

INFORMATION LITERACY SKILLS AND USE OF OPEN ACCESS RESOURCES BY UNDERGRADUATES IN TWO UNIVERSITIES IN IBADAN, OYO STATE, NIGERIA

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Abstract

The study investigated information literacy skills and the use of open access resources by undergraduates in two universities in Ibadan, Oyo State, Nigeria. A descriptive survey research design was adopted and the realised sample consisted of two hundred and twenty undergraduates drawn from the University of Ibadan and Lead City University. A multi-stage sampling technique was employed, data were collected with a structured questionnaire, and the responses were analysed using frequencies, percentages, mean, standard deviation, and the Pearson product moment correlation to test the hypothesis. The questionnaire was validated through expert review and its reliability confirmed through the Cronbach alpha coefficient, which returned values of 0.82 for the information literacy scale and 0.79 for the open access resource use scale. The results showed that the majority of undergraduates used the examined types of open access resources, as reflected by a weighted average mean of 3.12 against a grand mean of 2.50, with electronic books, electronic databases, open access theses and dissertations, and institutional repositories emerging as the most used resources. The finding that a high proportion of respondents reported daily use of open courseware is noted with caution, as this figure may partly reflect social desirability in self-reported responses, a limitation acknowledged in the study. The results further revealed a positive and significant relationship between information literacy skills and the use of open access resources by undergraduates. It was concluded that information literacy skills are essential for undergraduates to navigate and evaluate the vast array of available electronic resources, and it was recommended, among other measures, that university management organise workshops, lectures, and seminars on information literacy skills.

Keywords: information literacy skills; open access resources; undergraduates; electronic resources; academic libraries

1. Introduction

A university is an institution of higher education dedicated to advanced teaching and research. Students attend universities after completing secondary education to deepen their knowledge and develop specialised skills. In contrast to institutions that provide only basic or vocational education, universities encompass a broad spectrum of disciplines, including science, the humanities, engineering, medicine, and the social sciences, and confer degrees recognised internationally. Universities are characterised by the presence of both undergraduate students, who are pursuing their initial degree, and postgraduate students, who advance their studies through master's and doctoral programmes. Whereas postgraduate students frequently engage in specialised research, undergraduates are establishing their academic foundations and therefore require broad, reliable, and accessible materials to support their learning. Open access resources are consequently of particular significance for undergraduates, as they promote equitable access to scholarly knowledge.

Prince and Saravanan (2015) define open access resources as electronic resources available to the end user without payment, meaning that neither institution nor individual must pay to access and use them. According to the Budapest Open Access Initiative (2012), open access resources are free resources available on the internet that permit any user to read, download, copy, distribute, print, search, or link to the full texts of articles and use them for any lawful purpose without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Open access resources are therefore conceptualised in this study as electronic materials that are freely available online. They are considered among the most valuable assets in teaching, learning, and research, and it is expected that teachers and students should acquaint themselves with their use. Several factors may influence the use of open access resources, prominent among which are the information literacy skills of undergraduates.

As stated by Skyline College (2021), information literacy skills involve the capacity to locate, assess, arrange, utilise, and convey information in its diverse forms, especially in contexts that require decision-making, problem-solving, or knowledge acquisition. Majetic and Pellegrino (2018) hold that information literacy skills encompass the ability to discover information, understand how it is produced, valued, and used in creating new knowledge, and participate ethically in the learning environment. An information literate person must be able to detect when information is needed and to search, assess, and apply relevant material appropriately (Association of College and Research Libraries, 2016). Information literacy thus involves how an individual understands their engagement with the digital world and assigns meaning to the information they find, using it ethically. Undergraduates who intend to be effective users of open access resources must therefore possess information literacy skills. It is on this basis that the present study was conducted.

1.1 Statement of the Problem

The swift increase in information resources has introduced new challenges related to accessibility and effective utilisation. In addition to traditional print media, information is progressively stored in electronic formats that present their own accessibility

challenges. This ongoing growth of information, often referred to as information overload, has complicated the process of finding and using pertinent materials. Consequently, effectively utilising electronic information resources has become more demanding, as the sheer volume of sources requires that information seekers cultivate the skills needed to pinpoint and access only the most relevant and accurate information. Despite the benefits of these resources, observation affirms that their use remains low.

