



AVAILABILITY AND ACCESSIBILITY AS CORRELATES OF INFORMATION RETRIEVAL SYSTEMS AMONG UNDERGRADUATE LIBRARY USERS IN UNIVERSITIES IN KWARA STATE, NIGERIA

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ABSTRACT

This study investigates availability and accessibility as correlates of information retrieval systems among undergraduate library users in universities in Kwara State. The study identified three (3) research objectives and research questions. It adopted descriptive research design and the study population was 370 while the questionnaire was used to collect data. Stratified random sampling technique was used for the study, it was a sampling technique considered appropriate. The selected universities are University of Ilorin, Al-Hikmah University and Kwara State University, Malete. Data collected were analysed using descriptive statistics of frequency count and percentages. The findings revealed that majority of the users are of the opinion that library users have been a major mechanism to effective utilisation of information retrieval systems (IRS) in the three selected universities. It was also revealed that there is a significant relationship between the acquisition of IRS skills and usage among the library users and a high extent of accessibility of a good number of materials; even as few of these materials were reported to be utilised to a high extent leading to a relationship between the extent of availability and accessibility. The study therefore concluded that journals, indexes and abstracts, CD-ROM and Internet are major information retrieval tools provided in the selected universities while the provision of video tapes/cassettes are not common. Therefore, the study recommended, among other things, that undergraduates library users in these universities should undergo a compulsory ICT skills acquisition skills to aid their theoretical activities.

Keywords: Availability, Accessibility, Undergraduate library users, Information retrieval systems



Introduction

Universities are made up of different components that ensure that they render their services and also function effectively and efficiently. These components include students, staff, essential service units like administration, health centre, fire unit, faculties, departments, sports and recreational facilities and the university library (Svoboda, 2024). The university library as an essential component of the university system contributes immensely to the goals and objectives of the university. This is because, without the information resources that are available and accessible in the university library, the teaching role of the faculty will not be effective and the research function of faculty and students will be shallow. The importance of information retrieval systems in university library context highlights the need for technical skills and knowledge to effectively use these systems to find relevant information from vast sources. Tahri (2023) emphasised the growing significance of discerning relevant information due to the proliferation of such systems, particularly online. This aligns with Maki's (2023) perspective that mastering information retrieval systems not only improves undergraduate performance but also forms a foundational aspect of their academic journey.

Achoba (2024) noted that undergraduate proficiency in accessing these systems is influenced by educational efforts such as library orientations, seminars, and workshops facilitated by library staff and supported by comprehensive handbooks. According to Paul et al. (2024), this underscores the critical need to explore how information retrieval systems impact the utilisation of library resources by undergraduates, emphasising the role of information literacy in promoting scholarly inquiry and academic achievement. In the last fifty years, a significant global advancement has been the emergence of advanced information infrastructure known as information retrieval systems. Yu and Liu (2023) confirmed that before this era, information was primarily communicated through written or spoken forms such as print media or telecommunications via telephone, television, and radio. However, the advent of modern technology has introduced a diverse range of electronic tools, significantly improving service delivery and ensuring high-quality information provision, as highlighted by Sheikh et al. (2021).

Amidst this technological evolution, university libraries are adjusting and integrating these new information retrieval systems. William et al (2023) proposed that the introduction of Information and Communication Technology (ICT) into library and information services was aimed at enhancing the collection, processing, storage, dissemination, and utilisation of information retrieval systems (IRS). This term IRS has garnered numerous definitions. According to Wijeratne (2023), information retrieval systems are mechanisms for generating, storing, sending, and retrieving files. IRS serves as a tool for collecting, processing, storing, transmitting, and disseminating information electronically. Nafisah (2023) asserted that IRS is a broad term encompassing various devices and resources including radio, television, cell phones, computers, network hardware and software, satellite systems, and Internet-related services. Maqbool and Herold (2023) highlighted that the components of IRS include those used to process, store, and transfer information at faster speeds. As a catalyst for social change, IRS has impacted all areas of life, including libraries. This integration is crucial considering the pivotal role of information in fostering the academic development of undergraduate students.



The concept of availability is crucial in effective library services, as highlighted by Heldal and Hermansen (2023). They emphasised that information, regardless of its quantity, remains inaccessible unless it is properly provided and made accessible. In this study, availability refers to the state of having information retrieval systems readily provided and available. With the availability of information retrieval systems, university libraries focus on their utilisation. The integration of information and communication technology has transformed libraries into new units of information services, offering electronic acquisition, cataloguing, OPAC, interlibrary loans, and circulation functions, according to Svoboda (2024). Library users now have the ability to browse, download, send emails, and take notes directly from the Internet through digital or online library platforms. Furthermore, Priskshat (2023) explained that availability encompasses the ability of an item to be seen, used, or obtained by library patrons, recognizing that access may be contingent upon specific conditions or restrictions. Additionally, availability extends beyond physical resources to include electronic media like the Internet, CD-ROMs, and computers, which facilitate interlibrary loans, displays, abstracting, and indexing services, as emphasised by Liu (2023).

