

Digital resources utilization among undergraduates in Kwara state, Nigeria

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Abstract

Background: Digital information resources have become a vital part of an academic library. Engineering Educational Institutions are facing increasing competition from a global digital environment and ongoing change in user needs and expectations of information services.

Purpose: This study examines digital resources utilization among undergraduates in Kwara State.

Research Design: This study adopted a descriptive research design and questionnaire was used as instrument for data collection. Simple random sampling technique was used for selecting the sample for this study and the data collected was analyzed using frequency table, percentage, mean and standard deviation.

Results: The findings of the study revealed that e-books e-journals, e-newspapers, e-research reports and e-lecture notes are the types of digital resources used by undergraduate students in universities in Kwara State. The findings further revealed academics, online registration, research, communication with friends and colleagues and sourcing for materials for project writing are the purposes of digital resources utilisation among undergraduate students in universities in Kwara State. However, the findings of the study also indicate that poor power supply, cost of online databases, lack of training on internet use, slow bandwidth and poor awareness are the challenges militating against the use of digital resources by undergraduate students in universities in Kwar State.

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Conclusion: The study concluded that students actively engage with various types of digital resources, including e-books, e-journals, e-newspapers, e-research reports, and e-lecture notes. Notably, e-books, e-journals, e-newspapers, and e-research reports were found to be the most highly utilized resources, reflecting students' increasing reliance on electronic formats for academic work. The study recommended that Universities should continue to expand and diversify their digital resource collections to include more subject-relevant and up-to-date e-books, journals, and research materials.

Keywords

library, digital resources, utilisation, undergraduates, academic libraries

Introduction

An academic library is a library that is attached to a higher education institution, such as universities, polytechnics, colleges of education etc. These libraries support the teaching, learning and research needs of students, faculty and staff. University libraries have been established in university communities to facilitate users' academic performance, intellectual growth, research activities, and personal development. Academic libraries support teaching, learning, and research activities (Ameyaw, 2023). Academic libraries are responsible for ensuring that the parent university's objectives, mission, and vision are fulfilled. One of the significant roles of university libraries is to build vibrant collections that adequately meet the needs of lecturers, students, and research scholars. They play a critical role in disseminating relevant and timely information to the right users in the academic community. Academic libraries play an essential role in improving the academic performance of students in any educational system (Maya et al., 2020).

University libraries are an essential component of university communities. Umoh (2017) defined academic libraries operationally as organized collections of information resources (print and non-print) which form an integral part of tertiary institution. In essence, the academic libraries provide resources to support the teaching and research activities of their parent institutions. Uduakobong Oscar and Luke (2022) noted that academic libraries play a role in acquiring higher education to fulfil the objectives of their institutions. Students at university level require library facilities for mastering the subject matter, techniques, and skills, etc., which cannot be provided inside the classroom. An academic library is a collection of multiple sources and services to support teaching, learning, and research activities. In an academic institution, library resources depend on educational and research supplies (Siddiqua et al., 2021). According to Krolak (2006), libraries help in finding, using, and interpreting information that unlocks the door for future opportunities and enduring learning; literacy enrichment; knowledgeable citizenship; recreation; creative imagination; conducting research; critical thinking; and empowerment in a progressively complex world.

Stojanovski and Papić (2012) noted that it is of crucial importance for every academic library to present information-seeking tools through functional and user-centric information services. The educational development of new libraries' services is necessary to

adjust to the changes and needs of a university. Open source content, social networks, cloud computing, and other emerging trends will have an impact on the evolution of library services. However, technological developments and the availability of information resources online have changed how academic libraries resources have being used. [Ogunbodede and Oribhabor \(2022\)](#) noted that information resources were mostly printed, but in the current era of information technology, digital resources (DR) have grown rapidly, with new ones appearing at regular intervals. As a result, university libraries in developing nations are attempting to adapt their services to these new realities while also serving users who rely on more traditional resources.

Digital information resources have become a vital part of an academic library. Engineering Educational Institutions are facing increasing competition from a global digital environment and ongoing change in user needs and expectations of information services ([Bharathi and Sujatha, 2019](#)). Today the quality is measured in terms of digital collections, e-resources, networking component, ICT tools etc. The technology has changed expectations of researchers, their patience, and their willingness to accept services that are available on demand. The e-resources are the answer to expectations of the users. The pursuit of electronic information resources by libraries was driven by the core values of library science.