A factor that may be responsible for the low use of open access resources by undergraduates is a low level of information literacy skills. It has been observed that some undergraduates find it difficult to recognise their information need, locate sources, retrieve needed information, evaluate such information, and use it. As such, they may experience difficulty during the search and retrieval of open access resources, which can lead to low use. While several studies have investigated information literacy and electronic or open access resource use in Nigerian university settings, including Adebisi and Madukoma (2021) in Abeokuta, Nwalo and Babarinde (2022) in South-West Nigeria, and Buba, Song, and Abdullahi (2021) across various institutions, the specific interplay of information literacy skills with open access resource use among undergraduates in Ibadan, drawing on a comparative two-university design, remains insufficiently examined. The present study therefore addresses this gap by providing institution-specific evidence from the University of Ibadan and Lead City University.

1.2 Objectives of the Study

The main objective of the study was to investigate information literacy skills and open access resource use by undergraduates in two universities in Ibadan, Oyo State, Nigeria. The specific objectives were to determine the types of open access resources used by undergraduates; to ascertain the frequency of use of open access resources; to establish the level of information literacy skills of the undergraduates; and to examine the relationship between information literacy skills and the use of open access resources by undergraduates in the two universities.

1.3 Hypothesis

The following null hypothesis was tested at the 0.05 level of significance. There is no significant relationship between information literacy skills and the use of open access resources by undergraduates in two universities in Ibadan, Oyo State, Nigeria.

2. Literature Review

2.1 Use of Open Access Resources by Undergraduates

Open access resources represent a relatively recent method for students in Nigerian and global higher education institutions to obtain information. Oladele and Aragbaye (2022) state that open access resources have greatly benefited the international academic community, providing various advantages and serving a vital role in teaching and learning across different regions. These resources have broken down conventional obstacles to information, enabling scholars, students, and educators from various parts of the world to obtain high-quality academic content without financial or institutional limitation. They further highlight types of open access resources such as datasets, literature, and scientific research articles, alongside dissertations, directories, electronic-print

archives, digital repositories, open educational resources, search engines, and blogs.

The study conducted by Ukwoma and Onyebinama (2020) on the access and utilisation of open access resources by undergraduate students in various federal universities in South-East Nigeria indicated that students recognise open access resources and engage with them daily, as these resources are time-efficient and supply valuable literature for research. Sawyerr-George, Ogunbodede, and Cocodia (2022) likewise examined the use of open access journals by undergraduate students in library and information science at Delta State University, Abraka, with a population of four hundred and seventy-seven undergraduates and a sample representing forty-five per cent of the total. Their results indicated that the students exhibited both a high level of awareness and a significant level of usage regarding open access journals.

2.2 Information Literacy Skills and Open Access Resource Use

The level of computer and information literacy skills that undergraduate students possess may be linked to their engagement with open access resources. As Ebiefung and Okafor (2022) note, possessing information literacy skills is a key factor in the proper and efficient utilisation of electronic information resources by undergraduates. It is therefore essential for undergraduates to work diligently toward acquiring the competencies associated with being information literate, which include recognising when information is necessary and the capability to find information from various electronic sources. Research has shown that limited engagement with open access resources is primarily due to insufficient information literacy skills, and possessing strong information literacy skills is essential for selecting and obtaining relevant and current information in the digital environment (Ambrose and Ogunbodede, 2022).

Lawrence, Omehia, and Okwu (2022) explored information literacy skills and the utilisation of library resources by final-year undergraduates of the Faculty of Education at Delta State University, Abraka. The study found that varying levels of information literacy skills among final-year undergraduates significantly affect their use of information resources. It was consequently suggested, among other recommendations, that the National Universities Commission should incorporate information literacy skills as a fundamental course in universities to instil the essential knowledge required for becoming an information literate individual.

