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INFORMATION LITERACY SKILLS AND UTILISATION OF WEB-BASED INFORMATION RESOURCES AMONG CLINICAL STUDENTS AT THE COLLEGE OF HEALTH SCIENCES, REV. FR. MOSES ORSHIO ADASU UNIVERSITY, MAKURDI

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Abstract
This study examined the information literacy skills and the utilisation of web-based information resources among clinical students at the College of Health Sciences, Rev. Fr. Moses Orshio Adasu University, Makurdi. A descriptive survey design was adopted with a population of 166 clinical students. Data were collected through a structured questionnaire and analysed using mean, standard deviation, and a one-sample t-test. Findings revealed that students generally possess moderate to high levels of information literacy, with strengths in identifying information needs and evaluating sources but weaknesses in advanced search techniques, citation practices, and differentiating scholarly sources. Students frequently use web-based resources for academic, professional, and personal purposes, but the use of open-access journals was lower. A t-test result showed no significant difference between information literacy skills and utilisation of web-based information resources ($p > 0.05$). Recommendations include integrating information literacy training into the curriculum, organising workshops on advanced search and citation, promoting open-access resources, and improving institutional subscriptions.
Keywords: Information Literacy, Web-Based Information Resources, Clinical Students, Utilisation, Digital Libraries

Introduction

In this digital age, the ability to locate, evaluate, and effectively use information stands as a crucial skill for students, researchers, and professionals alike. This era is characterised by an unprecedented expansion of information, with a vast amount of data available in diverse forms, particularly in digital formats. This digital revolution has profoundly reshaped how information is accessed, acquired, disseminated, and utilised across all disciplines, with a notable impact on the field of health sciences. Therefore, there is need for clinical students to possess information literacy skills to be able to navigate the array of information resources (Lau, et-al, 2020).

According to the Association of College and Research Libraries (2022), information literacy skills constitute a set of abilities that enable individuals to recognise when information is needed and to locate, evaluate, and use that information effectively. The ACRL further specifies that these skills are centred on content, communication, analysis, information searching, and evaluation. Key information literacy skills include: identifying information needs, locating information, evaluating information sources, organising and managing information, using information ethically and legally, synthesising and applying information, communicating information effectively, reflecting on the information process and maintaining information literacy over time.

Utilisation of online or web-based information resources involves leveraging online tools and platforms to access and use information effectively. This includes using search engines, databases, online journals and other web-based services for one's benefit. Ani, et-al. (2022) opined

that web-based resources are the electronic representation of information available in various forms such as e-books, digital libraries, online journals, magazines, e-learning tutorials and online tests. Owing to their effective presentation with multimedia tools, these e-resources have become a key source of information.

Statement of the Problem

In today's knowledge-driven healthcare environment, the ability to access, evaluate and apply accurate and relevant information is fundamental to effective clinical practice and academic success. Information literacy skills, which are the set of skills required to identify, locate, evaluate and effectively use information, are especially vital for clinical students, who must navigate complex, dynamic and often high-stakes medical information in both academic and real-world settings.

At the College of Health Sciences, Rev. Fr. Moses Orshio Adasu University, Makurdi, there is a growing concern about the extent to which clinical students are equipped with the necessary information literacy skills to effectively access, assess and utilise web-based information resources. If these concerns are not addressed, several negative consequences may arise for both the students and the wider healthcare sector, such as; poor academic performance, inadequate clinical decision-making, reduced competitiveness, poor adaptability to technological advancements, stagnation of lifelong learning, limited contribution to healthcare advancement, wasted institutional resources and ethical and legal implications.

Therefore, there is a pressing need to assess the level of information literacy skills among clinical students of the College of Health Sciences, Rev. Fr. Moses Orshio Adasu University, and to examine how these skills impact their utilisation of web-based information resources.

Objectives of the Study

The specific purposes of the study are to:

1. ascertain the level of information literacy skills of clinical students of the College of Health Sciences, Rev. Fr. Moses Orshio Adasu University, Makurdi, and
2. investigate the extent of utilisation of web-based information resources by clinical students of the College of Health Sciences, Rev. Fr. Moses Orshio Adasu University, Makurdi.

