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ELECTRONIC INFORMATION RESOURCES AND THEIR IMPACTS ON UNDERGRADUATE STUDENTS OF IMO STATE UNIVERSITY, OWERRI LIBRARY

Gracious Nonyelum Oparanozie (Rev. Sr.)
University Library, Alvan Ikoku Federal University of Education Owerri;

Ogechi Iheanacho-Kelechi, PhD.
University Library, Federal University of Technology Owerri.

and

Joy Udodi Kelechi-Usoh
Childhood Africa Foundation School, Obinze

Abstract

This research work focuses on Electronic Information Resources and their impacts on the undergraduate students of Imo State University Library, Owerri Library. Four specific research objectives and four research questions were posed to guide the study. The study adopted survey research design. The study was conducted in Imo State University Owerri Library. The population of this study is 3,344 registered users of the library. The sample for the study was 357. Taro Yamane's (1969) statistical formula was used to determine the sample size of 357. The instrument used in collecting data for the study was rating scale tagged "Electronic Resources and their Impact on the Academic Library (ERIAL)". The data collected were analysed using mean scores. The findings revealed among others that e-journals, e-books, e-theses, e-dissertation, online database, e-magazines and e-dictionaries are available in the library studied; e-journals, e-books, e-theses, e-dissertation, online database, e-magazines and e-dictionaries were relatively used at high extent by the students in the library studied. Based on the findings, it was therefore recommended among others that Imo State Government should allocate sufficient fund to the university libraries in order to maintain subscription rate of electronic resources as well as acquire other enhanced electronic information resources used by the students; and library staff should always make electronic information resources accessible to students so as to enable them satisfy their information needs and to maintain high extent of use.
Keywords: Libraries, information resources, Electronic Information Resources, Students

Introduction

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Libraries are organized information centres established to acquire, organize, preserve, and disseminate information resources to meet the diverse informational, educational, research, and recreational needs of their users. They serve as vital institutions for knowledge creation, preservation, and dissemination by providing access to a wide range of information resources that support learning, research, decision-making, and personal development (Mada, 2025). Libraries are often regarded as important centres of knowledge because they facilitate access to information and contribute significantly to intellectual and societal advancement.

Libraries provide users with both print and electronic information resources, including books, journals, newspapers, reference materials, databases, and other digital resources. Through these collections, they support information access, lifelong learning, scholarship, and research activities. Modern libraries have evolved from traditional repositories of printed materials to dynamic information centres that utilize information and communication technologies to provide efficient and timely access to information resources. According to Mone and London (2018), libraries remain indispensable institutions for promoting education, research, innovation, and knowledge development in society. They promote knowledge through the provision of information resources.

Information resources refer to all materials that provide information to library users. They exist in print and electronic formats. Print resources include textbooks, monographs, journals, newspapers, and reference materials, while non-print resources

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include microforms, CDs, DVDs, and other audiovisual materials. Aguinis (2023), observed that in modern libraries, electronic information resources (EIRs) have become increasingly important due to technological advancement and improved access to digital information.

Electronic information resources include e-books, e-journals, online databases, institutional repositories, and internet-based learning platforms. These resources have transformed library services by improving access to current and global information. According to Adeyemi and Olatunji (2023), electronic resources enhance research productivity, teaching effectiveness, and student academic performance by providing timely and relevant information. Similarly, Lopata (2015) noted that electronic information resources reduce barriers to information access and support efficient knowledge dissemination in academic environments. They play major role in meeting the information needs of the library users.

Despite their advantages, the use of electronic information resources is affected by several challenges such as inadequate funding, poor internet connectivity, insufficient ICT infrastructure, lack of skilled personnel, and unstable power supply. These constraints limit effective utilization of electronic information resources in many libraries (Mada, 2025). Consequently, libraries must invest in infrastructure development, staff training, and improved ICT support systems to maximize the benefits of electronic information resources for academic work.

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Libraries remain vital to higher education, and their effectiveness largely depends on the availability and efficient use of both print and electronic information resources. Strengthening access to electronic resources is therefore essential for improving teaching, learning, and research in modern institutions.

Statement of the Problem

Libraries and information centres are established to provide timely and effective access to information resources that support education, research, and knowledge development. With the rapid advancement of Information and Communication Technology (ICT), electronic information resources have become an integral component of modern library services. These resources, which include e-books, e-journals, online databases, institutional repositories, and internet-based information sources, have transformed the way information is stored, accessed, and disseminated in libraries and information centres.