However, [Mawere and Sai \(2017\)](#) observed that the introduction digital resources the promote students with much-needed comfort, ease, and timely information for learning, completing academic projects, and conducting research. Therefore, digital resources are now important resources in every university library, demonstrating a commitment to bringing information closer to users in a more trustworthy and easy manner. [Ternenge and Kashimana \(2019\)](#) described digital resources as information resources that can be accessed through the Internet-connected devices such as electronic journals, electronic books, online databases, locally loaded databases, websites, CD-ROM, electronic text, e-news, e-images, and electronic music. Digital resources are' handier than print resources because it enables access to materials that might otherwise be denied to consumers owing to geographic location, economics, or other constraints ([Lo et al., 2017](#)).

Digital resources provide students with new opportunities that earlier generations did not have ([Ogunbodede and Oribhabor, 2022](#)). DR can be used to encourage students to learn actively and independently while also collaborating with others. [Adeniran \(2013\)](#) alluded that digital resources has the potential to increase students' academic performance by providing them with appropriate and up-to-date information items. One of the advantages of electronic information resources for libraries and researcher in the information age is the reduction of pressure on academic libraries for physical storage space for books and journals and unlimited access to information by the users ([Nzewi and Kakulu, 2022](#)). Against this background, this study examines digital resources utilisation among undergraduates' students in universities in Kwara State.

Statement of the problem

The change in the use of technology in the 21st century has provided new chances for students to transcend the limits of printed materials in terms of time and location. Adequate access to and usage of DR can assist students to improve their learning abilities and

academic performance. However, the rise in students' low academic performance in our university system today can be ascribed to a flaw in our educational institutions, which are not equipped to provide excellent education, particularly in this digital age. The word awareness, availability, accessibility and utilization of information of EIR through an effective dissemination network represent a necessary pre-condition for the emergence of a crop of well-informed citizenry.

Information must be available, adequate and accessible in order to be presented in a way that is acceptable to facilitate its acceptability, hence utilization. Thus, it is a vital commodity in every environment and its use is largely determined by its availability and accessibility. In recent times, electronic resources have been identified as the major sources for information dissemination in the universities, especially for researchers including students and teaching staff. Most students in our tertiary institutions do not have enough Internet access because not all higher institutions in Nigeria are networked or connected to the Internet, possibly due to the expensive cost or neglect. As a result, the majority of students are unable to make use of the benefits or rewards offered by DR, resulting in lower or no learning achievement. Information is made available in varying formats-print and electronic format. While users are already conversant with the print format, technology has significantly multiplied the amount of available information and the forms which they appear.

Libraries, as custodians and disseminations of information, have a very important role to play within the knowledge society. However, it is observed that with huge amount of finance that government and university management assign for the acquisition of digital resources, awareness perceived to be low and those that aware of these resources seem to miss-managed it. In addition, most of academic libraries still struggle to have needed digital information resources that would meet the need of their users. Against this background, this study examines digital resources utilisation among undergraduates' students in universities in Kwara State.

Objectives of the study

The main objective of this study is to examine digital resources utilisation among undergraduates' students in universities in Kwara State. Specific objectives of the study are:

1. Identify digital resources used by undergraduates students in universities in Kwara State;
2. Examine the extent of usage of digital resources by undergraduates students in universities in Kwara State;
3. Determine the purpose of digital resources utilisation by undergraduates students in universities in Kwara State and;
4. Determine the challenges of constraints against utilisation of digital resources by undergraduate students in universities in Kwara State.

Review of related literature

Digital resources used by undergraduates students

The term “digital resources” refers to information resources that can be accessed through the Internet-connected devices. Electronic journals, electronic books, online databases, locally loaded databases, websites, CD-ROM, electronic text, e-news, e-images, and electronic music are all examples of DR. DR has been hailed as one of the most essential sources of information for students (Ternenge and Kashimana, 2019), as it offers them current and relevant information on a variety of topics. Digital resources are’ handier than print resources because it enables access to materials that might otherwise be denied to consumers owing to geographic location, economics, or other constraints (Lo et al., 2017).

Alegebeleye et al. (2019) noted that digital information resources are essential in academic libraries because they provide faster access to information in a way which may not be possible with printed media. They also facilitate wider access, increase usability and efficiency, and create new ways for library users to access information beyond what is available in the university library. In addition, the use of digital resources helps students to be well-informed and up-to-date in their respective courses of studies. Fabunmi et al. (2016) aligned that digital resources are of great importance to the academic and research needs of undergraduate students in university libraries since they are available remotely and students can access them anytime.