3. Methodology

A descriptive survey research design was adopted for the study. The study population comprised fifteen thousand four hundred and seventy-nine undergraduates from the University of Ibadan and six thousand three hundred and fifty-nine undergraduates from Lead City University, giving a total population of twenty-one thousand eight hundred and thirty-eight undergraduates. The University of Ibadan is a federal university established in 1948 and is the oldest university in Nigeria, while Lead City University is a private university established in 2005, both located in Ibadan, Oyo State. These two institutions were selected to provide a comparative perspective across different university types, federal and private, within the same metropolitan area, allowing for an assessment of

whether differences in institutional character are associated with differences in information literacy skills and open access resource use.

A multi-stage sampling technique was used to determine the sample size. In the first stage, three similar faculties were randomly selected from each of the two universities. In the second stage, two similar departments were randomly chosen from the three selected faculties in both universities. Finally, a sampling fraction of ten per cent was applied to each of the chosen departments, yielding a final sample of two hundred and fifty-seven undergraduates, of which two hundred and twenty returned usable instruments. A structured questionnaire was the main data collection instrument. It was validated through face and content validity procedures, with a draft reviewed by two subject experts in library and information science and one expert in educational measurement, whose comments were incorporated before administration. Reliability was established through a pilot study administered to thirty undergraduates outside the main sample, returning Cronbach alpha coefficients of 0.82 for the information literacy skills scale and 0.79 for the open access resource use scale, confirming adequate internal consistency. Simple percentages were used to analyse demographic information, descriptive statistics of frequency counts, percentages, mean, and standard deviation answered research questions one to three, and the Pearson product moment correlation tested the hypothesis at the 0.05 level of significance.

4. Results and Discussion

4.1 Types of Open Access Resources Used

The first research question sought to determine the types of open access resources used by undergraduates in the two universities. Table 1 presents the responses, expressed as frequencies, percentages, mean, and standard deviation.

Table 1. Types of open access resources used by undergraduates

Open access resource	VHU f (%)	HU f (%)	MU f (%)	NU f (%)	Mean	SD	Rank
Open access journals	48 (21.8)	80 (36.4)	73 (33.2)	19 (8.6)	2.71	.90	9
Open courseware	46 (20.9)	97 (44.1)	59 (26.8)	18 (8.2)	2.78	.87	8
Open educational resources	76 (34.5)	87 (39.5)	54 (24.5)	3 (1.4)	3.07	.80	6
Open access archives	84 (38.2)	90 (40.9)	39 (17.7)	7 (3.2)	3.14	.82	5
Electronic databases	92 (41.8)	117 (53.2)	10 (4.5)	1 (0.5)	3.36	.59	2
Institutional repositories	84 (38.2)	127 (57.7)	8 (3.6)	1 (0.5)	3.34	.57	4
Open access articles	60 (27.3)	101 (45.9)	47 (21.4)	12 (5.5)	2.93	.84	7
Open access thesis and dissertation	87 (39.5)	123 (55.9)	9 (4.1)	1 (0.5)	3.35	.58	3
Electronic books	95 (43.2)	119 (54.1)	6 (2.7)	0 (0.0)	3.40	.54	1
Total	75 (34.1)	105 (47.7)	34 (15.5)	6 (2.7)			

N = 220; weighted average mean = 3.12; grand mean = 2.50. Key: VHU = Very Highly Used, HU = Highly Used, MU = Moderately Used, NU = Not Used. Source: Authors' field survey, 2026.

Table 1 shows the various types of open access resources used by the respondents. The findings indicate that electronic books with a mean of 3.40, electronic databases with 3.36, open access theses and dissertations with 3.35, institutional repositories with 3.34, and open access archives with 3.14 are the most used resources by undergraduates at both universities. The weighted average mean of 3.12 exceeds the grand mean of 2.50, indicating that the specified types of open access resources are indeed utilised by undergraduates at the University of Ibadan and Lead City University.

