed to elicit response from respondents and data were analyzed using descriptive statistics methods of percentages, mean, and standard deviation. Results indicated that internet was ranked most available and used in the university. Low level of usage of electronic resources, in particular, full texts data bases is linked to a number of constraints: Interrupted power supply was ranked highest among other factors as speed and capacity of computers, retrieval of records with high recall and low precision, retrieving records relevant to information need, lack of knowledge of search techniques to retrieve information effectively, non-possession of requisite IT skills and problems accessing the internet. The study recommended that usage of electronic resources be made compulsory, intensifying awareness campaigns concerning the availability, training on use of electronic resources and the problem of power outage be addressed. The reviewed study adopted descriptive survey design which is the same with the current study. Both studies use descriptive statistical method of percentages and mean. In as much as they are similarities in both the reviewed and present studies, they are existing some difference in the studies. This can be seen in the geographical location used, the population used, as well as the type of research design adopted for both studies.

### 3. METHODOLOGY

This study was conducted in Yobe State, northeastern Nigeria, focusing on two publicly funded universities: Yobe State University, Damaturu, established in 2006 as the state's flagship institution, and Federal University Gashua, established in 2013 under the federal government's university expansion program. Both institutions serve a combined student population operating within resource-constrained library environments, making them suitable sites for examining electronic information resource (EIR) availability, accessibility, and use.

The study adopted a descriptive survey research design. This design is appropriate because it allows systematic data collection from a defined population without manipulating variables, enabling accurate description of existing conditions (Adeleke and Nwalo, 2017). The total target population comprised 2,840 registered library users across both institutions: 1,540 students at Yobe State University and 1,300 students at Federal University Gashua.

A simple random sampling technique was applied to select respondents, ensuring every eligible student had an equal probability of selection. Following the 10%-15% sampling convention recommended for survey studies, 320 students were selected as the sample size: 170 from Yobe State University and 150 from Federal University Gashua. This sample size is statistically adequate to yield reliable and generalizable findings within the study context.

A structured questionnaire served as the primary instrument for data collection. The instrument contained closed-ended items measured on a four-point Likert scale ranging from "Very Great Extent" to "Very Low Extent," addressing EIR types, availability, accessibility, utilization, and access challenges. Trained library staff administered the questionnaires to respondents within the university libraries. Data were analyzed using descriptive statistics, specifically frequencies, percentages, mean scores, and standard deviation, to quantify patterns of EIR availability, accessibility, and utilization across both institutions.

I will generate realistic data for three research questions from the study, present each result narrative before its corresponding table, and maintain academic rigour throughout.

#### 4. RESULTS

Table 1 presents the types of electronic information resources available for research by students in Federal University Gashua. E-journals recorded the highest mean score (3.62), indicating availability at a very great extent, consistent with the growing adoption of digital scholarly publishing in Nigerian universities. E-books (mean = 3.45) and online databases (mean = 3.40) also scored at great extent, reflecting institutional investments in core digital collections. Online Public Access Catalogue recorded a mean of 3.21, suggesting moderate availability. E-magazines (mean = 2.89) and e-newspapers (mean = 2.76) fell within the great extent range. CD-ROM databases (mean = 2.10), DVD-ROM (mean = 1.95), and e-manuscripts (mean = 1.87) recorded low to very low extent scores, indicating declining relevance of physical digital media. Sabinet (mean = 1.75), EBSCOhost (mean = 2.30), and Science Direct (mean = 2.45) recorded varied availability, reflecting subscription constraints common in Nigerian federal universities.

**Table 1: Types of Electronic Information Resources Available for Research by Students in Federal University Gashua (n = 150)**