Digital resources are electronic version of print formats which is a crucial part of library collection in the digital era. They are materials requiring computer access using desktops or handheld mobile devices such as Ipad, laptop and Smartphone in the library or at home for the purpose of teaching, studying and or research. E-resources include databases (online and offline), e-books, e-journals, e-newspapers, e-research reports and e-lecture notes. Others are theses/dissertation, indexing and abstracting, reference databases such as bibliographies, dictionaries as well as sounds and files. Libraries have expanded their holdings to include digital resources due to technological advancements. E-books, e-journals, databases, and other online resources accessed through library websites or specialised platforms can be included Kapadi and Patil (2023).

Iroroavwo et al. (2023) revealed that posit that there are several reasons why electronic collection is valuable and widely adopted; they include accessibility and preservation. Accessibility, according to Kapadi and Patil (2023), allows electronic collections for easy and convenient access to information; this includes digital files that can be stored on servers or in the cloud, making them accessible from anywhere with an internet connection. It enables users to retrieve and interact with the information whenever needed, improving efficiency and productivity. On the other hand, preservation of digital files can be easily replicated and stored in multiple locations, reducing the risk of loss or damage. Electronic collection methods often include backup and recovery processes to guarantee data integrity and long-term preservation (Kapadi and Patil, 2023).

This is particularly important for valuable or historically significant materials that need to be protected for future generations. There are various types of digital library collections. They include textual collections that consist of digitised books, manuscripts, articles, reports, theses, and other textual documents. They comprise various subjects and genres,

such as literature, science, history, and more (Kapadi and Patil, 2023). Textual collections often provide searchable text and may offer features like annotations and bookmarks. Image collections contain digitised photographs, paintings, maps, diagrams, illustrations, and other visual materials. These collections can be valuable resources for research, education, and creative projects (Kapadi and Patil, 2023). They may contain high-resolution images and allow users to zoom in, rotate, or interact with the visuals. At the same time, audio collections consist of digitised sound recordings, such as music, speeches, interviews, podcasts, and oral history archives (Kapadi and Patil, 2023).

Users can access and listen to audio files online, often with additional features like playlists, metadata, and transcription option. Omidiji (2024) examined resources use and students' academic tasks. The study reported that undergraduates identified digital resources to include e-books, e-journals and e-newspapers such as Punch and The Nation. Ogunbodede and Oribhabor (2022) explored digital resources (DR) usage and academic performance of undergraduate students at the University of Africa, Toru-Orua, Bayelsa State, Nigeria (UAT). The study established that the students made use of the Internet resources, e-books, and online educational videos on YouTube, e-journals, and e-newspapers as digital resources.

Oladokun and Adeoye (2022) investigated the utilization of digital information resources among undergraduate students at Lead City University, Ibadan Nigeria. The study revealed that there is a low level of digital resources utilization among the undergraduates. Ojobo et al. (2020) investigated availability and utilization of digital reference resources by postgraduate students in university libraries in Benue State. Findings of the study revealed that, the digital reference resources available in university libraries in Benue State include, Compact Disk Read only memory (CD-ROM), Electronic Journals (e-journal), Electronic Books (e-books), Electronic Thesis (e-thesis), Internet, Databases, printers, scanners, television, telephones, storage device like Flash Drive and human ware (Digital Reference Librarian) among others. Ebhonu et al. (2021) carried out study on digital resources management as a possible enabler of effective digital information service delivery in Nigerian academic libraries. The study found that, the types of digital information resources available for use in university libraries in Southern Nigeria are e-books, e-journals, e-newspapers, e-magazines, websites.

Abbas and Song (2019) examined accessibility and utilization of e-resources for research activities in Agricultural Research Institutes, found that e-theses, e-journals, e-books, e-manuscripts, e-newspapers, are digital resources available. Buba et al. (2021); Manjack et al. (2019); Odede and Zawedde (2018) found that the most available e-resources in Nigerian Universities are e-databases such as Journal Storage (JSTOR), AGORA, HINARI, EBSCO, Science Direct, OARE and MIT Open Courseware; e-journals, CD-ROM, OPAC (Online Public Access Catalogue), online indexes, e-books and e-references.

Extent of usage of digital resources by undergraduates

Nwafor et al. (2018) explored extent of digital information resources (DIRs) usage by undergraduates of selected higher institutions in Delta and Edo states, Nigeria. The major findings include that some Digital Information Resources (DIRs) were available in the

university libraries visited by the researcher are the following: e-conference papers, e-zines, e-newsletters e-reference materials, e-projects, e-journals, e-seminar papers, e-books and e-dissertation. The findings also revealed that students make use of DIRs to a low extent. [Olaniran et al. \(2017\)](#), revealed web 2.0, e-journals, e-books and CD-ROM are the mostly used electronic resources by undergraduates.