Despite the increasing adoption of electronic information resources in libraries, concerns remain regarding the extent to which these resources have impacted library operations, information service delivery, and user satisfaction. While electronic information resources are expected to enhance access to current information, improve research productivity, facilitate resource sharing, and increase the efficiency of library services, their effectiveness may be hindered by challenges such as inadequate funding,

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poor internet connectivity, insufficient ICT infrastructure, erratic power supply, and inadequate user and staff competencies.

Research Questions

The following research questions were posed to guide the study.

1. What are the types of electronic information resources used in Imo State University, Owerri Library?
2. To what extent do students use electronic information resources in the library studied?
3. What is the impact of electronic information resources in the library studied?
4. What are the factors affecting effective use of electronic information resources in the library studied?

Literature Review

Electronic Information Resources (EIRs)

Electronic information resources refer to information materials that are stored in digital formats and accessed through electronic devices such as computers, smartphones, and tablets. These resources require internet connectivity or digital platforms for retrieval and use (Okafor, & Ukwuoma, 2018). According to Njoku and Osuagwu (2026), electronic information resources are information-bearing materials that are accessed through electronic means. They have become an essential part of modern library and information centres' services due to their speed, accessibility, and vast information coverage.

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These resources have become indispensable tools for learning, teaching, and research (Togia & Tsigilis as cited in Egbuchu & Osuagwu, 2023). Electronic information resources include e-books, e-journals, online databases, institutional repositories, and multimedia materials. Toney (2014) observed that electronic information resources help reduce physical storage challenges while ensuring faster and more efficient access to information. They also support the digitization of library collections, thereby improving information preservation and dissemination.

The evolution of ICT has significantly transformed how information is created, stored, and shared. Johnson et al. (2012) noted that electronic information resources have revolutionized scholarly communication by enabling real-time access to global information networks. Electronic information resources eliminate geographical barriers, making information accessible to users regardless of location.

In addition, electronic resources have become essential tools for teaching, learning, and research in academic institutions. According to Aguolu and Aguolu (2002), they complement traditional print resources and expand the scope of information access for library users. More recent studies confirm that electronic information resources are now indispensable in modern academic environments due to their versatility and accessibility (Adeyemi & Olatunji, 2023). They play major role especially on the aspect of providing updated information that will enable users' information needs to be met.

Types of Electronic Information Resources Used in Libraries

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Electronic information resources used in libraries exist in various formats and platforms designed to support diverse information needs. These include online databases, e-books, e-journals, CD-ROMs, digital libraries, institutional repositories, and web-based learning platforms. Akanwa (2016) explained that electronic information resources represent all information materials in digital formats that can be accessed through computers and telecommunication systems. There is need for internet connection to have access to them.

These resources also include reference tools such as online encyclopedias, dictionaries, indexing services, and abstracting databases. Chisenga (2015) identified commonly used electronic information resources in libraries to include e-books, e-journals, e-theses, and e-dissertations, all of which support academic research and learning.

In modern libraries, electronic information resources are integrated into library management systems such as Online Public Access Catalogues (OPAC) and discovery tools. This integration allows users to search, retrieve, and access information seamlessly. The expansion of internet technologies has further enabled libraries to provide remote access to digital resources, making information available beyond physical library spaces (Mada, 2025). Truly, electronic information resources have become central to library operations, enabling faster access to scholarly materials and improving service delivery efficiency.

Extent of Use of Electronic Information Resources in Libraries

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The use of electronic information resources in libraries has increased significantly due to advancements in technology and improved internet access. Students and researchers increasingly prefer electronic information resources because of their convenience, speed, and ability to provide up-to-date information (Chisenga, 2015). They are also preferred due to the fact that they are easily accessible. In search for information from electronic information resources, links to other related documents that can provide one with the needed information are also made available.

Electronic databases and online journals provide full-text access to scholarly materials, which enhances research quality and academic performance. The emergence of digital libraries has transformed traditional library services into virtual systems that allow users to access information anytime and anywhere. Aguolu and Aguolu (2002) further observed that electronic resources have significantly improved library usage patterns by increasing the frequency and diversity of information access. However, the extent of use is influenced by factors such as user skills, availability of ICT infrastructure, and awareness of electronic resources.

Despite challenges, electronic information resources remain highly valuable in academic environments as they support independent learning, research productivity, and academic collaboration (Adeyemi & Olatunji, 2023). When properly considered and provided, users information needs can easily be attended to.