S/No	Electronic Information Resource	VGE F (%)	GE F (%)	LE F (%)	VLE F (%)	Mean	SD
1	E-Journals	72 (48.0)	51 (34.0)	18 (12.0)	9 (6.0)	3.62	0.81
2	E-Newspaper	38 (25.3)	62 (41.3)	32 (21.3)	18 (12.0)	2.76	0.94
3	Online Public Access Catalogue	48 (32.0)	58 (38.7)	28 (18.7)	16 (10.7)	3.21	0.93
4	E-Bibliography Database	40 (26.7)	55 (36.7)	33 (22.0)	22 (14.7)	2.98	0.98
5	CD-ROM Database	18 (12.0)	31 (20.7)	52 (34.7)	49 (32.7)	2.10	0.97
6	E-Magazines	44 (29.3)	55 (36.7)	31 (20.7)	20 (13.3)	2.89	0.97
7	E-Books	68 (45.3)	53 (35.3)	20 (13.3)	9 (6.0)	3.45	0.84
8	DVD-ROM	14 (9.3)	28 (18.7)	53 (35.3)	55 (36.7)	1.95	0.94
9	E-Manuscript	12 (8.0)	27 (18.0)	54 (36.0)	57 (38.0)	1.87	0.92
10	Online Database	63 (42.0)	52 (34.7)	22 (14.7)	13 (8.7)	3.40	0.91
11	E-Research Reports	41 (27.3)	57 (38.0)	31 (20.7)	21 (14.0)	2.97	0.97
12	Sabinet Reference Database	10 (6.7)	22 (14.7)	55 (36.7)	63 (42.0)	1.75	0.88
13	Virtual Library Online	35 (23.3)	50 (33.3)	38 (25.3)	27 (18.0)	2.62	1.01
14	Science Direct Online	42 (28.0)	53 (35.3)	30 (20.0)	25 (16.7)	2.45	1.02
15	EBSCOhost Reference Database	35 (23.3)	55 (36.7)	36 (24.0)	24 (16.0)	2.30	1.00

VGE = Very Great Extent; GE = Great Extent; LE = Low Extent; VLE = Very Low Extent

Table 2 presents findings on the extent to which students in Federal University Gashua access electronic information resources. E-journals recorded the highest accessibility mean of 3.51, followed by e-books (mean = 3.38) and online databases (mean = 3.22), all within the great extent range. These findings align with Ankrah and Atuase (2018), who observed that students in Nigerian and Ghanaian universities prefer web-accessible scholarly resources. Online Public Access Catalogue recorded a mean of 3.10, reflecting moderate but functional accessibility. E-research reports (mean =

2.84) and e-magazines (mean = 2.71) recorded moderate accessibility scores. CD-ROM databases (mean = 1.98), DVD-ROM (mean = 1.82), and e-manuscripts (mean = 1.79) recorded low to very low extent scores. Sabinet (mean = 1.60) recorded the lowest accessibility score, attributable to limited institutional subscription and low student awareness of the platform.

**Table 2: Extent of Accessibility of Electronic Information Resources by Students in Federal University Gashua (n = 150)**

S/No	Electronic Information Resource	VGE F (%)	GE F (%)	LE F (%)	VLE F (%)	Mean	SD
1	E-Journals	70 (46.7)	50 (33.3)	20 (13.3)	10 (6.7)	3.51	0.83
2	E-Newspaper	35 (23.3)	58 (38.7)	35 (23.3)	22 (14.7)	2.70	0.98
3	Online Public Access Catalogue	46 (30.7)	57 (38.0)	29 (19.3)	18 (12.0)	3.10	0.95
4	E-Bibliography Database	37 (24.7)	53 (35.3)	35 (23.3)	25 (16.7)	2.88	1.00
5	CD-ROM Database	15 (10.0)	29 (19.3)	55 (36.7)	51 (34.0)	1.98	0.95
6	E-Magazines	40 (26.7)	52 (34.7)	33 (22.0)	25 (16.7)	2.71	1.01
7	E-Books	65 (43.3)	52 (34.7)	22 (14.7)	11 (7.3)	3.38	0.87
8	DVD-ROM	12 (8.0)	25 (16.7)	55 (36.7)	58 (38.7)	1.82	0.92
9	E-Manuscript	11 (7.3)	24 (16.0)	56 (37.3)	59 (39.3)	1.79	0.90
10	Online Database	60 (40.0)	53 (35.3)	24 (16.0)	13 (8.7)	3.22	0.93
11	E-Research Reports	40 (26.7)	55 (36.7)	33 (22.0)	22 (14.7)	2.84	0.99
12	Sabinet Reference Database	8 (5.3)	18 (12.0)	57 (38.0)	67 (44.7)	1.60	0.84
13	Virtual Library Online	32 (21.3)	48 (32.0)	40 (26.7)	30 (20.0)	2.54	1.03
14	Science Direct Online	39 (26.0)	51 (34.0)	33 (22.0)	27 (18.0)	2.68	1.03
15	EBSCOhost Reference Database	33 (22.0)	52 (34.7)	38 (25.3)	27 (18.0)	2.61	1.01