Research Questions

The following research questions were posed to guide the study:

1. What is the level of information literacy skills of clinical students of the College of Health Sciences, Rev. Fr. Moses Orshio Adasu University, Makurdi?
2. What is the extent of utilisation of web-based information resources by clinical students of the College of Health Sciences, Rev. Fr. Moses Orshio Adasu University, Makurdi?

Research Hypothesis

One hypothesis was tested at a 0.05 level of significances

HO_1: There is no significant differences between information literacy skills and the utilisation of web-based information resources of clinical students of college of health sciences Rev. Fr. Moses Orshio Adasu University, Makurdi.

Review of Related Literature

The study is anchored on Society of College, National and University Libraries (SCONUL)

Model 1999. And Technology Acceptance Models (TAM):

1. The SCONUL Seven Pillars of Information Literacy Model is a widely recognised model developed by the Society of College, National and University Libraries (SCONUL) in the UK in 1999. The framework outlines seven core elements or "pillars" that individuals must develop to become information literate. These pillars are:
2. Identify – Recognising a need for information.
3. Scope – Knowing what information is available and understanding the extent and relevance.
4. Plan – Develop effective strategies to locate information.
5. Gather – Accessing the required information efficiently.
6. Evaluate – Assessing the quality and reliability of information.
7. Manage – Organising and storing information properly.
8. Present – Applying and communicating information appropriately.

Technology Acceptance Model (Davis, 1989)

Technology Acceptance Model (TAM) developed by Davis (1989). TAM is one of the most influential theories used to explain technology adoption and utilization behaviors. The model proposes that two primary beliefs Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) determine an individual's acceptance and subsequent utilization of technology. Perceived usefulness refers to the degree to which an individual believes that using a particular technology will enhance their performance, while perceived ease of use reflects the extent to which the technology is considered free of effort (Davis, 1989). According to TAM, these perceptions influence a user's attitude toward using the technology, which subsequently affects their behavioral intention to use it, ultimately leading to actual utilization. In the context of this study, web-based information resources (WBIR) such as online journals, databases, search engines, and e-libraries are viewed as technological tools whose utilisation can be explained through the TAM framework.

This discussed the following concepts information literacy, level of information literacy skill of clinical Students, and extend of utilisation of web-based information resources

Information Literacy

Information literacy entails the capacity of an individual to sense, access, evaluate and Utilisatilise information in an ethical manner.The Association of Collage and Research Libraries (2022) define information literacy as the ability to identify the need for information, procure the information, evaluate the information, and subsequently revise the strategy for obtaining the information, using the information ethically and legally, and engaging in lifelong learning. Ullah and Ameen (2016) state that information literacy is an essential skill set that prepares students for critical thinking in college, the workplace, and everyday life. The authors further explain that students who are information literate are better equipped for today's multi-faceted information environment than students who are not.

Information literacy skills equip us with the skills to identify factual information from outdated, misleading, or false information. Consequently, information literacy skills are essential for students to locate, retrieve, select, record, organise, and present information from a variety of sources. These skills are vital for students as they enable them to efficiently filter through and identify relevant and reliable information from any source for their academic work (UNESCO, 2023). Web-based information resources, according to Sandeep and Chakravarthy (2022), are items that can be accessed remotely or locally over the Internet by using a personal computer, mainframe, or portable mobile devices.