Impacts of Electronic Information Resources in Libraries

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Electronic information resources have had a profound impact on the operations and services of libraries and information centres. They have transformed traditional library functions such as cataloguing, reference services, and document delivery into automated and digital processes (Njoku and Osuagwu, 2026). These resources have also enhanced access to global knowledge networks, enabling libraries to provide real-time information services to users. Electronic resources improve efficiency in information storage, retrieval, and dissemination, thereby reducing reliance on manual processes. Furthermore, Singh and Kaur (2019) noted that electronic information resources improve user satisfaction by providing quick, flexible, and diversified access to information. Libraries have also evolved into hybrid and digital environments where physical and electronic resources coexist.

The impact of electronic information resources extends to teaching and research, as they enable students and staff to access current academic materials, engage in online learning, and collaborate globally. This transformation has repositioned libraries as dynamic information centres in the digital age (Adeyemi & Olatunji, 2023). They are important for the modern day libraries.

Factors Affecting Effective Use of Electronic Information Resources in Libraries

Despite the benefits of electronic information resources, their effective use in libraries and information centres is constrained by several challenges. One major challenge is inadequate funding, which limits the acquisition, maintenance, and upgrading of ICT infrastructure (Igbo, Ibegbulam, Asogwa & Nwabuisi, 2022). Also, Imo and Igbo as cited in

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Njoku and Osuagwu (2026) stated that that libraries are poorly funded in Nigeria which in turn affect their services to the public. In addition, Nwankwo and Okoro (2023) identified high cost of subscription to digital databases and limited institutional budgets as often restrict the availability and sustainability of EIRs in many academic libraries.

Poor telecommunication infrastructure also affects internet connectivity and restricts access to online resources. Many academic libraries experience slow or unreliable internet services, which hinders effective use of electronic databases and platforms (Major, 2011). When there is no strong and steady internet connection, access to these resources becomes difficult.

Another critical challenge is the shortage of skilled personnel capable of managing and maintaining electronic information systems. Dazie (2011) emphasized that ICT-based library services require trained professionals to ensure effective implementation and user support. Without these ICT trained personnel, access to these resources become difficult in libraries.

Additionally, adaptability issues among users and staff remain a concern, as many lack sufficient ICT literacy skills to fully utilize electronic resources. Epileptic power supply further worsens the situation, as continuous electricity is required for optimal functioning of electronic systems (Ubah, 2015). Without power supply, the electronic gadgets will not function which will also affect the resources in them.

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These constraints collectively reduce the effectiveness of electronic information resource utilization in libraries and information centres, particularly in developing countries. Addressing them requires improved funding, infrastructure development, staff training, and stable power supply systems.

Methodology

The study adopted survey research design. The study was conducted in Imo State University Owerri Library. The population of this study is 3,344 registered users of the library. The sample for the study was 357. Taro Yamane's (1969) statistical formula was used to determine the sample size of 357. The instrument used in collecting data for the study was rating scale tagged "Electronic Resources and their Impact on the Academic Library (ERIAL)". The data collected were analysed using mean scores.

Results and Discussion

Data Analysis and Interpretation

Research Question 1: What are the types of electronic information resources available in library studied?

Table 1: Types of Electronic Information Resources Available in the Library Studied

N=308

S/N	ITEMS	SA (4)	A (3)	D (2)	SD (1)	Total	Mean X	Decision Rule
1	E-journals	97 388	91 273	87 174	38 38	308 863	3.8	Positive
2	E-books	123 492	90 270	65 130	30 30	308 922	3.0	Positive
3	E-theses	104 416	127 381	35 70	42 42	308 909	3.0	Positive
4	E-dissertation	135 540	97 291	54 108	22 22	308 961	3.1	Positive

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5	Online data base	91 364	142 426	63 126	12 12	308 928	3.0	Positive
6	E-magazines	84 336	125 375	67 134	32 32	308 877	2.9	Positive
7	E–dictionaries	96 384	87 261	72 144	53 53	308 842	2.7	Positive

The analysis presented in Table 1 shows that e-journals (3.8), e-books (3.0), e-theses (3.0), e- dissertation (3.1), online database (3.0), e-magazines (2.9) and e-dictionaries (2.7) are the types of electronic resources available in library studied. The result reveals that e-journals were the electronic information resources mainly available in the Imo State University library. All other media e-sources are also positive, signifying that they are available in the library studied.

This finding is in agreement with the finding of Akanwa (2016) who identified e-serials, e-database web resources and e-journals and e-book as part of electronic information resources. It is also in line with the findings of Chisenge (2015), who noted that the types of electronic information resources include e-journals, e-books, e-theses, e-dissertation, online database, e-magazines and e-dictionaries among others.

Research Question 2: To what extent do students use electronic information resources in the library?