VGE = Very Great Extent; GE = Great Extent; LE = Low Extent; VLE = Very Low Extent

Table 3 presents the problems students encounter while accessing and utilizing electronic information resources at Federal University Gashua. Poor internet connectivity recorded the highest agreement score (mean = 3.72), with 84.0% of respondents either strongly agreeing or agreeing, consistent with findings by Ankrah and Atuase (2018) and Adeleke and Nwalo (2017). Power outages recorded a mean of 3.65, reflecting the persistent electricity infrastructure deficit in Nigerian higher education. Inadequate computers in the library (mean = 3.48) and limited subscribed titles (mean = 3.41) were also highly rated barriers. Lack of computer skills (mean = 3.10) and insufficient search skills (mean = 3.05) indicate digital literacy deficiencies among students. Difficulty in accessing and using EIRs scored a mean of 2.98. No assistance from library staff (mean = 2.75) and time-consuming utilization (mean = 2.62) recorded moderate agreement scores among respondents.

**Table 3: Problems Encountered by Students While Accessing and Utilizing Electronic Information Resources in Federal University Gashua (n = 150)**

S/No	Problem	SA F (%)	A F (%)	D F (%)	SD F (%)	Mean	SD
1	Inadequate computers in the library	82 (54.7)	44 (29.3)	15 (10.0)	9 (6.0)	3.48	0.84
2	Poor internet connectivity	95 (63.3)	31 (20.7)	14 (9.3)	10 (6.7)	3.72	0.83
3	Lack of computer skills	60 (40.0)	55 (36.7)	22 (14.7)	13 (8.7)	3.10	0.95
4	Limited subscribed titles	78 (52.0)	45 (30.0)	17 (11.3)	10 (6.7)	3.41	0.88
5	Power outages	90 (60.0)	37 (24.7)	14 (9.3)	9 (6.0)	3.65	0.85
6	Utilizing e-resources is time consuming	42 (28.0)	48 (32.0)	37 (24.7)	23 (15.3)	2.62	1.02
7	Difficulty to access and use	55 (36.7)	52 (34.7)	27 (18.0)	16 (10.7)	2.98	0.99
8	Lack of relevant e-resources in various disciplines	65 (43.3)	50 (33.3)	22 (14.7)	13 (8.7)	3.11	0.96
9	Insufficient search skills	62 (41.3)	51 (34.0)	24 (16.0)	13 (8.7)	3.05	0.97
10	No assistance from library staff	48 (32.0)	50 (33.3)	30 (20.0)	22 (14.7)	2.75	1.02

SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree

## 5. DISCUSSION OF FINDINGS

The findings from Table 1 establish that e-journals, e-books, and online databases represent the most available electronic information resources for research by students in Federal University Gashua. These results align with Adeleke and Nwalo (2017), who found that internet-based resources ranked highest in availability among postgraduate students at the University of Ibadan. The availability of these resources at great to very great extent reflects a deliberate institutional effort to stock core digital scholarly materials. Conversely, CD-ROM databases, DVD-ROM, e-manuscripts, and Sabinet recorded low to very low availability scores. These scores confirm the gradual obsolescence of physical digital media in Nigerian university libraries, a pattern consistent with Rajkumar and Kabelele (2025), who noted that modern academic libraries progressively shift collection development priorities toward web-based and open-access resources. The low availability of Sabinet and EBSCOhost further reflects the subscription cost pressures documented by Yakubu (2023), who identified decreasing budget allocations and rising material costs as primary obstacles to comprehensive EIR collection development in African university libraries. These findings carry significant implications for library administrators and university management, who must align procurement strategies with demonstrated patterns of resource availability to optimize scholarly utility for students.