The utilisation of these resources is supported through various methods such as lending, document delivery, and current awareness services, as detailed by Raban and Włodarczyk (2024). While availability addresses the provision of resources, approachability concerns the effective use of acquired information. Accessibility aims to fulfil informational needs, support educational acquisition, or provide entertainment value, as highlighted by Sharma and Baishya (2023). They note that it can involve using books and other information resources, browsing the Internet for information retrieval or storage, and accessing information services from organizations like libraries or online sources.

Objectives of the Study

The primary aim of this study is to examine availability and accessibility as correlates of information retrieval systems among undergraduates' library users in universities in Kwara State.

The specific purposes of the study are to:

1. assess the current status of information retrieval systems available in university libraries in Kwara State;
2. examine how undergraduate library users access information retrieval systems in university libraries in Kwara State; and
3. determine the level of awareness of information retrieval systems by undergraduate library users in university libraries in Kwara State.

Research Questions

The study was guided by the following research questions:

1. What is the current status of information retrieval systems availability in university libraries in Kwara State?
2. How do undergraduate students in Kwara State universities access information retrieval systems in university libraries?



3. What is the level of awareness among undergraduate library users in Kwara State about the availability of information retrieval systems in university libraries?

Research Hypotheses

The following null hypotheses will be tested at a significance level of 0.05:

HO₁: There is no significant relationship between the availability and accessibility of information retrieval systems among undergraduate students in Kwara State.

HO₂: There is no significant relationship between accessibility and information retrieval systems among undergraduate students in Kwara State.

Statement of the Problem

The effectiveness of university libraries in supporting academic research and learning is largely contingent upon the availability and accessibility of information retrieval systems (IRS). These systems are essential for enabling students to locate, access, and utilise a vast array of academic resources efficiently. However, in Kwara State, there is limited empirical data on the current status of these systems in university libraries. This gap in knowledge raises concerns about whether these libraries are adequately equipped to meet the information needs of their undergraduate students, which in turn could affect the students' academic performance and research capabilities (Adebayo & Idowu, 2020).

Availability to IRS is a critical aspect that influences their usability. Even when such systems are accessible, they may not be easily accessible to all students due to such barriers as inadequate infrastructure, limited user training, or restrictive library policies (Emezie, 2024). These barriers can significantly impede students' ability to access necessary academic resources, thereby affecting their research outcomes and overall educational experience. Understanding the extent of accessibility to these systems is essential for identifying the gaps that need to be addressed to enhance students' engagement with academic resources.

Moreover, the proficiency of undergraduate students in using IRS is a crucial factor that impacts their effectiveness. Without adequate training and skills, students may struggle to utilise these systems efficiently, even if they are both available and accessible. This proficiency gap highlights the need for university libraries to not only provide these systems but also to ensure that students are well-equipped to use them effectively (Rasaki et al., 2023). Investigating the correlation between the availability of IRS and their accessibility, and how these factors collectively influence students' usage, is critical for developing comprehensive strategies to improve library services.

Review of Related Literature

Information retrieval systems (IRS) play a crucial role in modern libraries by facilitating access to extensive knowledge repositories, as highlighted by (Emezi *et al.*, 2024). Understanding IRS involves grasping their core principles, functionalities, and applications within library environments, as noted by (Wable, 2023). These systems integrate various technologies such as databases, search algorithms, metadata structures, and user interfaces to efficiently locate and provide access to pertinent information, serving diverse user needs ranging from academic research



to personal enrichment, as mentioned by (Banafaa *et al.*, 2023). Moreover, IRS conceptualization encompasses user-entered design principles to ensure systems are intuitive and accessible across different user groups, as discussed by Rai and Pandey (2024). Hotsonyame (2023) observed that IRS transformed libraries from mere book repositories to organized centres where bibliographic details and abstracts were systematically catalogued and retrievable through computerised databases. Initially focused on bibliographic data, IRS expanded with the advent of full-text databases, accommodating multimedia content like audio, images, and videos, as highlighted by Ranjgar (2024).

While traditionally tasked with retrieving documents matching user queries, modern IRS now retrieve both bibliographic references and full-text documents, as discussed by (Mahbub *et al.*, 2024). IRS are the print and non-print consulted by library users to meet their information needs (Kutu, 2020). According to Rhima (2023), the major objective of university libraries is to develop and maintain collections of information retrieval systems in all formats such as print and non-print and the provision of such resources to meet the information needs of users. Universities provide a range of information retrieval systems to support academic research and learning (Ajogwu, Onyebuchi & Agu, 2024). These include library catalogues and OPAC for locating physical and digital materials, as well as subscription databases like JSTOR, IEEE Xplore, and PubMed for accessing academic journals and research papers. Demestichas and Daskalakis (2020) argued that discovery tools like EBSCO Discovery Service allow users to search across multiple databases simultaneously, while institutional repositories host theses and research papers by faculty and students.