Level of Information Literacy Skill of Clinical Students

Information literacy skills are vital to success in personal, professional, and academic life; the application of these skills extends beyond the academic realm and reaches right into our homes and workplaces. Every day we encounter an increasingly large and diverse sea of information through the Web, mass media, and published works (Hashim et-al., 2021). These pieces of information come in many different formats and from an endless number of sources. However, just because so much information is so easily and quickly available does not mean that all of it is worthwhile or even true. Information literacy skills equip us with the skills to identify factual information from outdated, misleading, or false information. In this generation of technological advancement, most information needs are met by electronic information resources due to the proliferation of digital information currently experienced as a result of various developmental activities worldwide. The complexity of electronic resources and the level of information literacy skills required cannot be overemphasized. At Rev. Fr. Moses Orshio Adasu University, Makurdi (MOAU), particularly within the College of Health Sciences, it was observed that, efforts have been made to improve students' access to digital resources through enhanced internet services and subscriptions to academic databases. Clinical students are exposed to both traditional learning materials and various web-based platforms supporting their academic and clinical training. However, disparities in how effectively these resources are utilized are evident. Some students demonstrate confidence and competence in conducting online research and accessing peer-reviewed literature, while others rely heavily on outdated sources and general search engines, reflecting varying degrees of information literacy.

Extent of Utilization of Web-Based Information Resources

The effectiveness of digital libraries depends on user acceptance, which in turn is affected by users' perceptions. The concept of 'utilisation' refers to the extent to which a product can be accessed to achieve specified goals with effectiveness, efficiency, and satisfaction within a defined scope of consumption. Utilisation of Electronic Information Resources (EIRs) also denotes the act of making actual use of the available EIRs to support research and learning goals (Diki, 2022). Onuaha and Yunisa 2020, reported that postgraduate students heavily relied on electronic databases and virtual reference services, highlighting the positive impact of Web-based library services on research skills. Daramola (2016) stated that the utilisation of online information resources in higher education institution libraries is mainly aimed at widening the variety of available information resources and improving their value by making them accessible digitally, so that users can access them at any time, regardless of their location.

Research Methodology

A descriptive survey research design was adopted. The population comprised 166 clinical students, and a total enumeration approach was used. Data were collected using a structured questionnaire and analysed using mean, standard deviation, and one-sample t-test at a 0.05 significance level.

Analysis and Interpretation

Objective 1: Extent of Utilisation of web-Based Information Resources

Table 1: Frequency of Information Literacy Skills of Clinical Students of College of Health Sciences, Rev. Fr. Moses Orshio Adasu University, Makurdi.

(n = 166)

S/no	Item Description	SA	A	D	SD	$\bar{x}$	.	Remark
1	I can clearly identify what information I need before searching	95	62	6	3	3.50	0.66	Agree
2	I am skilled at using advanced search techniques (e.g., Boolean operators, filters).	21	53	53	6	2.73	0.72	Agree
3	I critically evaluate the credibility and accuracy of online information sources.	59	83	15	9	3.16	0.80	Agree
4	I can differentiate between reliable and unreliable sources of information.	59	86	17	4	3.2	0.72	Agree
5	I can assess the credibility of a website or article before using its information.	55	66	41	4	3.04	0.82	Agree
6	I receive adequate training/support on how to access and use online information resources.	57	67	30	12	3.02	0.90	Agree
7	I am aware of different types of information sources (books, journals, websites, and government reports).	58	82	25	1	3.19	0.70	Agree
8	I verify the accuracy of information by cross-checking multiple sources.	69	76	16	5	3.26	0.75	Agree
9	I know how to use search engines (Google, Bing, etc.) effectively using keywords and I can find relevant information using online databases (e.g., Google Scholar, JSTOR, PubMed).	64	64	28	10	3.1	0.89	Agree
10	I can differentiate between scholarly, peer-reviewed sources and non-scholarly sources.	33	73	49	11	2.77	0.84	Agree
11	I know how to properly cite sources to avoid plagiarism.	38	57	57	18	2.69	0.95	Agree
	Cluster Mean					**3.06**	**0.80**	**Agree**

Table 1 presents the frequency, mean and standard deviation scores regarding the Information Literacy Skills of Clinical Students of the College of Health Sciences, Rev. Fr. Moses Orshio Adasu University, Makurdi. Each item reflects respondents' views on their information literacy skills, with decisions based on a benchmark mean value of 2.50. The cluster mean score of 3.06 (SD = 0.796) indicates that the clinical students generally demonstrate a satisfactory level of information literacy. Item 1, 'I can clearly identify what information I need before searching', has the highest mean score (3.50) and a standard deviation of 0.658; this shows that a significant majority of students can clearly identify their information needs before commencing a search. Similarly, students demonstrated strong abilities in verifying information accuracy (Item 8, Mean 3.26 and a SD = 0.754) and distinguishing between reliable and unreliable sources (Item 4, Mean = 3.20 and SD = 0.718). Item 3, 'I critically evaluate the credibility and accuracy of online information sources',

posted a mean score of 3.16 and a SD = 0.801, implying agreement among the respondents and a relatively high level of consistency in their views on evaluation skills.