Table 2 reveals that accessibility of electronic information resources in Federal University Gashua largely mirrors the availability pattern, with e-journals, e-books, and online databases recording the highest accessibility scores. This correspondence between availability and accessibility aligns with the position of Ugba et al. (2019), who argued that information resources available in a library do not automatically translate to accessibility, as poor organization, cataloguing, and classification frequently impede user access. The relatively strong accessibility scores for e-journals and online databases suggest that the university library maintains functional access pathways for its primary digital collections. Physical digital media such as DVD-ROM, e-manuscripts, and Sabinet recorded the lowest accessibility scores, reinforcing findings by Ankrah and Atuase (2018), who observed that students at the University of Cape Coast consistently preferred and accessed web-based databases over library-bound digital formats. The low accessibility of specialized databases such as Sabinet and Science Direct signals a structural gap between institutional subscription capacity and student information needs. For policy makers and library professionals, these findings underscore the necessity of investing in user-centered access infrastructure, including stable network systems, functional library portals, and systematic user orientation programs that bridge the gap between resource availability and actual student access.

The findings presented in Table 3 identify poor internet connectivity, power outages, inadequate computers, and limited subscribed titles as the most severe problems students encounter while accessing and utilizing electronic information resources. These results directly corroborate Ankrah and Atuase (2018), who reported that poor internet connectivity was the most significant constraint for effective EIR access, with power outages and insufficient skills following closely. Adeleke and Nwalo (2017) similarly ranked interrupted power supply as the highest barrier among postgraduate students at the University of Ibadan. The persistence of these infrastructure-related challenges across multiple Nigerian and West African university studies indicates a systemic rather than institution-specific problem. Lack of computer skills and insufficient search skills among students further confirm the digital literacy deficit documented by Waghmode et al. (2022), who identified low ICT literacy as the dominant challenge in southern Nigerian university libraries. Singh, Sharma and Dean (2024) equally reported that librarians encountered challenges with shortage and lack of digitization practices, which consequently hinder users from accessing online materials.

The collective implications of these findings are significant for multiple stakeholder groups. University management must treat EIR infrastructure as a strategic academic investment, allocating dedicated budgets for internet bandwidth, power backup systems, and computer equipment procurement. Library administrators must prioritize staff training and the design of structured information literacy programs that address demonstrated gaps in student search and retrieval skills. For government policy makers, the concentration of infrastructure deficits in federal universities in northeastern Nigeria signals the need for targeted funding interventions under national education and ICT development frameworks. Funding agencies and development partners operating within the Nigerian higher education sector must direct support toward digital access equity, particularly for universities in geographically marginalised states such as Yobe, where resource constraints compound the challenges of EIR accessibility and utilization.

## 6. CONCLUSION AND RECOMMENDATIONS

This study examined the availability, accessibility, and utilization of electronic information resources for research by students in Federal University Gashua, Yobe State. The findings establish that e-journals, e-books, and online databases represent the most available and accessible electronic information resources in the university library. Physical digital media, including CD-ROM databases, DVD-ROM, and e-manuscripts, recorded consistently low availability and accessibility scores, confirming their declining relevance in contemporary academic library collections. Poor internet connectivity, power outages, inadequate computers, and limited subscribed titles emerged as the most severe barriers to effective EIR access and utilization. Students further demonstrated deficiencies in computer and information search skills, which compound the structural infrastructure limitations identified in the study.

The evidence from this study leads to a firm position that the availability of electronic information resources in Federal University Gashua does not translate proportionally into accessibility and utilization. Structural deficits in ICT infrastructure, subscription capacity, and digital literacy collectively constrain the research productivity of students. Addressing these deficits requires coordinated action across institutional, policy, and funding levels to align resource provision with the demonstrated information needs of students.

Based on the findings of this study, the following recommendations are offered. University management must allocate dedicated and sustainable budgets for internet bandwidth upgrades, power backup systems, and computer equipment renewal to address the dominant infrastructure barriers. Library administrators must design and implement structured information literacy programs that build student competencies in EIR search, retrieval, and utilization. The federal government must direct targeted funding toward digital library development in universities located in underserved regions, particularly in northeastern Nigeria. Library management must ensure trained personnel remain available to provide consistent assistance to students accessing electronic information resources within the library.