Also, universities offer access to e-journals collections, digital libraries and reference management tools such as EndNote and Zotero. Open access platforms and specialised subject gateways like arXiv and SSRN also provide valuable resources for retrieving scholarly content. These systems are crucial for enabling students to access, manage, and utilise academic information efficiently (Zhai, 2023). Information retrieval systems are the information organisation systems developed for the organization and bibliographic control of information resources. It includes those systems that help a library user easily identify and retrieve an information resource of interest. IRS also enable the librarians or information professionals to easily take inventory of the holdings of a particular library or information center (Adams, 2024). Information retrieval systems include library catalogue neither OPAC, card catalogue, microform or computerised catalogue, indexes, abstracts, bibliographies, directories, Internet search engines, and other in-house created IRS.

Onah, Adayi, Okonkwo and Onyebuchi (2020) identified bibliographies, indexes, title indexes, directories, OPAC, online database, and Internet search engines. As the major information retrieval tools available at the university libraries. Mohammed (2023) listed reading lists, indexes, abstracts, library catalogue, search engines, OPAC, bibliographies, shelf guides, web-based IRS as some of the IRS. Studies have revealed that library catalogue and Internet search engines are the most utilised IRS (Duka, Sikora & Strzelecki, 2023). The library catalogue as a record or list of books, periodicals, journals, pamphlets, monographs, audio-visual aids and other information resources of a particular library or a group of libraries. King and Nkechi (2020) asserted that the library catalogue



informs the users on what a library has in the traditional library or virtual library. Emphasizing the indispensability of the library catalogue as an information retrieval tools, Mwilongo, Luambano and Lwehabura (2020) invested that even a well-established library with trained staff, competitive head and large collection cannot function well in the absence of an up to date, well-constructed and accurate library catalogue of any form.

Abayigbodi and Iwighrehweta (2022) defined that apart from library catalogue, the other most utilized information retrieval tool is the Internet search engines. An Internet search engine is a website that acts like a massive catalogue of the pages available on the Internet (Husain *et al.* 2020). Search engines use software called a robot, a spider or a crawler to index pages from the web into its searchable databases. There are thousands of search engines available; the most currently used are google, Bing and Yahoo (Shah & Ali, 2023). The information retrieval systems are ineffective if adequate skills and competences of using them are not acquired by library users, most especially by undergraduate students who are at their early stage of academic career Information retrieval skills are the ability and competence of using the various information retrieval tools to identify locate and retrieve information resources from a collection (Adindu, 2020). Zamani *et al.* (2020) indicated that information retrieval systems are the skills to seek relevant information of the subject from different sources.

Olaniyi, Akinola and Oyadele (2023) identified that undergraduates in Nigeria have little skills in the use of the library catalogue and indexes, knowledge of using various information retrieval tools and the effective use of Internet search trains. The Information retrieval systems skills most needed in this century are Internet search skills and strategies, and the library catalogue search skills, among others (Hjørland, 2021). To search the Internet effectively the student must possess such skills and competence as in the use of Boolean operators, strategic use of search engines, keywords search skills, advance search skills, and truncation, among others.

Methodology

The descriptive survey design method was adopted for the study in order to gather opinions of the users of selected university library users in Kwara State, on the study's research purpose. This design is considered appropriate because the study is investigating the availability and accessibility as correlates of IRS among undergraduates library users in universities in Kwara State for effective IRS in selected university library in Kwara State. The population of the study was 370 Selected undergraduate users in selected university library in Kwara State. A total enumeration technique was employed to give all the selected university library users to participate in the study. Questionnaire was employed for data collection and it was prepared into two divisions. The first division was based on demographic information of the respondents, while the second division was build towards answering the research questions of the study. Face validity was employed by asking two experts in Library and Information Science to help examine the instrument. The instruments were sent to the respondents by the researcher and two research assistants through the use of online survey (Google Forms). Data collected were analysed and presented in frequency tables and simple percentages.

