

Information Literacy Skills and Digital Information Resources: Their Role in University Students' Academic Activities

Adeniyi Michael Omotade

Mountain Top University, Nigeria
maomotade@mtu.edu.ng

Adeyemi Adewale Akinola

Mountain Top University, Nigeria
aaakinola@mtu.edu.ng

Abstract

Information literacy skills and digital information resources are essential for students' development to enhance their academic activities. This study examined information literacy skills and digital information resources on academic activities of University Students in Nigeria. Survey research design was adopted for the study. The population for this study comprised 7020 students. 5,324 from Lead City University and 1,696 from Mountain University. Stratified sampling technique was adopted. The sample size was 400 respondents. Data were analyzed using descriptive and inferential statistics. The result shows that Information literacy skills enable students to recognize different methods of accessing electronic 163 (41.7%); ILS enable students to judge the accuracy and authenticity of website information 145 (37.1%). Majority of the students fully utilized internet access 197 (47.8%), computer system and personal data 178 (45.8%). The students' level of information literacy and their use of digital information resources influence their academic activities. The library management should strive to obtain up-to-date digital resources, provide extensive internet access bandwidth, and ensure an ample supply of computer systems and electronic reference sources.

Keywords: Information literacy skills, digital information resources, students, university

Introduction

Information is crucial for individuals, societies, associations, and groups to function effectively. Without access to relevant information, they may operate at a diminished capacity below expected standards. Information can be disseminated through various resources, including both printed and non-printed formats. Printed resources encompass materials like books, journals, encyclopedias, and dictionaries, while non-print resources involve information communicated through Information and Communication Technology (ICT) devices, transmitted electronically. This includes formats such as CD-ROMs, e-books, e-journals, and web-based information resources.

The rise of Information Communication and Technology (ICT) has expanded the range of information outlets accessible to people in today's digital era. Information now comes in various forms, including print and digital formats. The integration of information technology in libraries has significantly impacted how information is obtained, stored, and shared, with a growing emphasis on digital production. Presently, there's a transition occurring from printed materials to Digital Information Resources (EIR), necessitating traditional libraries to utilize Information and Communication Technology (ICT) infrastructure to provide their services. The goal of the educational system in the twenty-first century is to assist students in their quests for knowledge, especially those pursuing higher education. This method places a strong emphasis on helping students become information literate so they can use digital resources for information. This encourages motivation and provides chances for investigation, self-directed learning, creativity, assessment, synthesis, and efficient search techniques. Consequently, students are self-directed and lifelong learners since they learn how to find, download, and share material according to their interests (Ukachi, 2015). Individuals with access to various forms of information demonstrate fluency skills that ensure the knowhow and functionality of various platforms to source the information.

Information literacy skills are essential for students to develop in order to become self-sufficient lifelong learners, sharpen their critical thinking, and become successful in their academic pursuits and better researchers. The term "information literacy" refers to a variety of abilities needed to successfully and efficiently find, use, manage, and transmit information for a variety of goals, especially daily tasks and academic activities. It is described as the capacity of an individual to locate, recognize, assess, organize, and make use of data from a variety of print and digital sources for ethically performed research, problem-solving, and decision-making. It is in view of this that

the study seeks to know how information literacy skills and digital information resources can improve academic activities of university students in Nigeria.

Statement of the Problem

From the literature, as well as casual observation and interaction with a significant number of students, it appears that students are insufficiently utilising the digital information resources available in their university libraries for academic activities. This issue may be attributed to lack of commitment to improve information literacy skills among students in leveraging these resources to enhance their academic activities. If this problem is not addressed, it could negatively impact the quality of research produced and academic performance of the students. Although libraries are well-stocked with rich information resources, these resources continue to be underused (Anyim, 2020).

However, many undergraduates misuse the internet facilities provided by their institutions, opting to download local and foreign music, movies, and other non-academic materials instead of utilizing digitized information resources and online subscribed resources intended to improve their academic activities. As a result, the subscribed digitized resources remain underutilized. Furthermore, the cost of subscribing to digitized information resources databases is quite high, and both private and public institutions struggle to afford these subscriptions, yet they are still underutilized by undergraduate students.