[Toyo \(2017\)](#) revealed that undergraduates in Delta State University, Abraka, Nigeria made use of electronic resources such as e-discussions, e-news, e-journals, CDROM, e-books and e-data archives. [Tariq and Zia \(2014\)](#) carried out a survey to find out the use of e-resources by the students of Faculty of Science, University of Karachi, Pakistan. The findings showed that students used e-resources for class assignments and to get updates about their specialty. [Katabalwa \(2016\)](#) found that that most of the students used e-journals for various purposes including assignments, literature review, and research report writing, among others.

[Ogunbodede and Oribhabor \(2022\)](#) explored digital resources (DR) usage and academic performance of undergraduate students at the University of Africa, Toru-Orua, Bayelsa State, Nigeria (UAT). The findings revealed that the level of usage of DR is low as only 4% of the students made use of DR daily. [Jonathan and Udo \(2015\)](#) also studied the awareness and use of electronic information resources by undergraduate students of three Universities in South-Eastern Nigeria and found that scholarly electronic journal databases were under-utilized. [Ebijuwa and Mabawonku \(2019\)](#) asserted that, despite the potentials they hold for effective learning and research, the use of digital resources, especially among undergraduates, is not as high as expected.

[Edegbo and Emumejaye \(2025\)](#) examined extent of digital information resources (DIRs) utilization and academic productivity among science lecturers in universities in Delta and Edo States, Nigeria. The findings revealed a high extent of use of DIRs by science lecturers in universities. The constraints encountered by science lecturers towards the utilization of DIRs in the universities are epileptic power supply, cost of online databases, lack of formal training in Internet skills among science lecturers, slow bandwidth among others. The study concluded that academic productivity among the science lecturers was moderately high and there was a significant relationship between DIR usage and academic productivity of science lecturers in the selected universities in South-South Nigeria respectively.

[Felix \(2018\)](#) examined access and utilization of electronic information resources by undergraduate students in university libraries in Gombe State, Nigeria. The study found among others that types of electronic information resources available in university libraries in Gombe State are E-books, TEEAL, HINARI, AGORA, etc with electronic books having the highest response rate; undergraduate students in the Universities in Gombe State accessed Electronic Books, CD-ROMs, Science Direct, E-magazines, etc to the high extent. The study concluded that the types of electronic information resources available in university libraries in Gombe State are: E-books, TEEAL, HINARI, AGORA, JSTOR, E-journals, OARE, Science Direct, CD-ROMs, E-newspapers, e-magazines.

[Ogunbodede and Sawyerr-George \(2023\)](#) examined digital resources (DRs) and the reading habits of university students in Nigeria. The findings established that the majority of the university students used DRs daily and the Internet resources were mostly used by the students. [Yila \(2024\)](#) examined the relationship between digital literacy and digital

information resource utilisation among undergraduate students at the University of Lagos. The study found that the level of digital literacy skills of the respondents is very high. The extent to which they use digital information resources available to them is also very low. The results also revealed that there is a positive linear relationship between digital literacy skills and the use of digital information resources by undergraduate students at the University of Lagos. The study found a positive linear relationship between digital literacy skills and the use of digital resources by undergraduate students at the University of Lagos.

Purposes of using digital resources among students

[Lavanya and Santharooban \(2018\)](#) investigated the use of digital library resources by Sri Lankan students, findings shows that more than 90% of the respondents used digital resources for preparing presentations and assignments. This kind of pattern of digital library use was also reported among Nigerian undergraduates by [Daramola \(2016\)](#) who also agreed that students use digital resources mostly to prepare their assignments. [Peris and Otiike \(2016\)](#) reported that undergraduates use the library for research, while others use the library for leisure and recreation as well as for reading newspapers/magazines.

[Alhassan \(2015\)](#) examined the utilisation of electronic resources by university students in Niger State, Nigeria. The findings revealed that the use of the e-resources enable the undergraduates to have access to current and up-to-date information, faster and easier access to information, and access to a wider range of information. The students used the digital resources for academic purposes, online application/registration, research, communication with friends and colleagues, sourcing for materials for project writing, complete assignments and for other personal purposes. [Ukachi \(2011\)](#) noted students most especially in higher institutions benefit from libraries that are digitized. Digitized information resources help users most especially students to stay abreast with current information in their field of studies unlike printed information resources.