Table 2: Extent of Students Use Electronic Information Resources in the Library Studied

N= 308

S/N	**ITEMS**	**VHE (4)**	**HE (3)**	**LE (2)**	**VLE (1)**	**Total**	**Mean X**	**Decision**
1	E-journals	138 552	84 252	67 134	19 19	308 957	3.11	Positive
2	E-books	147 588	95 285	42 84	24 24	308 981	3.19	Positive
3	E-theses	123	108	59	18	308	3.09	Positive

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		492	324	118	18	952		
4	E-dissertation	132	126	27	23	308	3.19	Positive
		528	378	54	23	983		
5	Online data base	98	163	36	11	308	3.13	Positive
		392	489	72	11	964		
6	E-magazines	102	117	79	10	308	3.01	Positive
		408	351	158	10	927		
7	E–dictionaries	97	89	66	56	308	2.74	Positive
		388	267	132	56	843		

The analysis presented in Table 2 showed the extent of use of electronic information resources by students. It revealed that e-journals (3.11), e-books (3.19), e-theses (3.09), e-dissertation (3.19), online database (3.13), e-magazines (3.01) and e-dictionaries (2.74) were used in the library indicating their extents of use by the students. This result reveals that e-journals (3.11), e-book (3.19), e-theses (3.09), e-dissertation (3.19), online database (3.13), e-magazines (3.01) and e-dictionaries (2.74) are used at high extent in the Imo State University library.

This finding is in agreement with the findings of Aguolu and Aguolu (2002) who stated that the introduction of electronic information resources in the library have facilitated the use of library by the library users at a high extent.

Research Question 3: What is the impact of electronic information resources in your library?

Table 3: Impact of Electronic Information Resources in the Library

N= 308

S/N	**ITEMS**	**SA (4)**	**A (3)**	**D (2)**	**SD (1)**	**Total**	**Mean X**	**Decision Rule**
1	Enhances users satisfaction	137	103	50	18	308	3.2	Positive
		548	309	100	18	975		
2	Provision of speedy and easy access to information	105	129	33	41	308	3.0	Positive
		420	387	66	41	914		
3	Provides access to unlimited information from	99	84	72	53	308	2.7	Positive
		396	252	144	53	845		

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	different sources							
4	Provides increased flexibility	104 416	97 291	62 124	45 45	308 876	2.8	Positive
5	Facilitates the reformatting and combining of data from different sources.	113 452	98 294	67 134	30 30	308 910	3.0	Positive

The analysis of Table 3 revealed the impact of electronic information resources to the library to include; enhances users satisfaction (3.2), provision of speedy and easy access to information (3.0), provides access to unlimited information from different sources (2.7), provides increased flexibility (2,8) and facilitates the reformatting and combining of data from different sources (3.0). The result reveals that enhances users satisfaction, provision of speedy and easy access to information, provides access to unlimited information from different sources, provides increased flexibility and facilitates the reformatting and combining of data from different sources are the impact of electronic information resources to Imo State University Library.

This is in line with the findings of Singh and Kaur (2019) who opined that electronic resources enhance users satisfaction, provision of speedy and easy access to information, provides access to unlimited information from different sources, provides increased flexibility and facilitates the reformatting and combining of data from different sources are the impacts of electronic resources.

Research Question 4: What are the factors affecting effective use of electronic information resources in the library?

Table 4: Factors Affecting Effective Use of Electronic Information Resources

N = 308

S/N	ITEMS	SA (4)	A (3)	D (2)	SD (1)	Total	Mean X	Decision Rule
1	Inadequate funding of	162	92	29	25	308	3.2	Positive

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	academic libraries	648	276	58	25	1007		
2	Inadequate communication infrastructure	113 452	107 321	66 132	22 22	308 927	3.01	Positive
3	High cost of telecommunication facilities	97 388	118 354	69 138	24 24	308 904	2.9	Positive
4	General shortage of skilled information communication human resources in academic libraries.	104 416	97 291	58 116	49 49	308	2.9	Positive
5	Technophobia	49 596	106 318	19 38	34 34	308 986	3.2	Positive
6	Epileptic power supply	99 396	84 252	72 144	53 53	308 845	2.7	Positive

The analysis of Table 4 revealed that inadequate funding of academic libraries (3.2), inadequate communication infrastructure (3.01), high cost of telecommunication facilities (2.9), general shortage of skilled information communication human resources in academic libraries (2.9), technophobia (3.2) and epileptic power supply (2.7) are the factors affecting effective use of electronic information resources in the Imo State University library.