Research Questions

1. How does information literacy skills improve students' academic activities among universities students?
2. What are the various digital information resources used by the universities students?

Literature review

Information resources necessitate specific skills for effective utilization, which are commonly referred to as information literacy skills. Digital resources, also known as e-resources, are materials available in digital format that can be accessed electronically (Ikeagwuani, 2021). The ability of users to utilize Electronic Information Resources (EIRs) may be influenced by factors such as information literacy skills or computer self-efficacy (Prangya & Rabindra, 2017).

Information literacy play a crucial role in various aspects of life decisions, spanning academic, financial, health, business, agricultural, or technical domains. Crucially, the ability of lecturers to

effectively communicate and make use of Digital Information Resources depends on their knowledge of information literacy, which has been defined by a number of scholars. Webber and Johnston (2003), cited in Ekong & Ekong, (2018) defined information literacy as the capacity of individuals to locate, be able to critically evaluate information sources, and to make efficient utilisation of information acquired in decision making and knowledge creation. Additionally, information literacy skills entails the ability of any user to be able to recognize information requirements, search for relevant resources to meet those needs, analyze, evaluate, synthesize, and communicate the resulting knowledge (Tella, 2015).

According to Dictionary of Library and Information Science, Information Literacy (IL) is defined as the proficiency in finding necessary information, which includes understanding library organization, familiarity with available resources (such as information formats and search tools), and knowledge of common research techniques (Reitz, 2010). It also encompasses the ability to critically evaluate information content, utilise it effectively, and understand the technological and socio-cultural contexts of information transmission. Information literacy is fundamental in the quest for knowledge as it involves recognizing the need for information, efficiently locating it, accurately evaluating it, effectively using it, and communicating it across different formats. Information literacy skills denotes the capacity to navigate the ever-expanding information landscape, which includes diverse sources such as professional literature, mass media, libraries, the internet, and more.

UNESCO (2009) emphasized that information literacy involves understanding one's information needs and concerns, and the capability to identify, locate, evaluate, organize, and effectively create, use, and communicate information to address issues or problems. It is essential for effective participation in the information society and is a fundamental human right related to lifelong learning. Information literacy is considered an "ongoing process" that should be supported throughout one's life, as it is a core educational goal "common to all disciplines, learning environments, and all levels of education" (Boekhorst, 2013, cited in Virkus, 2016). For library users to be competent, they must first be information literate. Being competent and information literate fosters personal growth, self-actualization, empowerment, and social inclusion, making information literacy a crucial factor in the workplace as well (Adeleke & Emeahara, 2016). UNESCO (2023) defines Information Literacy as the empowerment of individuals across diverse spheres of life to effectively seek, evaluate, utilize, and generate information to fulfill personal, social, professional, and educational objectives. However UNESCO (2023) further outlined that

information literacy necessitates proficiency in utilising information and communication technologies (ICTs) and their applications for accessing and creating information. This concept is closely intertwined with two other literacies: computer literacy (comprising ICT skills) and media literacy (comprehension of various mediums and formats through which information is conveyed). For instance, proficiency in navigating cyberspace and interpreting hypertext multimedia documents requires both technical expertise in using the Internet and literacy skills to comprehend the information presented. Information literacy transcends mere information retrieval; it encompasses the ability to discern the need for information, along with the competence to locate, evaluate, utilize, and ethically disseminate it. The Chartered Institute of Library and Information Professionals (CILIP) defined Information Literacy as the ability to recognize the necessity and purpose behind seeking information, understanding where to locate it, and mastering the skills to assess, utilize, and ethically share it (CILIP, 2018). In 2016, the Association of College & Research Libraries (ACRL) released the Framework for Information Literacy for Higher Education, which featured the following description: Information literacy comprises a comprehensive range of skills that involve thoughtfully uncovering information, comprehending the processes of information creation and assessment, and employing information to generate fresh insights and engage ethically within learning communities (ACRL, 2000).