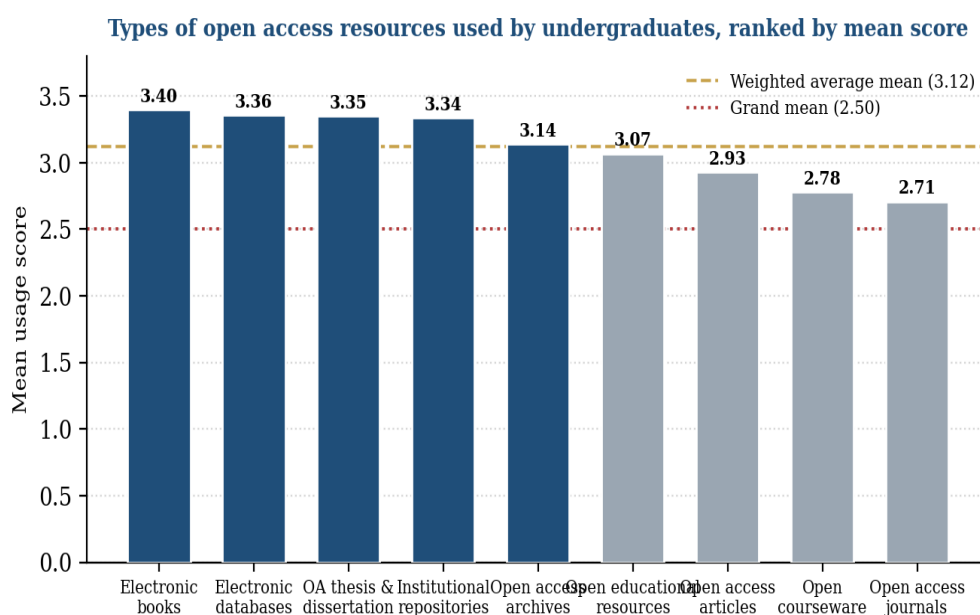


Figure 1: Types of open access resources used by undergraduates, ranked by mean usage score against the weighted average and grand means. Source: Authors' field survey, 2026.

Figure 1 visualises the ranking reported in Table 1, ordering the nine resource types by their mean usage score. The reference lines mark the weighted average mean of 3.12 and the grand mean of 2.50. The figure makes clear that text-based and repository resources, namely electronic books, electronic databases, theses and dissertations, and institutional repositories, cluster above the weighted average, whereas open access journals and courseware fall below it, a pattern consistent with the academic tasks for which undergraduates most frequently seek scholarly material.

4.2 Frequency of Use of Open Access Resources

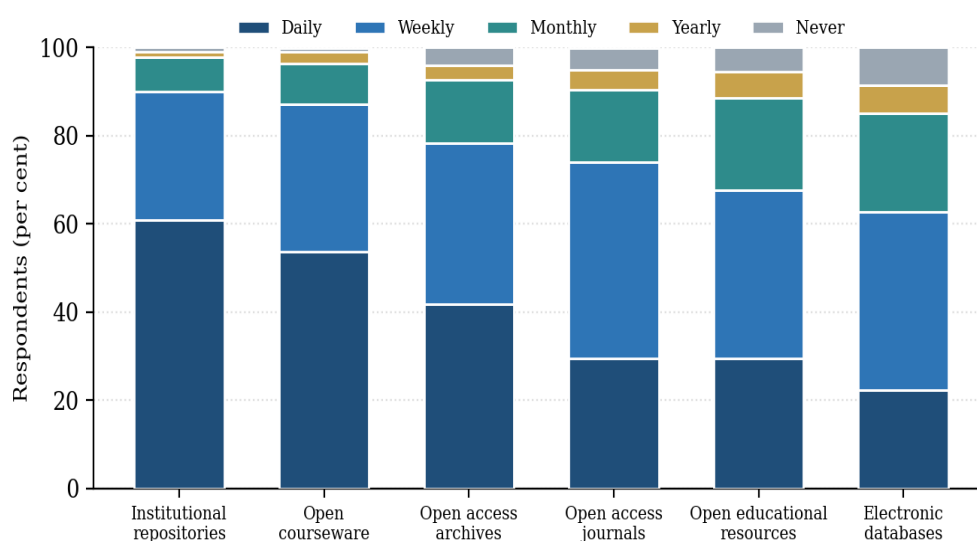
The second research question examined the frequency with which undergraduates use open access resources. Table 2 reports the distribution across daily, weekly, monthly, yearly, and never categories.