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Data Analysis

Distribution of the Respondents by Institutions

Table 1: Demographic Characteristics of the Respondents

Gender	Frequency	Percentage
Male	150	40.6%
Female	220	59.4%
Total	386	100.0

Age	Frequency	Percentage
20- 25 years	30	8.6%
26-30years	60	16.2%
31-35years	90	24.3%
36-40years	95	25.6%
45-50 years	70	18.6%

Institution	Frequency	Percentages
Al-Hikmah University	90	24.3%
Kwara State University, Malete	125	33.6%
University of Ilorin, Ilorin	155	41.6 %
Total	370	100.0

Table 1 showed that 150 (40.6%) of undergraduates in university libraries in Kwara State were males, while 220 (59.4%) were females. This suggests that there were more female undergraduates in university libraries in Kwara State in the selected universities. However, female students engaged in the pursuit of undergraduates' certificate than their male counterpart. While the table also revealed that 30 (8.6%) of undergraduates in university libraries in Kwara State were between 20-25years of age, 60(16.2%) are aged 25-35years, 90(24.3%) were aged 30-35 years 95(25.6%) were aged 70(18.6) were aged 25(6.7) were aged are 50 and above years of age. This implies that majority of the undergraduates in university libraries in Kwara State were aged of 25-50 years, suggesting that they were mostly matured adults. In addition, the table showed that 90 (24.3%) undergraduates in university libraries in kwara state were from Al-Hikmah university 125(33.6%) were from Kwara State University Malete, 155 (41.6%) were from University of Ilorin.

RQ 1: What is the current status of available of information retrieval systems in university libraries across Kwara State?

Table 2: Current Status of Available Information Retrieval Systems in the University Libraries

S/N	Items	Very Readily Available	Readily Available	Occasionally Available	Not Available
1	Internet	23(6.2%)	44(11.9%)	92(24.9%)	211(57.0%)
2	Computer	20(5.4%)	93(25.1%)	83(22.4%)	174(47.0)
3	KOHA	6(1.6%)	95(25.7%)	93(25.1%)	175(47.3%)



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4	Library Managt. System	32(8.6%)	56(15.1%)	107(28.9%)	175(47.3%)
5	Network	32(8.6%)	47(12.7%)	103(27.8%)	188(50.8%)
6	OPAC	22(5.9%)	11(3.0%)	136(36.8%)	201(54.3%)
7	Printer	22(5.9%)	23(6.2%)	135(36.5%)	190(51.4%)
8	Classical I.R. Model	10(2.7%)	58(15.7%)	193(52.2%)	109(29.5%)
9	Projector	33(8.9%)	33(8.9%)	167(45.1%)	137(37.0%)
10	Scanner	22(5.9%)	97(12.7%)	190(51.4%)	11(30.0%)
11	Handbooks	37(10.0%)	28(7.6%)	210(56.8%)	92(24.9%)
12	Boolean I.R. Model	33(8.9%)	57(15.4%)	167(45.1%)	113(30.5%)
13	CD ROM Database	49(13.2%)	63(17.0%)	143(38.6%)	115(31.1%)
14	UPS	10(2.7%)	88(23.8%)	124(33.5%)	148(40.0%)
15	Technical Reports	32(8.6%)	108(29.2%)	69(18.6%)	161(43.5%)

Table 2 reveals that many critical information resources and systems are either unavailable or only occasionally available. For example, the Internet, institutional repositories, and library management systems are reported as unavailable by a significant portion of respondents, with 50-57% indicating unavailability for the Internet. Similarly, resources like OPAC and Machine-Readable Cataloguing (MARC) also face high unavailability rates. Information retrieval models, including classical, non-classical, and Boolean models, are mostly occasionally available, with low percentages of them being readily available. However, resources like CD-ROM databases and technical reports show slightly better availability, though still not widely accessible. Overall, the data suggests considerable trials in accessing key information resources, indicating a need for improved resource management or infrastructure.

RQ 2: How do undergraduate students in Kwara State universities access information retrieval systems in university libraries?

Table 3: Accessibility and Operation of Information Retrieval Systems to the Respondents

S/N	Items	Readily Accessible	Occasionally Accessible	Not Accessible
1.	Computer	33(8.9%)	123(33.2%)	214(57.8%)
2.	Internet	34(9.2%)	148(40.0%)	188(50.8%)
3.	Journals	34(9.2%)	123(33.2%)	213(57.6%)
4.	Encyclopedia	55(14.9%)	102(27.6%)	213(57.6%)
5.	Printer	35(9.5%)	136(36.8%)	199(53.8%)
6.	Projector	33(8.9%)	10(2.7%)	195(54.2%)
7.	Bibliographies	10(2.7%)	91(24.6%)	269(72.7%)
8.	Abstracts/ Indexes	58(15.7%)	90(24.3%)	222(60.0%)
9.	Scanner	21(5.7%)	124(33.5%)	225(60.8%)
10.	Government Publications	45(12.2%)	125(33.8%)	200(54.1%)
11.	E-mail	56(15.1%)	157(42.4%)	157(42.4%)
12.	Photocopier	67(18.1%)	114(30.8%)	189(51.1%)
13.	CD-ROM	43(11.6%)	102(27.6%)	225(60.8%)
14.	UPS	32(6.6%)	173(46.8%)	165(44.6%)
15.	Technical Reports	46(12.4%)	158(42.7%)	166(44.9%)
16.	Electronic Resources	52(14.1%)	103(27.8%)	215(58.1%)
17.	Online Database	88(23.8%)	114(30.8%)	168(45.4%)