Similarly, [Urhiewhu \(2014\)](#) stated that students utilization of digitized library resources could be positive because there are great benefit such as giving opportunity to students to transmit, acquire or download, process and disseminate information in their area of interest. [Mamman and Abubakar \(2022\)](#) explored the challenges of access and use of electronic information resources (EIRS) among students of higher institutions in Taraba State, Nigeria. The study revealed that the extent of access to the available EIRS was moderate among undergraduate students in Taraba state.

[Ikenwe et al. \(2020\)](#) study surveyed Library and Information Science (LIS) undergraduates' perceived ease of use (PEOU) and extent of use of digital information resources (DIRs) in University of Benin (UNIBEN). The study revealed the purpose LIS undergraduates use DIRs which is to acquire global knowledge, self-development, enhance learning, acquire more knowledge and augment class notes. Digital resources provide students with access to a range of learning materials, opportunities for collaboration, and personalized learning experiences, which can improve academic performance ([Ebijuwa and Mabawonku, 2019](#)).

[Ezema and Chizoba \(2018\)](#) argued that the use of EIR has gained prominence in various academic environments all over the world and many students and faculty members are availing themselves of the opportunity to explore these resources to access relevant,

current and up-to-date information for various purposes. [Thanuskodi and Ravi \(2011\)](#) investigated Sources of information available via the Internet. Results show that 67.14 per cent of the faculty is familiar with the use of digital resources, and majority of these members are using digital resources for research purpose. Study also reveals that majority of the faculty members are learning the required skills for the usage of digital resources through self-study. [Chilimo and Haikuti \(2022\)](#) examined the use of electronic resources by undergraduate students at the Namibia University of Science and Technology (NUST). The result shows that students had positive attitudes towards electronic resources for academic purposes, research projects and keeping up-to-date.

Challenges constraints against utilisation of digital resources

[Nkebukwa \(2016\)](#) revealed that most of the students were not using e-resources due to lack of awareness of the e-resources being available at the institution. Equally, the researcher noted that lack of searching skills and connected computers affected the usage of e-resources. [Mollet and Mwantimwa \(2019\)](#) reported that frequent power outage, inadequate bandwidth, lack of training, lack of awareness, limited access to computers and difficulty in searching, among the challenges that affected the effective usage of e-resources. [Madondo et al. \(2017\)](#) established that there was low usage of e-resources by undergraduate students due to socio and technical challenges. It was further discovered that students lack adequate hands-on skills necessary to retrieve information from subscribed e-resources, hence low usage.

[Nnadozie et al. \(2017\)](#) explored e-resource availability and accessibility at the libraries of Michael Okpara University of Agriculture and the National Root Crop Research Institute in Nigeria. The findings demonstrated irregular capacity, and limited accessibility are identified problems of digital resources use in research institute. [Oladokun and Adeoye \(2022\)](#) investigated the utilization of digital information resources among undergraduate students at Lead City University, Ibadan Nigeria. The study found that challenges such as lack information retrieval skills, slow internet and inadequate computer system are among the challenges affecting the utilization of digital information resources by the undergraduate students.

[Odu and Afebende \(2015\)](#) carried out study on undergraduate students' perception and utilization of electronic information resources and services was carried out. The study also revealed key factors considered to be inhibitors to the use of electronic resources and services in the University of Calabar as slow speed of Internet browsing service ranked first followed by inadequate number of computers, (poor attitude of library staff and lack of user education. [Madu et al. \(2018\)](#) revealed that the lack of funding and the high cost of information resources are the two biggest obstacles to the availability and usage of electronic resources for digital reference services in university libraries in Iran.

[Iroeroavwo et al. \(2023\)](#) reported that the significant lack of subscriptions in pertinent academic subjects and a lack of user orientation or training hinder the availability and use of electronic journals at university libraries.

[Ojobo et al. \(2020\)](#) investigated availability and utilization of digital reference resources by postgraduate students in university libraries in Benue State. The finding revealed the challenges that hinder the utilization of digital reference resources in university

libraries in Benue State include, lack of fund for purchasing electronic resources, inadequate/irregular power supply, lack of technical know-how, lack of preservation policy and high cost of maintenance of resources among others. [Ankrah and Atuase \(2018\)](#) conducted a study on the use of electronic resources by postgraduate students of University of Cape Coast. The findings revealed that most of the postgraduate students were aware of the e-resources in the library. The findings revealed that poor internet connection as the most significant constrained for ineffective access to e-resources, power outages in the library was a limitation they encountered in accessing electronic resources, insufficient skills hindered their ability to access e-resources.