Table 2. Frequency of use of open access resources by undergraduates

Open access resource	D f (%)	W f (%)	M f (%)	Y f (%)	N f (%)	Mean	Rank
Open access journals	65 (29.5)	98 (44.5)	36 (16.4)	10 (4.5)	11 (5.0)	3.89	4
Open courseware	118 (53.6)	74 (33.6)	20 (9.1)	6 (2.7)	2 (0.9)	4.36	2
Open educational resources	65 (29.5)	84 (38.2)	46 (20.9)	13 (5.9)	12 (5.5)	3.80	5
Open access archives	92 (41.8)	80 (36.4)	32 (14.5)	7 (3.2)	9 (4.1)	4.09	3
Electronic databases	49 (22.3)	89 (40.5)	49 (22.3)	14 (6.4)	19 (8.6)	3.61	6
Institutional repositories	134 (60.9)	64 (29.1)	17 (7.7)	3 (1.4)	2 (0.9)	4.48	1
Open access articles	2 (0.9)	2 (0.9)	97 (44.1)	119 (54.1)	0 (0.0)	2.49	9
Open access thesis and dissertation	2 (0.9)	9 (4.1)	97 (44.1)	112 (50.9)	0 (0.0)	2.55	7
Electronic books	1 (0.5)	6 (2.7)	106 (48.2)	107 (48.6)	0 (0.0)	2.55	8
Total	59 (26.8)	56 (25.5)	56 (25.5)	43 (19.5)	6 (2.7)		

$N = 220$; average weighted mean = 3.53; grand mean = 3.00. Key: D = Daily, W = Weekly, M = Monthly, Y = Yearly, N = Never. Source: Authors' field survey, 2026.

Table 2 shows that institutional repositories and open courseware recorded the highest frequencies of daily use, at 60.9 per cent and 53.6 per cent respectively, while open access journals were most commonly accessed weekly and electronic books most commonly monthly. It is important to note that the reported daily use of open courseware at 53.6 per cent is notably high for a Nigerian university context in which internet connectivity and device access remain inconsistent. This figure may partly reflect social desirability bias, a recognised limitation of self-reported survey data, whereby respondents indicate use patterns that reflect aspirational or socially acceptable behaviour rather than verified actual behaviour. The reliance on self-reported data is acknowledged as a methodological limitation, and future research should consider triangulating self-report data with library management system access logs or learning management system records to obtain a more accurate picture of actual engagement.

Frequency of use of selected open access resources**Figure 2:** Frequency of use of selected open access resources, showing the distribution of daily, weekly, monthly, yearly, and never responses.

Source: Authors' field survey, 2026.

Figure 2 presents the frequency distribution reported in Table 2 for the six most actively used resource types. The visualisation reveals two contrasting patterns of engagement. Institutional repositories and open courseware are dominated by daily and weekly use, whereas electronic databases and journals display a more even spread across the frequency categories. The figure helps to situate the cautionary note registered above, since the prominence of daily open courseware use stands out against the more modest daily engagement reported for other resource types and invites verification against objective access records.

4.3 Level of Information Literacy Skills

The third research question sought to establish the level of information literacy skills of undergraduates in the two universities. Table 3 presents selected representative items across the seven dimensions of information literacy, comprising recognising information need, locating information, retrieving information, organising information, evaluating information, using information ethically, and communicating information.

Table 3. Information literacy skills of undergraduates (selected representative items by dimension)