Information literacy basically means knowing how information is created, accessed, shared, and evaluated in addition to having the mentality and abilities necessary to locate, evaluate, use, and create information in an ethical manner. Students' academic success in their particular disciplines is likely to be improved by utilizing these fundamental information literacy skills. Deepmala & Upadhyay (2021) assert that developing information literacy skills is fundamental for attaining profound understanding and acts as its principal foundation.

University library users have become more independent compared to a few years ago because they no longer need to visit the library in person to access valuable information resources. The advancement of ICT allows patrons to conveniently access Digital Information Resources (DIR) from home, work, or hostels. Additionally, Khan (2016) highlights that a wide range of electronic resources, such as databases, journals, learning materials, and hundreds of thousands of monographs, are now available nationwide. This enhances the accessibility of information and literature, thereby improving the efficiency of information services. Akanwa & Udo-Anyanwu (2017), libraries now offer various types of digital information resources, such as e-books, e-journals, preprints, e-theses, and dissertations. Research indicates that factors like computer self-

efficacy and information literacy skills significantly influence users' ability to utilize these DIRs (Prangya & Rabindra, 2017). Information technology literacy can aid in making numerous life decisions across academic, financial, health, economic, agricultural, and technical fields (Weiner, 2013). Weiner asserts that an information technology literate individual should be capable of navigating a complex problem-solving process. This involves identifying the necessary information, selecting an appropriate search strategy, locating the required information, evaluating the information obtained, interpreting and communicating the findings, and drawing conclusions based on the initial problem identified. The individual is anticipated to be a proficient and autonomous learner who immerses themselves in intellectual pursuits, confidently addresses challenges, and understands the necessary resources and strategies.

The availability of digital information resources provides consumers with new tools and apps for locating and retrieving information. Unlike traditional manual methods, which limit repeated access by different users, digital resources allow multiple users to access the same information multiple times. It is important to note that because DIRs come in various formats, they are essential for fulfilling the academic and research needs of undergraduate students in university libraries (Fabunmi, Paris, & Fabunmi, 2016). Digital resources offer access to authoritative, reliable, accurate, and timely information (Anyim, 2018). Time, space, and cost are no longer significant obstacles (Tekale & Dalve, 2012). These electronic resources enable users, especially those in higher education institutions heavily engaged in research, to access accurate and timely information (Ukpebor, 2012).

Digital information sources are materials that require electronic or computer technology to access and understand their content (IFLA, 2012). Examples include electronic databases, books, journals, online newspapers, and website content. While literate individuals can easily use traditional textbooks and other conventional information sources, effectively utilizing electronic information sources requires distinct skills.

Information literacy has been the subject of research by several writers. Some of these researches are summarized here:

The impact of information literacy skills on undergraduate students' use of digital information resources at a few federal university libraries in North-West Nigeria was evaluated by Kabir, Efe, & Bukar (2021). The study's findings demonstrated a generally high level of information literacy. It also came to the conclusion that information literacy skills are a significant predictor of

undergraduate students' use of digital information resources in a select group of federal institutions in Nigeria.

Toyo (2017) investigates information literacy skills and use of electronic resources among undergraduates at Delta State University, Abraka, Nigeria. The study found that Delta State University, Abraka undergraduate Library and Information Science students use a variety of digital resources. It also found that the respondents possess strong information literacy skills, which they use to take advantage of the millions of information available in digital resources via the internet. The study also found that undergraduate students benefit from the use of electronic resources in a number of ways, including improved academic performance overall and instructional delivery to support teaching and research activities, relatively easy to use, access to a wider range of information, improvements in general communication, and improved overall academic success and significant reliance on research work.

Ilogho & Nkiko (2014) examined the information literacy knowledge and search skills of students from five selected private universities in Ogun State, Nigeria. The study also evaluated students' ability to differentiate between various information sources and assessed the effectiveness of information literacy programs at these private universities. The results indicated that a majority of respondents had low knowledge of information literacy skills, demonstrated significant deficiencies in identifying diverse information sources, and found the information literacy programs at their institutions lacking practical components. The study concluded that robust information literacy skills are essential for knowledge acquisition in the twenty-first century and recommended that information literacy skills be integrated into the curricula of secondary and tertiary schools.