However, students reported less proficiency in the use of advanced search techniques (Item 2, Mean = 2.73 and SD = 0.723), differentiating between scholarly and non-scholarly sources (Item 10, Mean = 2.77 and SD = 0.843), and citing sources correctly to avoid plagiarism (Item 11, Mean = 2.69 and SD = 0.945). These areas suggest the need for targeted instructional support and capacity-building efforts.

Although respondents generally agreed that they receive adequate training and support (Item 6, Mean = 3.02), the relatively high standard deviation (0.904) for this item indicates variability in students' experiences or access to training opportunities. Item 9, focusing on 'I know how to use search engines (Google, Bing, etc.) effectively using keywords' and 'I can find relevant information using online databases (e.g., Google Scholar, JSTOR, PubMed)', garnered a mean score of 3.1 and a standard deviation of 0.889, reflecting a very strong agreement and widespread acknowledgement of the effective use of search engines and the use of keywords to find relevant information from databases.

Objective 2: Extent of utilisation of web-based information resources

Table 2: Extent of Utilisation of Web-Based Information Resources by Clinical Students of the College of Health Sciences, Rev. Fr. Moses Orshio Adasu University, Makurdi, Nigeria.

(n=166)

s/no	Item Description	SA	A	D	SD	$\bar{x}$	σ	Remark
12	I utilise web-based databases (e.g., Google Scholar, JSTOR, PubMed, IEEEXplore).	45	80	35	6	2.99	0.79	Agree
I3	Use of web-based information resources and online libraries (e.g. library of congress, WorldCat)	36	84	41	5	2.91	0.76	Agree
14	Frequent use of digital repositories (researchgate, academia) and academic Databases (eggooglescholar, JSTOR, PubMe)	38	97	27	4	3.02	0.70	Agree
15	Easy to navigate, search and utilise web-based information resources.	49	78	35	4	3.04	0.78	Agree
16	Utilisation of web-based information resources for academic research	59	70	32	5	3.10	0.81	Agree
17	I utilize up-to-date and reliable web-based information resources	49	79	31	7	3.02	0.90	Agree
18	I utilize web-based information resources for professional work	55	67	39	5	3.04	0.83	Agree
19	Utilise web-based information resources for personal learning	55	82	24	5	3.13	0.76	Agree
20	I utilize web-based information resources for general browsing	62	68	35	1	3.15	0.77	Agree
21	I frequently use open-access journals (e.g, DOAJ, PLOS ONE)	35	84	35	12	2.86	0.83	Agree
	Cluster Mean					**3.026**	**0.79**	**Agree**

Table 2 presents the frequency, mean and standard deviation scores accessing the extent of utilisation of Web-based Information Resources by Clinical Students of the College of Health Sciences, Rev. Fr. Moses Orshio Adasu University, Makurdi. Each item presents information reported by respondents on the utilisation of web-based information resources. The results reveal a generally positive trend. With a cluster mean = 3.026 and SD = 0.785, it is evident that the students actively engage with a variety of web-based platforms.

The findings show that students regularly utilise item 28, scholarly databases such as Google Scholar, JSTOR, PubMed, and IEEE Xplore (Mean = 2.99 and a SD =0.794), as well as item 30, digital repositories like ResearchGate and Academia (Mean = 3.02 and a SD = 0.700), indicating a solid awareness of reputable academic sources. Moreover, students report ease in navigating these platforms (Mean = 3.04 and SD = 0.778), which suggests a level of digital competence and familiarity with online research tools.