Information literacy item	SA f (%)	A f (%)	D f (%)	SD f (%)	Mean	SD
I can recognise when I need information	104 (47.3)	109 (49.5)	6 (2.7)	1 (0.5)	3.44	0.57
I can express my information needs in clear terms	98 (44.5)	112 (50.9)	8 (3.6)	2 (0.9)	3.39	0.60
I know where and how to find necessary materials	95 (43.2)	115 (52.3)	8 (3.6)	2 (0.9)	3.38	0.60
I know the right search engines to use	95 (43.2)	115 (52.3)	9 (4.1)	1 (0.5)	3.38	0.58
I can search information online using retrieval tools	88 (40.0)	112 (50.9)	18 (8.2)	2 (0.9)	3.30	0.65
I know how to merge new with existing information	71 (32.3)	129 (58.6)	15 (6.8)	5 (2.3)	3.21	0.66
I can ascertain when information is from a reliable source	89 (40.4)	124 (56.4)	6 (2.7)	1 (0.5)	3.37	0.56
I can use information acquired to solve the problem	68 (30.9)	128 (58.2)	23 (10.5)	1 (0.5)	3.33	0.61
I can avoid plagiarism and use information ethically	96 (43.6)	112 (50.9)	10 (4.5)	2 (0.9)	3.31	0.61
Total (28-item scale)	82 (37.3)	119 (54.1)	17 (7.7)	2 (0.9)	2.94	0.75

$N = 220$; average weighted mean = 2.94; grand mean = 2.50. Key: SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree. Source: Authors' field survey, 2026.

To determine the level of information literacy skills, a test of norm was conducted. The scale contained twenty-eight statements measured on four response options, giving a maximum score of one hundred and twelve. Dividing the maximum by three produced an interval of approximately thirty-seven. Accordingly, scores between zero and thirty-seven indicate a low level of information literacy, scores between thirty-eight and seventy-four a moderate level, and scores between seventy-five and one hundred and twelve a high level. The findings showed that most undergraduates in the two universities possessed a high level of information literacy, as reflected by an overall mean value of 91.67.

Table 4. Test of norm on the information literacy level of undergraduates

Interval	Observed score	Level
0 – 37		Low
38 – 74		Moderate
75 – 112	91.67	High

Grand mean = 91.67; maximum score = 112; interval = $112/3 = 37$. Source: Authors' field survey, 2026.

Results in Table 3 reveal that the majority of undergraduates in the University of Ibadan and Lead City University possess a high level of information literacy skills, with an average weighted mean of 2.94 exceeding the grand mean of 2.50. On recognising information needs, the majority indicated that they can recognise when they need information and express their information needs in clear terms, with means of 3.44 and 3.39 respectively. On locating information, most respondents reported that they know where and how to find necessary materials and the right search engines to use, each with a mean of 3.38. On retrieving information, a high proportion indicated that they can search online using retrieval tools, with a mean of 3.30. On organising information, a high number reported that they can merge new information with existing thought, with a mean of 3.21. On evaluating information, a high number indicated that they can ascertain when information is from a reliable source, with a mean of 3.37. On using information ethically, the majority reported that they can use acquired information to solve problems, with a mean of 3.33, and avoid plagiarism, with a mean of 3.31.

Information literacy skill dimensions (mean scores)

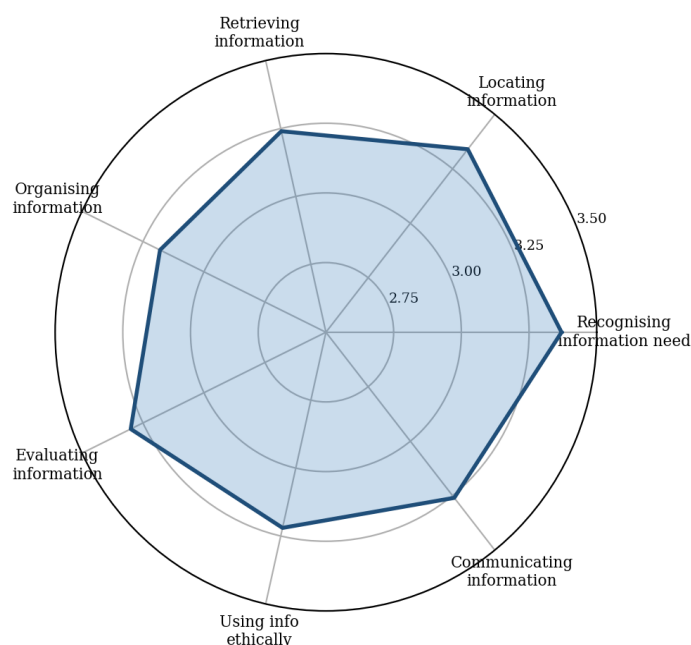


Figure 3: Information literacy skill dimensions of undergraduates, expressed as mean scores across the seven competency areas. *Source: Authors' field survey, 2026.*