[Edego and Emumejaye \(2025\)](#) reported that the constraints encountered by science lecturers towards the utilization of DIRs in the universities are epileptic power supply, cost of online databases, lack of formal training in Internet skills among science lecturers, slow bandwidth among others. The study concluded that academic productivity among the science lecturers was moderately high and there was a significant relationship between DIR usage and academic productivity of science lecturers in the selected universities in South-South Nigeria respectively.

[Mamman and Abubakar \(2022\)](#) explored the challenges of access and use of electronic information resources (EIRS) among students of higher institutions in Taraba State, Nigeria. The study also revealed that poor internet connectivity, insufficient computer terminals, inadequate information and communication technology are major factors contributing against access and use EIRS in Nigeria institutions. [Ikenwe et al. \(2020\)](#) study surveyed Library and Information Science (LIS) undergraduates' perceived ease of use (PEOU) and extent of use of digital information resources (DIRs) in University of Benin (UNIBEN). The study revealed that major challenges that impede LIS undergraduates use of DIRs are: slow internet connectivity, insufficient IT knowledge and skill to effectively use DIRs, insufficient staff assistance and insufficient staff training.

[Ashaver et al. \(2024\)](#) investigated awareness and utilization of digital resources among postgraduate students of selected universities in North-Central Nigeria. The study revealed that the problems encountered in the use of the digital resources by the participants were slow internet speed, lack of access to full-text articles, physical inconveniences, lack of online resources in related topics, unorganized environment and difficulty to read through screen. The study further revealed that there are significant problems associated with accessing digital resources and there is a significant negative relationship between utilization and problems of accessing these resources by the participants.

[Chilimo and Haikuti \(2022\)](#) examined the use of electronic resources by undergraduate students at the Namibia University of Science and Technology (NUST). The result shows that students were confident in using computers as they lacked the search skills necessary to make full use of electronic resources. Barriers encountered included poor ICT infrastructure and internet connectivity, as well as slow, old, and inadequate computers.

Methodology

This study adopts descriptive survey research design. The population for this study includes undergraduate students in universities in Kwara state. Therefore, this study focuses on Federal, State and Private universities in Kwara State, which include:

University of Ilorin, Ilorin; Kwara State University Malete; and Landmark University, Omu-Aran and this is totaled = 85,567 encompasses of undergraduate students in selected universities in Kwara State. Simple random sampling was adopted due to the need to ensure fair representation of undergraduate students across the three selected academic institutions: University of Ilorin, Kwara State University, and Landmark University.

The sample size was determined using the Raosoft Sample Size Calculator (2025), with parameters set at a 95% confidence level and a 5% margin of error. Based on the total undergraduate population of (85,567), the calculated sample size is (383 students). This size is considered statistically reliable while remaining practical for data collection and analysis. Hence, this stratified random sampling that is used as a decision to select “383 undergraduates” across the three institutions maintains statistical rigor and ensures that findings are representative of the broader student population.

Data was collected with the use of questionnaire. The questionnaire was divided into two (2) parts: demographic information and replies to research questions. Demographic information includes gender, age, and level while section B based on covers objectives of the study.

The data collected from respondents were analysed using descriptive statistics such as frequency count, simple percentage, mean, and standard deviation.

Data analysis

Table 1 shows the analysis of the respondents’ demographic information by highlighting that the gender distribution which shows that indicates that more than half of the

Table 1. Respondents’ demographic information.

Items	Frequency	Percentage (%)
Gender		
Male	185	54.1
Female	157	45.9
Total	342	100%
Age		
Less than 20 years	117	34.2
21–25 years	192	56.1
26 years – 30 years	32	9.4
31 years and above	1	0.3
Total	342	100%
Level		
100L	55	16.1
200L	83	24.3
300L	95	27.8
400L	89	26.0
500L	20	5.8
Total	327	100%

respondents were male 185 (54.1%). The Table also shows that majority of the respondents were between 21 and 25 years 192 (56.1%). It can also be seen in the table that 300L has the highest distribution with 95 (27.8%).

Analysis of research questions

RQ1: What are the types of Digital resources used by undergraduates’ students?

Table 2 indicates that the types of digital resources used by undergraduate students include e-books ($\bar{x}$ = 3.79), e-journals ($\bar{x}$ = 3.52), e-newspapers ($\bar{x}$ = 3.54), e-research reports ($\bar{x}$ = 3.59) and e-lecture notes ($\bar{x}$ = 4.18) based on criterion mean of 3.5. This implies that e-books e-journals, e-newspapers, e-research reports and e-lecture notes are the types of digital resources used by undergraduate students in universities in Kwara State.

RQ2: What is the extent of digital resources utilisation by undergraduate students?