Research Methodology

The descriptive survey research design was utilized in this study, as it is one of the most effective methods for research of this type. This design seeks to create an accurate representation of respondents, events, and situations. The total population of this study was 7, 020. The sample population comprises 5,324 undergraduate students from Lead City University, Ibadan (Central Registration Unit, 2024) and 1,696 students from MountainUniversity, Prayer City Ibafo (Ceneral registration Unit, 2024). Stratified sampling technique was adopted in this study. This sampling technique was favored in heterogeneous populations because it reduces selection bias and

guarantees an accurate representation of the entire population group. The sample size of the study was 399.9 approximately 400 respondents. The sample size is considered adequate for the study and it was achieved using the Taro Yamane's formular and table sample size. A structured questionnaire was employed as the instrument for data collection. Data were analyzed using descriptive and inferential statistics.

Table 4.1: Questionnaire administration and return rate

S/N0	Institution	Return Rate
1	Lead City University, Ibadan	71.8% (281)
2	Mountain Top University, Prayer City	28.2% (111)
	TOTAL	100% (391)

Research Question 1: How does information literacy skills improve students' academic activities among universities students?

Table 1: Information literacy skills and students' academic activities

S/N	Item	4 SA	3 A	2 D	1 SD
1	My ILS enable me to put together ideas from different sources when completing my research	111 (28.4%)	144 (36.8%)	66 (16.9%)	70 (17.9%)
2	My ILS enable me to locate information in multiple choices for my research activities	139 (35.5%)	127 (32.5%)	67 (17.1%)	58 (14.8%)
3	My ILS enable me to recognize different methods of accessing digital resources for my research activities	163 (41.7%)	115 (29.4%)	53 (13.6%)	60 (15.3%)
4	My ILS enable me to compare and evaluate critically if the information collected is credible and relevant to my research activities	127 (32.5%)	135 (34.5%)	55 (14.1%)	74 (18.9%)
5	My ILS enable me to browse numerous online databases to locate relevant information resources for my research activities	129 (33%)	133 (34%)	68 (17.4%)	61 (13.6%)
6	My ILS enable me to judge the accuracy and authenticity of website information	94 (24%)	145 (37.1%)	76 (19.4%)	76 (19.4%)

Key: Strongly Agreed (SA), Agreed (A), Disagreed (D), Strongly Disagreed (SD).

Source: Field work, 2024

Table 1 revealed distribution of the influence of information literacy skills on students' research activities undergraduate students of Mountain Top University, Prayer City, Ogun State and Lead City University, Ibadan, Oyo State in South West Nigeria. Majority of the respondents strongly agreed that My ILS enable me to recognize different methods of accessing electronic 163 (41.7%) and sometimes most of the respondents agreed. My ILS enable me to judge the accuracy and authenticity of website information 145 (37.1%) and My ILS enable me to put together ideas from different sources when completing my research 144 (36.8%), while some respondents also disagreed 76 (19.4%) and strongly disagreed 76 (19.4%) that My ILS enable me to judge the accuracy and authenticity of website information. This shows that students are skilled in the use of information for their academic activities.

Research Question 2:What are the various digital information resources used by the universities students?

Table 2: Types of Digital Information Resources

S/N	Item	FUU	FAU	NOU
1.	CD ROM Databases	122 (41.2%)	165 (42.3%)	104 (26.6%)
2	Electronic Reference Sources (E-Dictionary, e-encyclopedia etc)	162 (41.4%)	140 (35.8%)	89 (22.8%)
3	Online Databases (Google Scholar, J.stor)	158 (41.4%)	134 (34.3%)	99 (25.3%)
4	Off-Line Databases (Encarta, Britannica encyclopedia)	154 (39.4%)	134 (34.3%)	109 (27.9%)
5	E-Book	166 (42.5%)	122 (31.2%)	103 (26.3%)
6	E-Journals	151 (48.6%)	131 (33.5%)	109 (27.9%)
7	Internet Access	197 (47.8%)	125 (32%)	79 (20.2%)
8	Computer System	112 (28.6%)	178 (45.8%)	100 (25.6%)
9	Online Public Access Catalogue	185 (42.2%)	118 (30.2%)	108 (27.6%)
10	Open-Source Software	182 (48.5%)	107 (27.4%)	102 (26.4%)