Figure 3 summarises the seven dimensions of information literacy as a radar profile of mean scores. The profile is relatively balanced and uniformly high, with recognising information need and evaluating information returning the strongest scores and organising information the most modest. The visualisation reinforces the test-of-norm finding that undergraduates in both institutions possess a high overall level of information literacy, while drawing attention to the comparatively weaker dimension of synthesising and organising information as a candidate for targeted instructional attention.

4.4 Test of Hypothesis

The null hypothesis stated that there is no significant relationship between information literacy skills and the use of open access resources by undergraduates in two universities in Ibadan, Oyo State, Nigeria. The Pearson product moment correlation was used to test the hypothesis, and the result is presented in Table 5.

Table 5. Pearson correlation between information literacy skills and use of open access resources

Variable	N	Mean	SD	Df	r	p	Remark
Use of open access resources	220	28.10	3.96	219	.628	.000	Significant
Information literacy skills	220	91.67	10.46				

Correlation is significant at the 0.05 level (two-tailed). Source: Authors' field survey, 2026.

Table 5 shows the relationship between information literacy skills and the use of open access resources by undergraduates in the two universities. The result revealed that information literacy skills significantly influenced the use of open access resources, with a correlation coefficient of .628, degrees of freedom of 219, and a probability value less than .05. The null hypothesis is therefore rejected, and it is concluded that a positive and significant relationship exists between information literacy skills and the use of open access resources.

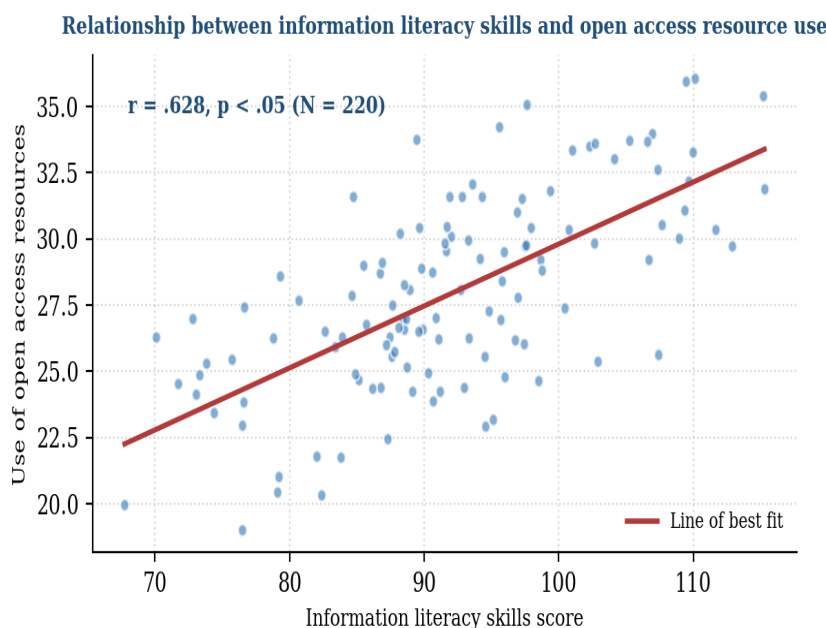


Figure 4: Scatter plot of the relationship between information literacy skills and use of open access resources, with the line of best fit. *Source: Authors' field survey, 2026.*

Figure 4 displays the positive association established by the correlation analysis. The upward slope of the line of best fit illustrates that higher information literacy scores are associated with greater use of open access resources, consistent with the correlation coefficient of .628 reported in Table 5. The visualisation conveys both the strength and the direction of the relationship, and it underscores the central inference of the study that competence in locating, evaluating, and ethically using information translates into more active engagement with open access scholarship.