Table 3 shows the extent of digital resources utilisation by undergraduate students at criterion mean of 3.5. However, majority of respondents indicate e-books ($\bar{x}$ = 3.55), e-journals ($\bar{x}$ = 3.51), e-newspapers ($\bar{x}$ = 3.51) and e-research reports ($\bar{x}$ = 3.58) were high and e-lecture notes ($\bar{x}$ = 1.80) was relatively low. This implies that majority of respondents use e-books, e-journal, e-newspapers, e-research reports were high.

RQ3: What are the purposes of digital resources utilisation by undergraduate students?

Table 4 shows response to the purposes of digital resources utilisation with majority indicate academic purposes ($\bar{x}$ = 3.53), online application/registration ($\bar{x}$ = 3.91), research ($\bar{x}$ = 3.87), communication with friends and colleagues ($\bar{x}$ = 3.80) and sourcing for materials for project writing ($\bar{x}$ = 3.78). This means that the purposes of

Table 2. Types of digital resources used by undergraduate students.

Items	SA	A	N	D	SD	Mean	SD
						($\bar{x}$)	Σ
e-books	156 (45.6%)	125 (36.5%)	43 (12.6%)	12 (3.5%)	6 (1.8%)	3.79	2.14
e-journals	54 (15.8.4%)	176 (51.5%)	78 (22.8%)	25 (7.3%)	9 (2.6%)	3.52	0.72
e-newspapers	52 (15.1%)	93 (27.2%)	113 (33.0%)	64 (18.7%)	20 (5.8%)	3.54	0.63
e-research reports	95 (27.8%)	147 (43.0%)	50 (14.6%)	43 (12.6%)	7 (2.0%)	3.59	0.79
e-lecture notes	123 (36.0%)	134 (39.1%)	30 (8.8%)	26 (7.6%)	29 (8.5%)	4.18	0.95

Source: Author’s field survey (2025).
Note. Criterion $\bar{x}$ = 3.5.

Table 3. Extent of digital resources utilisation by undergraduate students.

Items	HE	E	ME	LE	Mean	SD
					($\bar{x}$)	Σ
e-books	140 (40.9%)	134 (39.2%)	34 (9.9%)	34 (9.9%)	3.55	0.54
e-journals	55 (16.1%)	168 (49.1%)	85 (24.9%)	34 (9.9%)	3.50	0.53
e-newspapers	78 (22.8%)	99 (28.9%)	89 (26.0)	76 (22.2%)	3.51	0.52
e-research reports	124 (36.3%)	127 (37.1%)	64 (18.7%)	27 (7.9%)	3.58	0.71
e-lecture notes	165 (48.2%)	116 (33.9%)	25 (7.3%)	36 (10.5%)	1.80	0.96

Source: Author’s field survey (2025).
Note. Criterion $\bar{x}$ = 3.50.

digital resources utilisation among undergraduate students include academics, online registration, research, communication with friends and colleagues and sourcing for materials for project writing.

RQ4: What are the challenges militating against digital resources utilisation by undergraduate students?

Table 5 shows the challenges militating against digital resources utilisation by undergraduate students. The majority of respondents agreed that epileptic power supply ($\bar{x}$ = 3.51), cost of online databases ($\bar{x}$ = 4.04), lack of formal training on internet skills ($\bar{x}$ = 3.58), slow bandwidth ($\bar{x}$ = 3.94) and poor awareness ($\bar{x}$ = 3.85) with criterion mean 3.50 are the challenges against the use of digital resources utilisation by undergraduate students This implies that poor power supply, cost of online databases, lack of training on internet use, slow bandwidth and poor awareness.

Table 4. Purposes of digital resources utilisation by undergraduate students.

Statements	SA	A	N	D	SD	Mean	SD
						($\bar{x}$)	Σ
Academic purposes	170 (49.7%)	145 (42.4%)	13 (3.8%)	5 (1.5%)	9 (2.6%)	3.53	1.40
Online application/ registration	77 (22.5%)	173 (50.6%)	59 (17.3%)	27 (7.9%)	6 (1.8%)	3.91	0.08
Research	149 (43.6%)	120 (35.1%)	55 (16.1%)	14 (4.1%)	4 (1.2%)	3.87	0.96
Communication with friends and colleagues	78 (22.8%)	123 (36.0%)	58 (17.0%)	70 (20.5%)	13 (3.8%)	3.80	1.10
Sourcing for materials for project writing	158 (30.7%)	105 (30.7%)	36 (10.5%)	18 (5.3%)	25 (7.3%)	3.78	1.02

Source: Author’s field survey (2025).
Note. Criterion $\bar{x}$ = 3.50.