Key: Full Use (FOU), Fairly Use (FAU), Not Use (NOU)

Source: Field work, 2024

Table 2 revealed the distribution of the electronic resources used by undergraduate students in Mountain Top University, Prayer City, Ogun State, Nigeria and Lead City University, Ibadan, Oyo

State, Nigeria. Majority of the students fully used internet access to enhance their academic performance 197 (47.8%), and the students sometime fairly used computer system and personal data 178 (45.8%), while majority not used Off-Line Databases and E-journal 109 (27.9%) respectively. This indicate that students can access digital information resources in their university.

Discussion of Findings

The general objective of the study is to investigate the influence of information literacy skills and digital information resources use of undergraduate on their academic activities in Mountain Top University Prayer City, Ogun State and Lead City University, Ibadan, Oyo State from South West Nigeria. To achieve this general objective, some specific objectives were formulated and part of the specific objective is to examine the influence of information literacy skills on students' academic activities among Undergraduate students in the selected private universities. The study established that the students have the necessary information literacy skills to access digital information resources in meeting their academic activities, as it was revealed in the table 1. Majority of the respondents students strongly agreed and that ILS enable them to recognize different methods of accessing electronic 163 (41.7%) and most of the respondents agreed that ILS enable them to judge the accuracy and authenticity of website information 145 (37.1%) and ILS enable them to put together ideas from different sources when completing their research 144 (36.8%), This result is corroborated with the view of the Chartered Institute of Library and Information Professionals(2012) that viewed information literacy skills as the ability to recognize the necessity and purpose behind seeking information, understanding where to locate it, and mastering the skills to assess, utilize, and ethically share it. It also in line with UNESCO (2023) which ascertained that information literacy skills is the empowerment of individuals across diverse spheres of life to effectively seek, evaluate, utilize, and generate information to fulfill personal, social, professional, and educational objectives.

From the table 2 above it was obvious that majority of the undergraduate student were fully aware of the availability and the usage of digital resources in their institutions. Majority of the students fully utilized internet access to enhanced their academic performance 197 (47.8%), and the students sometime fairly used computer system and personal data 178 (45.8%), CD =ROM Databases (42.3%) (47.8%), Online Public Access Catalogue (42.2%), and Open Source Software (48.5%). This is corroborated by a study that seminarians were fully aware of usage of digital information resources (Samuel, Taiwo & Adeniyi, 2016). The result of this finding is also in line

with Ukpebor (2012), digital resources enable users, especially those in higher education institutions heavily engaged in research, to access accurate and timely information.

Conclusion

The findings suggest that the 21st century necessitates information literacy skills programs that extend beyond the academic curriculum, due to the nature of information being generated or provided in digital formats. The students' level of information literacy and their use of digital information resources influence their academic activities. The intricate nature of the digital landscape demands a thorough grasp of the multifaceted aspects of information literacy to effectively and efficiently utilize digital information resources. Hence, it is crucial to equip students with the necessary information literacy skills to navigate digital information resources proficiently. However, librarians should re-evaluate their roles in promoting information literacy and utilization of digital information resources. They need to adopt a more proactive stance in teaching information literacy principles and ensuring that students can effectively apply these principles in appropriate situations.

Recommendations

Based on the study's findings, the following recommendations are proposed to enhance undergraduate students' use of digital resources in both the university and its libraries.

1. In order to guarantee that undergraduate students have a higher level of digital literacy when enrolling in universities, Nigerian educational authorities should make sure that institutions have enough computers and digital resources facilities and lecturers made available to teach practical sessions.
2. The university administration should make internet facilities, computer workstations and other digital devices available.
3. Institutions should conduct seminars, workshops and library user education for students to enhance their information literacy skills.
4. The library management should strive to obtain up-to-date digital resources, provide extensive internet access bandwidth, and ensure an ample supply of computer systems and electronic reference sources (such as e-dictionaries and e-encyclopedias). This will enhance the frequency and quality of library resource usage by students.
5. The university administration needs to implement a backup power system to ensure a consistent power supply for the effective utilization of digital resources in the libraries.

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