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Table 3 reveals a pervasive issue of inaccessibility across a wide range of information resources. Books and journals, fundamental to academic and research work, are largely inaccessible to over 57.00% of respondents, with only around 9.00% finding them readily available. Bibliographies, a critical tool for scholarly research, are the most inaccessible resource, with nearly 73.00% of respondents unable to access them. Even resources like encyclopedias and government publications, which are expected to be more accessible, are unavailable to over half of the respondents. Electronic resources, which are often seen as more accessible, also face significant challenges. For instance, 60.8% of respondents report that CD-ROMs are not accessible, and 58.1% find electronic resources difficult to access. The Internet, which is crucial for accessing a wide array of information, is still inaccessible to over 51.00% of users. Online databases, while somewhat better, are still inaccessible to 45.4% of respondents, although they are the most accessible resource listed, with nearly 24.00% finding them readily accessible. Therefore, the findings of this study reveal that undergraduate students in Kwara State universities find it difficult to have access information retrieval systems in university libraries.

RQ 3: What is the level of awareness among undergraduates' library users in Kwara State about the availability of information retrieval systems in university libraries?

Table 4: Level of Awareness among Undergraduates Library Users

S/N	Items	Daily	Weekly	Monthly	Occasionally
1	Internet	57(15.4%)	67(18.1%)	101(27.3%)	145(39.2%)
2	Computer	69(18.6%)	71(19.2%)	88(23.8%)	142(38.4%)
3	Journals	91(24.6%)	59(15.9%)	23(6.2%)	197(53.2)
4	Encyclopedia	80(21.6%)	36(9.7%)	92(24.9%)	162(43.8%)
5	Printer	104(28.1%)	24(6.5%)	23(6.2%)	219(59.2%)
6	Scanner	90(24.3%)	23(6.2%)	70(18.9%)	187(50.5%)
7	Bibliographies	162(27.6%)	24(6.5%)	55(14.9)	189(51.5%)
8	Abstracts/ Indexes	79(21.4%)	46(12.4%)	79(21.4%)	166(44.9%)
9	E-mail	79(21.4%)	47(12.7%)	67(18.1%)	177(47.8%)
10	Government Publications	103(27.8%)	45(12.2%)	90(24.3%)	132(35.7%)
11	Photocopier Machine	82(22.2%)	24(6.5%)	98(26.5%)	166(44.9%)
12	Internet	67(18.1%)	35(9.5%)	145(39.2)	123(33.2%)
13	CD ROM	114(30.8)	23(6.2%)	108(29.2%)	125(33.8)
14	Conference Proceedings	114(30.8)	43(11.6%)	101(27.3%)	112(30.3%)
15	Technical Reports	68(18.4%)	112(30.3)	44(11.9%)	146(39.5%)
16	UPS	101(27.3%)	52(14.1%)	79(21.4%)	138(37.3%)
17	Online Database	79(21.4%)	111(30.0%)	68(18.4%)	112(30.3)
18	Projector	79(21.4%)	47(12.7%)	67(18.1%)	177(47.8%)

Table 4 indicates that the majority of information resources are accessed infrequently by respondents, with "occasional" usage being the most common pattern across the board. Books, newspapers, and journals are primarily used occasionally, with a smaller percentage of respondents accessing them daily or weekly. This trend extends to other key resources like encyclopedias, bibliographies, and handbooks, which also see higher rates of occasional use rather than frequent



engagement. Although electronic resources such as CD ROMs and online databases show more varied usage patterns, including notable daily and weekly engagement, they are still primarily used on an occasional basis. This suggests that while these resources are valued, they are not central to the daily information needs of most users. The overall picture reflects a landscape where frequent, routine access is limited, and occasional use dominates, highlighting potential opportunities for increasing the accessibility and integration of these. This finding revealed that there was a strong understanding of use of IRS among library users. This suggests that undergraduate's library users are highly motivated and committed to integrating information retrieval systems into their theoretical workflows. both in the short term and the long term.

Testing of the Hypotheses

Two null hypotheses were tested in the study PPMC and regression analyses. All the hypotheses were tested at 0.05 level of significance. The results of the hypotheses are presented in this section.

H0₁: There is no statistically significant relationship between the availability and accessibility of information retrieval systems and undergraduate students in Kwara State.