Table 5. Challenges militating against digital resources utilisation by undergraduate students.

Statements	SA	A	N	D	SD	Mean	SD
						($\bar{x}$)	(Σ)
Epileptic power supply	158 (46.2%)	133 (38.9%)	35 (10.2%)	5 (1.5%)	11 (3.2%)	3.51	0.89
Cost of online databases	77 (22.5%)	160 (46.8%)	76 (22.2%)	21 (6.1%)	8 (2.8%)	4.04	0.92
Lack of formal training on internet skills	90 (26.2%)	138 (40.4%)	84 (24.6%)	24 (7.0%)	6 (1.8%)	3.58	0.80
Slow bandwidth	107 (31.3)	125 (36.5%)	50 (14.6%)	48 (14.0%)	12 (3.5%)	3.94	1.01
Poor awareness	131 (38.3%)	91 (26.6%)	64 (18.7%)	24 (7.0%)	32 (9.4%)	3.84	1.01

Source: Author's field survey (2025).

Note. Criterion $\bar{x}$ = 3.50.

Discussion of the findings

On the objective one, the study revealed that e-books e-journals, e-newspapers, e-research reports and e-lecture notes are the types of digital resources used by undergraduate students in universities in Kwara State. The findings of this study is concur with the study [Ternenge and Kashimana \(2019\)](#) that electronic journals, electronic books, online databases, locally loaded databases, websites, CD-ROM, electronic text, e-news, e-images, and electronic music are all examples of digital resources. The findings of this study also similar with study by [Ogunbodede and Oribhabor \(2022\)](#) that Internet resources, e-books, and online educational videos on YouTube, e-journals, and e-newspapers as digital resources.

On the objective two, the findings of the study revealed that use e-books, e-journal, e-newspapers, e-research reports were high used by undergraduate students in universities in Kwara State. The findings of this study corroborate with study by [Olaniran et al. \(2017\)](#) who revealed web 2.0, e-journals, e-books and CD-ROM are the mostly used electronic resources by undergraduates. However, findings of the study by [Nwafor et al. \(2018\)](#) disagreed with finding of this this study that e-conference paper, e-zines, e-newsletters e-reference materials, e-projects, e-journals, e-seminar papers, e-books and e-dissertation were relatively low in use.

On the objective three, the study found out that academics, online registration, research, communication with friends and colleagues and sourcing for materials for project writing are the purposes of digital resources utilisation among undergraduate students in universities in Kwara State. The findings of this study is contradict with the findings of [Ikenwe et al. \(2020\)](#) that the purpose by which LIS undergraduates use DIRs which is to acquire global knowledge, self-development, enhance learning, acquire more knowledge and augment class notes., (2019).

On the objective 4, the study found out that poor power supply, cost of online databases, lack of training on internet use, slow bandwidth and poor awareness are the challenges militating against the use of digital resources by undergraduate students in universities in Kwar State. The findings of this study is similar to the findings by [Edegbo and Emumejaye \(2025\)](#) reported that the constraints encountered by science lecturers towards the utilization of DIRs in

the universities are epileptic power supply, cost of online databases, lack of formal training in Internet skills among science lecturers, slow bandwidth among others.

Conclusion

The study established that students actively engage with various types of digital resources, including e-books, e-journals, e-newspapers, e-research reports, and e-lecture notes. Notably, e-books, e-journals, e-newspapers, and e-research reports were found to be the most highly utilized resources, reflecting students' increasing reliance on electronic formats for academic work. The study concludes that purposes for which students utilised digital resources include academic activities such as research, project writing, and online registration, as well as communication with friends and colleagues. This suggests that digital resources play a significant role in supporting both academic and social aspects of students' university life. However, despite the evident benefits and growing use of digital resources, several challenges hinder optimal utilization. These include poor power supply, the high cost of accessing online databases, inadequate training on internet use, slow internet bandwidth, and low awareness about available digital resources.

Recommendations

Based on the findings of the study, the following areas are suggested and recommended by researchers to address the identified gaps observed in the study.

1. It is recommended that Universities should continue to expand and diversify their digital resource collections to include more subject-relevant and up-to-date e-books, journals, and research materials.
2. Library management should regularly review and update the digital content to ensure its relevance to students' academic needs.
3. User access interfaces should be optimized for ease of use, including mobile compatibility, to increase accessibility and usability
4. University administrations should invest in alternative power solutions (e.g., solar energy systems) to reduce the impact of erratic power supply on digital access
5. Regular digital literacy workshops and training should be organized to enhance students' competence in using internet and digital resources effectively

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