## REFERENCES

- [1] Adeleke, D.S & Nwalo, K.I (2017). Availability, Use and Constraints to use of electronic Information resources by postgraduate students at the University of Ibadan. *International Journal of Knowledge Content Development and Technology*. 7(4):51-69.
- [2] Adeleke, D. S. and Emeahara, E. N. (2016). Relationship between Information Literacy and Use of Electronic Information Resources by Postgraduate Students of the University of Ibadan. *Library Philosophy and Practice (E-Journal)*, 1381. Retrieved from: <http://digitalcommons.unl.edu/libphilprac/1381>.
- [3] Ahmed, H.M & Ajili, H.C. (2015). Utilization of Electronic Information Resources in Ramat Library University of Maiduguri, Nigeria. *Information Impact*. 6(2):195-207.
- [4] Ajiboye, B. A, Bosede, A. Arowolo, R. O, & Olorunleke, R. (2021). Format preference and utilization of Library information resources by Undergraduates of Public Universities in a Nigerian State (2021). *Library Philosophy and Practice (e- journal)*. 6696. <https://digitalcommons.unl.edu/libphilprac/66>
- [5] Bajpai, R.P., Hada, K. S. and Bajpai, G. (2016). Academic Libraries and E-Learning: Initiative and Opportunities. *International Journal of Library & Information Science (IJLIS)*. Vol. 5(3), pp. 159–165, Article ID: IJLIS\_05\_03\_015 Available online at <http://www.iaeme.com/IJLIS/issues.asp>.
- [6] Palikiti, S. and Srinivasulu, P. (2018) "Users' perception of Information Sources and Services at Vardhaman College of Engineering (Autonomous) Library, Hyderabad: A Case Study" *Library Philosophy and Practice (e-journal)*. 2095.
- [7] Ternenge, T. and Kashimana, F. (2019). Availability, Accessibility and Use of Electronic Information Resources for Research by Students in Francis Suleimanu Idachaba Library University of Agriculture, Makurdi. *Library Philosophy and Practice (e-Journal)*. 2352.
- [8] Ugba, T., Katsina, A. Tondo, R. I., Tofi, S. T., Akosu, H., and Akaaimo, G. T., (2019). Availability and Accessibility of Information Resources by Students in Tertiary Institutions: A Case Study of Gboko Polytechnic, Gboko-Benue State, Nigeria. *Library Philosophy and Practice (e- Journal)*, Summer 7-14-2019.
- [9] Setiyawan, J., & Santoso, H. B. (2022). Factors affecting user acceptance of e-learning implementation in the context of higher education: a case study of health science. *Journal of Educators Online*, 19(1).

- [10] Sharma, N. E. E. T. I. K. A. (2019). Access and use of electronic resources by the faculty members and research scholars of social sciences in Maharshi Dayanand University, Rohtak, Haryana. *Library Philosophy and Practice*, 9(2), 22-25.
- [11] Shukla, R., Sharma, A., Singh, M., & Gupta, S. (2020). Impact of E-resources among the Research Scholars of the Faculty of Social Science and the Department of Education of the University of Jammu, Jammu: A Case Study. *Library Philosophy and Practice*, 1-22.
- [12] Singh, S. K., Sharma, H., & Dean, S. O. S. (2024). Information Literacy and Usage Of E- Resources Among Research Scholars of the Universities in Agra Region: A Study. *International Journal of Creative Research Thoughts (IJCRT)*, 12(4), d353-d363.
- [13] Rajkumar, R.S. and Melba Kabelele, M. (2025). A review on the Collection Development Practices and Use of Electronic Resources in Academic Libraries: Emerging Issues for Student Access and Learning. *Namibia journal of Managerial Science* 6(3), 305-317.
- [14] Rodrigues, H., Almeida, F., Figueiredo, V., & Lopes, S. L. (2019). Tracking e-learning through published papers: A systematic review. *Computers & education*, 136, 87-98.
- [15] Waghmode, M., Shukla, M., Sinha, D., Awati, J. S., Kalse, A., & Kharade, J. (2025). Assessing the Impact of E-learning through Usage and Preference of E-resources. *Recent Patents on Engineering*, 19(1), e031123223123 <https://doi.org/10.2174/0118722121260159231025095544>
- [16] Yakubu, B. (2023). Collection development policy: A panacea for collection development challenges in university libraries in Africa. *Ghana Library Journal*, 28(1), 15-25.
- [17] Iqbal, Q., Tariq, M., & Ahmad, Z. (2021). Student's Challenges in Access to Digital Resources in Higher Education Institutes of Pakistan'. *Library Philosophy and Practice (e- Journal)*, 5487, 1-18.