Table 5: PPMC showing Relationship between Availability and Accessibility of Information Retrieval System among the Respondents

Variable	N	Mean	SD	DF	R	Sig (2-tailed)	Remark
Availability	370	87.50	3.58			0.000	Significant
Accessibility	370	30.85	2.23	368	.340**		

The PPMC analysis presented in Table 5 reveals a statistically significant relationship between the availability and accessibility of Information Retrieval Systems among undergraduate students in Kwara State. The correlation coefficient (R) is 0.340, indicating a moderate positive relationship between the two variables. With a significance level (Sig 2-tailed) of 0.000, which is less than the conventional threshold of 0.05, the null hypothesis is rejected. This means there is a statistically significant relationship between the availability and accessibility of these systems, suggesting that as the availability of information retrieval systems increases, accessibility for undergraduate students also improves.

H0₂: There is no significant relationship between accessibility and information retrieval systems among undergraduates' library users in Kwara State.



Table 6: PPMC showing Relationship between Accessibility and Information Retrieval Systems among Respondents

Variable	N	Mean	SD	DF	R	Sig (2-tailed)	Remark
Availability	370	154.290	5.013	368	.831**	0.000	Significant
Accessibility	370	30.85	2.813				

The Pearson Product Moment Correlation analysis summarized in Table 11 indicates a Availability and accessibility will not significantly correlate with information retrieval systems. With a correlation coefficient (R) of 0.831, the analysis reveals a strong positive relationship between these variables. The significance level (Sig 2-tailed) is 0.000, which is well below the 0.05 threshold, allowing us to reject the null hypothesis (H02). This suggests that greater availability of information retrieval systems is associated with a higher accessibility for students, demonstrating that improvements in system availability are likely to enhance how accessible these systems are for the students.

Discussion of the Findings

The purpose of this study was to examined availability and accessibility as correlates of information retrieval systems among undergraduate library users in universities in Kwara State. Consequently, three research questions were raised and answered and two hypotheses were formulated and tested. This section therefore discusses the findings emanating from the foregoing sections. Findings on the first Research Question revealed that the current status of information retrieval systems unavailability in university libraries in Kwara State, utilisation pattern of IRS among undergraduates' library users in the selected universities was high. Particularly, CD-ROM databases emerged as the most accessed resource, with greater number of undergraduate library users of consistently operating them. Following closely, OPAC showed a high level of usage due to frequent access. this finding in line with Ajogwu, Onyebuchi and Agu (2024) stated that include retrieval system available in library catalogues and OPAC for locating physical and digital materials, as well as subscription databases like JSTOR, IEEE Xplore, and PubMed for accessing academic journals and research papers. Similarly, Demestichas and Daskalakis (2020) finding is in consonance stated that discovery tools like EBSCO Discovery Service allow users to search across multiple databases simultaneously, while institutional repositories host theses and research papers by faculty and students.

The second findings of this study reveal that undergraduate students in Kwara State universities find it difficult to have access information retrieval systems in university libraries. This is in consonance with the work of Familoni and Babatunde (2024) reveals that poor performance of students in the various universities has been attributed to the inability of students to effectively retrieve information for academic work. Similarly, Gomroki *et al* (2023) finding stated that the major problem faced when using Online Public Access Catalogue is the problem of lack of proper guidance. The third finding revealed that there was a strong understanding of use of IRS among library users. This suggests that undergraduate's library users are highly motivated and committed to integrating information retrieval systems into their theoretical workflows both in the short term and the long term. Also, the research question examined the purpose of use of information retrieval systems resources (IRS) among undergraduate students' library users in Kwara State. The first result in the study reveals that all the four factors jointly predict information retrieval effectiveness with computer self-efficacy having the most significant contribution while at the same time, all the factors were good predictors of information



retrieval effectiveness.

The finding by Ayomide (2023) that computer and Internet self-efficacy, emotional intelligence and participation in the online discussion forum significantly correlate with web search effectiveness lend credence to the current finding in this study. These two studies are somewhat related; hence the results are similar. This similarity might be as a result of the fact that the study was conducted in the same environment, the same context using similar respondents. Similarly, web search effectiveness is related to information retrieval effectiveness because the former is a sine-qua-non to the later. In this research, computer self-efficacy was found to be the best predictor of information retrieval effectiveness of students

Conclusion

Generally, the findings suggest that enhancing availability, accessibility skills, improving Internet connectivity, and fostering positive attitudes and intentions towards IRS are essential for maximising their utilisation and perceived usefulness among undergraduates' library users. Therefore, there is need for policymakers, instructors, and library administrators to develop strategies to optimize the integration of electronic information resources into academic research and learning environments.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. There is the need for infrastructural improvement in the universities in South-West. Nigeria. This could be achieved by addressing issues related to slow Internet connectivity and epileptic electrical power supply is paramount. Investments in upgrading IT infrastructure, such as Internet bandwidth and power backup systems, should be prioritized to ensure seamless access to IRS.
2. Initiatives aimed at improving the IT competency of undergraduate library users should be implemented. This may include offering specialized training programs, workshops, or courses focused on developing essential IT skills required for effective utilization of IRS.
3. There is the need for promotion of positive confidence and intentions. This could be done when concerted efforts are made to foster positive approaches and purposes towards IRSs among undergraduate library users. Also, educational campaigns highlighting the benefits and relevance of IRSs in research and academic pursuits can help cultivate a culture of appreciation and enthusiasm towards these resources.