This is in line with the finding of Imo and Igbo as cited in Njoku and Osuagwu (2026) who noted that libraries are poorly funded in Nigeria which in turn affect their services to the public. Also, Igbo, Ibegbulam, Asogwa and Nwabuisi (2022) noted that the constraints to effective use of electronic resources by students include; inadequate funding of academic libraries, inadequate communication infrastructure, high cost of telecommunication facilities, general shortage of skilled information communication human resources in academic libraries, technophobia and epileptic power supply. However, Ubah (2015) identified epileptic power supply as one of the challenges facing libraries in Nigeria.

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Recommendations

Based on the findings of this study, the following recommendations were made;

1. Imo State Government should allocate sufficient fund to the university libraries in order to maintain subscription rate of electronic information resources as well as acquire other enhanced electronic information resources used by the students.
2. Library staff should always make electronic information resources accessible to students so as to enable them satisfy their information needs and to maintain high extent of use.
3. Library staff should always ensure that users have access to these electronic information resources to ensure effective use of these information resources.
4. University management should provide adequate maintenance of communication devices, provide regular power supply as well as provide well-trained library staff to guide students in the application of these electronic information resources.

Conclusion

This study examined electronic resources and their impact in Imo State University, Owerri library. The study concluded that electronic information resources have significantly improved information access, service delivery, and research activities in libraries and information centres. However, challenges such as inadequate funding, poor internet connectivity, insufficient ICT facilities, and unstable power supply hinder their effective utilization. Therefore, libraries should strengthen the provision and management

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of electronic information resources to enhance information service delivery and meet the evolving needs of users.

References

Adeyemi, T. O., & Olatunji, S. O. (2023). Human resource capacity and service delivery in academic libraries in Nigeria. *Library Philosophy and Practice*, 2023, 1–15.

Aguinis, H. (2023). *Performance management* (5th ed.). Chicago, IL: Chicago Business Press.

Aguolu, C. C. & Aguolu, T. E. (2002). *Libraries and information management in Nigeria.* Maidugiri Ed-Linform services.

Akanwa, P. (2016). Library resources. In R. U. Ononogbo and P. C. Akanwa *Basic concepts of Library practice*. Owerri: supreme publishers.

Chisenga, J. (2015). Global information and libraries in sub-saharan Africa. *Library Management,* 2 (1): 18- 27.

Egbuchu, C. & Osuagwu, H. (2023). Impact of advertisement on the use of library information resources in Federal Polytechnic Nekede, Owerri Library. *Library Philosophy and Practice Journal* (E-journal). Retrieved on 16th July, 2026 from *https://digitalcommons.unl.edu*

Igbo, H. U., Ibegbulam, I. J., Asogwa, B. E., & Nwabuisi, T. I. (2022). Provision of digital information resources in Nigerian university libraries. *Information Research, 27*(3). *https://doi.org/10.47989/irpaper936*

Johnson, S., Evensen, O. G., Gelfand, J., Lammers, G., Sipe, L., & Zilper, N. (2012). *Key issues for e-resource collection development: A guide for libraries*. International Federation of Library Associations and Institutions (IFLA).

Lopata, C. L. (2015). Performance evaluation and management effectiveness in information organizations. *Library Management, 36*(4/5), 290–301.

Mada, M. G. (2025). Investigating the challenges of information and communication technology facilities for information access in academic libraries: A case study of Kano, Kaduna and Jigawa States College Libraries. *International Journal of Research in Education and Sustainable Development, 5*(1), 8–18.

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Major, E. (2011), Electronic books: A survey of users in the UK. *A library proceedings: New information perspectives, 5* (13), P.115-223.

Mone, E. M., & London, M. (2018). *Employee engagement through effective performance management: A practical guide for managers* (2nd ed.). New York, NY: Routledge.

Njoku, I. & Osuagwu, H. (2026). Utilization of Electronic Information Resources by studenets in selected private universities in Enugu State. *International Journal of Information Resources Management*, Vol. 3(2).

Nwankwo, A., & Okoro, E. (2023). Funding challenges for e-resources in Nigerian university libraries. *Library Funding Review*, 28(4), 25-39).

Okafor, E. & Ukwuoma, C. (2012). *Electronic information resources.* A paper presented of the year-2012 national workshop for polytechnic and monotechnic Libraries 29th -30th November.

Singh, J. & Kaur, T. (2019). *Future of academic Libraries in India challenges and opportunities A paper presented at international conference academic Libraries (ICAL) held at the university of Delli,* India.

Ubah, C. N. (2015). *Impact of information communication technology in university Administration in Imo State University (1999- 2014).* A seminar paper submitted to the department of political science. Abia State University Uturu.

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