5. Discussion of Findings

5.1 Types of Open Access Resources Used

The results indicated significant usage of all categories of open access resources analysed in the research, with undergraduates from the two universities predominantly utilising electronic books, electronic databases, open access theses and dissertations, and institutional repositories. This may be attributed to the particular characteristics of the students, reflected in their varied information needs and the accessibility and availability of these resources. The result aligns with the findings of Hamza, Aliyu, Maryam, and Abbas (2015), who found that electronic databases are gaining popularity over traditional print materials because of their numerous benefits.

5.2 Frequency of Use

The results indicated a significant frequency of open access resource use among undergraduates at both universities, a pattern likely linked to the support these resources provide for everyday academic tasks such as examinations, assignments, research, and seminar presentations. This aligns with the study by Sawyerr-George, Ogunbodede, and Cocodia (2022) on the use of open access journals by undergraduate students in Abraka. The finding that 53.6 per cent of respondents reported daily use of open courseware is noted with caution, since platforms such as those offering open courseware require reliable internet connectivity and device access, and infrastructure constraints in Nigerian universities are well documented. It is possible that this figure reflects social desirability in self-report responses, and future studies should consider using objective usage data to verify self-reported figures of this kind.

5.3 Level of Information Literacy Skills

The findings revealed a high level of information literacy skills across all seven dimensions among undergraduates in the University of Ibadan and Lead City University. This can be attributed to the personal efforts of students to become information literate and the quality of training and instruction imparted by their educators. The results align with the work of Ogbomo and Ambrose (2022), who assessed information literacy skills among entrepreneurial and business management students at the National Open University of Nigeria, Benin Study Centre, and found that the students possessed competencies in identifying needed information, recognising and differentiating potential information, evaluating information from various outlets, and retrieving information from the web.

5.4 Relationship Between Skills and Resource Use

The result indicated that information literacy skills have a significant relationship with and greatly influence the use of open access resources by undergraduates in the two universities. This may be because of the constant and frequent use of open access resources, which are free and unrestricted, and because their relevance and easy accessibility encourage engagement. It is therefore necessary for students to possess relevant information literacy skills in order to navigate and effectively use electronic resources. These findings are consistent with the research of Bashorun, Bashorun, and Akinbowale (2021), who assessed

information literacy skills in the use of electronic resources among medical students at the University of Ilorin. The findings have direct implications for library instruction policy at both institutions, since structured information literacy programmes, particularly those that develop skills in locating, evaluating, and ethically using open access resources, are likely to produce measurable improvements in engagement. Libraries at both institutions are encouraged to collaborate with faculties to embed information literacy instruction within the academic curriculum rather than offering it only as stand-alone workshops, aligning instruction with the specific resources and academic tasks that students encounter most frequently.

6. Conclusion and Recommendations

The utilisation of open access resources by undergraduates is significantly influenced by their level of information literacy. These skills encompass the ability to find, locate, organise, evaluate, use, and effectively communicate information. Undergraduates who wish to use open access resources efficiently and reap their benefits must possess a high level of information literacy skills. The findings revealed that the higher the level of information literacy skills possessed by undergraduates, the higher the rate at which they utilise open access resources.

It was therefore recommended that information literacy skills should be included as a core course in universities by the National Universities Commission, in order to inculcate the basic knowledge of an information literate individual in undergraduates. If students are trained and acquire basic knowledge of information literacy skills, they will be self-dependent and confident in using electronic resources. The high level of information literacy skills among undergraduates can also be maintained through personal development on the part of students, who should become more skilled in the use of open access resources. University management can further organise workshops, lectures, and seminars on information literacy skills to sustain and deepen these competencies.

Declarations

Conflict of Interest Statement

The authors declare that there is no conflict of interest with respect to the research, authorship, or publication of this article.

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This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors. It was conducted as part of the authors' academic and professional activities.

Ethical Clearance Statement

This study was conducted in accordance with established ethical principles for research involving human participants. Participation was entirely voluntary. Respondents were informed of the purpose of the study and their right to withdraw at any point. No personal identifying information was collected, and the confidentiality and anonymity of all responses were strictly maintained. Ethical approval for the conduct of this study was obtained from the appropriate institutional authority prior to data collection.

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