REFERENCES

- Abayigbodi, A. R., & Ivwighreghweta, O. (2022). Use of online public access catalogue among Library and information science undergraduates in Southern, Nigeria. *Journal of Education in Developing Areas, 29*(2), 137-142.
- Adams, R. J. (2024). *Information technology & libraries: A future for academic libraries*. Taylor & Francis.
- Adindu, A. I. (2020). Application of information communication technologies (ICT) for effective user education programme in federal university libraries in South-east, Nigeria. *International Journal of Library and Information Science, 12*(1), 16-30.
- Ajogwu, P. E., Onyebuchi, G. U., & Agu, B. O. (2024). Organizing library print resources for enhanced students' information access and utilization in Nnamdi Azikiwe Library, University of Nigeria Nsukka. *International Journal of Applied Technologies in Library and Information Management, 10*(1), 57-69.
- Ayomide, O. S. (2023). *Awareness and utilisation of electronic library resources by Students of Umaru Musa Yar'adua University, Katsina* (Doctoral Dissertation, Department of Library and Information Science, Faculty of Education, Umaru Musa Yar'adua University, Katsina).
- Banafaa, M., Shayea, I., Din, J., Azmi, M. H., Alashbi, A., Daradkeh, Y. I., & Alhammadi, A. (2023). 6G mobile communication technology: Requirements, targets, applications, challenges, advantages, and opportunities. *Alexandria Engineering Journal, 64*, 245-274.
- Duka, M., Sikora, M., & Strzelecki, A. (2023). From web catalogs to Google: a retrospective study of web search engines sustainable development. *Sustainability, 15*(8), 67-68.
- Emezie, N. A., Chukwu, S. A., Nwaohiri, N. M., Emerole, N., & Bernard, I. I. (2024). Determination of library staff skills to enhance visibility of intellectual output in Nigerian universities. *Digital Library Perspectives, 40*(1), 67-79.
- Emezie, N. A., Chukwu, S. A., Nwaohiri, N. M., Emerole, N., & Bernard, I. I. (2024). Determination of library staff skills to enhance visibility of intellectual output in Nigerian universities. *Digital Library Perspectives, 40*(1), 67-79.
- Familoni, B. T., & Babatunde, S. O. (2024). User experience (UX) design in medical products: theoretical foundations and development best practices. *Engineering Science & Technology Journal, 5*(3), 1125-1148.
- Fordjour, R., Badu, E. E., & Adjei, E. (2010). The prospects and challenges of information retrieval by university students: a case study of post graduate students of the university of Ghana, Legon.
- Gomroki, G., Behzadi, H., Fattahi, R., & Salehi Fadardi, J. (2023). Identifying effective cognitive biases in information retrieval. *Journal of Information Science, 49*(2), 348-358.
- Hjørland, B. (2021). Information retrieval and knowledge organization: A perspective from the philosophy of science. *Information, 12*(3), 135.
- Hotsonyame, G. N. (2023). Significance of academic libraries in recent times: A review of articles. *Library Philosophy & Practice*.
- King, D. L. (2020). Transforming the library. *Foundations of Library and Information Science, 197*.
- Kutu, J. O. (2020). *Availability and utilisation of information resources by academic librarians for job performance enhancement in selected university libraries in North-Central Nigeria* (Doctoral dissertation).
- Liu, L., Song, W., & Liu, Y. (2023). Leveraging digital capabilities toward a circular economy: Reinforcing sustainable supply chain management with industry 4.0 technologies. *Computers & Industrial Engineering, 178*, 109113.
- Mahbub, M., Goethert, I., Danciu, I., Knight, K., Srinivasan, S., Tamang, S., ... & Peterson, G. D. (2024). Question-answering system extracts information on injection drug use from clinical notes. *Communications Medicine, 4*(1), 61.



- Maki, P. L. (2023). *Assessing for learning: Building a sustainable commitment across the institution*. Routledge.
- Maqbool, B., & Herold, S. (2023). Potential effectiveness and efficiency issues in usability evaluation within digital health: a systematic literature review. *Journal of Systems and Software*, 111881.
- Mohammed, A. A. (2023). *Influence of preservation techniques and access to digital resources on research output of academic librarians in federal university libraries in Northern Nigeria* (Doctoral dissertation).
- Mwilongo, K. J., Luambano, I., & Lwehabura, M. J. (2020). Collection development practices in academic libraries in Tanzania. *Journal of Librarianship and Information Science*, 52(4), 1152-1168.
- Nafisah, S. (2023). Electronic information and transaction law, a means of information control in libraries. *Jurnal Kajian Informasi & Perpustakaan*, 11(1), 57-76.
- Olaniyi, S. A., Akinola, I. S., & Oyadele, O. G. (2023). Perception and utilisation of information retrieval tools by the undergraduates of Ajayi Crowther University, Nigeria. *University of Ibadan Journal of Library and Information Science*, 6(1).
- Onah, J. C., Adayi, I. O., Okonkwo, E. A., & Onyebuchi, G. U. (2020). Information retrieval skills as it correlates to undergraduate use of library information resources at a Nigerian university. *Library Philosophy and Practice*, 4586.
- Paul, M., Deja, M., Kisilowska-Szurmińska, M., Głowacka, E., Świgoń, M., & Wojciechowska, M. (2024). Understanding information literacy among doctoral students: An ILDoc model and assessment tool. *The Journal of Academic Librarianship*, 50(2), 102855.
- Prikshat, V., Islam, M., Patel, P., Malik, A., Budhwar, P., & Gupta, S. (2023). AI-Augmented HRM: literature review and a proposed multilevel framework for future research. *Technological Forecasting and Social Change*, 193, 122645.
- Rai, M., & Pandey, J. K. (Eds.). (2024). *Using Machine Learning to Detect Emotions and Predict Human Psychology*. IGI Global
- Ranjgar, B., Sadeghi-Niaraki, A., Shakeri, M., Rahimi, F., & Choi, S. M. (2024). Cultural heritage information retrieval: Past, present and future trends. *IEEE Access*.
- Rasaki, O. E., Egbedokun, A. O., & Adedimeji, A. A. (2023). Preservation of audio-visual collections at Albert Illemobade Library, Federal University of Technology Akure, Ondo State, Nigeria. *Collections*, 19(1), 69-87.
- Shah, S. A. A., & Ali, S. (2023). Performance comparative analysis of web search engines for retrieving computer science research articles using information retrieval approaches. *Technical Journal*, 28(03), 25-37.
- Sharma, S., & Panda, S. P. (2023). Efficient information retrieval model: overcoming challenges in search engines-an overview. *Indonesian Journal of Electrical Engineering and Computer Science*, 32(2), 925-932.
- Sheikh, A., Anderson, M., Albalá, S., Casadei, B., Franklin, B. D., Richards, M., ... & Mossialos, E. (2021). Health information technology and digital innovation for national learning health and care systems. *The Lancet Digital Health*, 3(6), e383-e396.
- Svoboda, A. (2024). *Digitální platformy a technologie v ekonomice z druhé ruky* (Doctoral dissertation, Masaryk University, Faculty of Economics and Administration).
- Tahri, C. (2023). *Leveraging Modern Information Seeking on Research Papers for Real-World Knowledge Integration Applications: An Empirical Study* (Doctoral dissertation, Sorbonne Université).
- Ukwoma, S. C., & Onyebinama, C. O. (2021). Challenges and opportunities of facilitating access and use of open access resources to users by librarians in federal and state universities in Nigeria. *Library Management*, 42(8/9), 481-497.

- Ullah, M. R., Molla, S., Siddique, I. M., Siddique, A. A., & Abedin, M. M. (2023). Optimizing performance: A deep dive into overall equipment effectiveness (OEE) for operational excellence. *Journal of Industrial Mechanics*, 8(3), 26-40.
- Williams-Ilemobola, O. B., Adetayo, A. J., Buhari, G. I., & Omorinkoba, O. G. (2023). Information seeking behavior and use of library services by disabled students in federal universities in South-West, Nigeria. *International Information & Library Review*, 55(2), 95-104.
- Yu, S., Liu, Z., Xiong, C., & Liu, Z. (2023). Openmatch-v2: An all-in-one multi-modality plm-based information retrieval toolkit. In *Proceedings of the 46th International ACM SIGIR Conference on Research and Development in Information Retrieval* (pp. 3160-3164).
- Zamani, H., Dumais, S., Craswell, N., Bennett, P., & Lueck, G. (2020, April). Generating clarifying questions for information retrieval. In *Proceedings of the web conference 2020* (pp. 418-428).
- Zhai, C., & Wibowo, S. (2023). A systematic review on artificial intelligence dialogue systems for enhancing English as foreign language students' interactional competence in the university. *Computers and Education: Artificial Intelligence*, 4, 100-134.

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