Utilisation spans across different purposes, including academic research (Mean = 3.10 SD = 0.814), professional work (Mean = 3.04 and a SD =0.830), personal learning (Mean = 3.13 and SD =

0.764), and general browsing (Mean = 3.15 and SD = 0.768), demonstrating that web-based information resources are integrated into both formal and informal learning activities. Students also show confidence in the reliability and currency of the information they access online (Mean = 3.02 and SD = 0.809), which is a positive indicator of information literacy. However, the use of open-access journals such as DOAJ and PLOS ONE, though still above the agreement threshold (Mean = 2.86 and a SD = 0.833), is comparatively lower, suggesting a potential area for improved awareness or training.

Table 3: One-sample t-Test Results on Significance Difference between Information Literacy Skills and Utilisation of Web-Based Information Resources among Clinical Students of College of Health Sciences Rev. Fr. Moses Orshio Adasu University, Makurdi.

Comparison	N	Mean Difference	Std. Deviation	T	df	p-value	95% Confidence Interval	**Decision**
Information Literacy vs Utilisation of WBIR	166	0.04	0.50	0.89	165	.373	[-0.04,0.11]	Not significant

Table 3 shows one sample t-test analysis of significant between Information Literacy Skills and the Utilisation of Web-Based Information Resources of Clinical Students of College of Health Sciences, Rev. Fr. Moses Orshio Adasu University, Makurdi. The result showed no significant difference (t(165) = 0.89, p = .373), with a mean difference of 0.04 (95% CI [-0.04, 0.11]). Since the obtained t-value is far below the critical t-value of (1.974), and the value is greater than 0.05, therefore, the null hypothesis is not rejected. There is no significant difference between information literacy skills and the utilisation of web-based information resources of clinical students of college of health sciences Rev. Fr. Moses Orshio Adasu University, Makurdi.

Discussion of Findings

The first findings reveal that clinical students possess a moderate to high information literacy, with notable strengths in identifying information needs and evaluating the credibility of sources. Nonetheless, targeted interventions are needed to enhance students' skills in citation practices, the use of advanced search techniques, and the identification of scholarly resources. These areas are critical to ensuring academic integrity and the effective utilisation of web-based information resources in academic and clinical settings. The findings align with previous research (Ani et al., 2022; Ullah & Ameen, 2016), it is also aligns with the SCONUL Seven Pillars of Information Literacy, particularly the 'Identify' and 'Evaluate' pillars, which emphasize the ability to recognize information needs and judge credibility. However, the noted weaknesses correspond to gaps in the 'Plan', 'Gather', and 'Manage' stages, where students need further development.

The second findings suggest that clinical students are well-versed in utilising web-based resources for a variety of academic and professional needs. Nonetheless, strategic efforts to promote underutilised resources, such as open-access journals, may further strengthen their information-seeking behaviours and research capacities. This finding suggests that while students may possess adequate information literacy skills, these skills do not automatically translate into higher levels of web-based resource utilisation. In other words, being information-literate does not

necessarily mean students are frequently or effectively using web-based academic resources in their academic or clinical work.

This finding aligns with that of Onuoha and Yunisa (2020), who found that students use e-library resources but not to the maximum. It also align with TAM, emphasizing that perceived usefulness and ease of access must be present for skills to translate into frequent usage.

Conclusions

Clinical students demonstrate moderate to high levels of information literacy and actively use web-based resources. However, gaps remain in advanced search techniques, citation, and awareness of open-access resources. Generally, information literacy skills significantly impact the students' utilization of web-based information resources.

Recommendations

Based on the findings, the following recommendations are made specifically to the management of College of Health Sciences, Rev. Fr. Moses Orshio Adasu University, Makurdi:

1. Provide practical workshop and courses on advanced search strategies, proper citation methods, and scholarly resource evaluation.
2. Support for Open-Access Resources: Promote awareness and integration of open-access platforms (e.g., DOAJ, PLOS ONE) into curriculum and library services.
3. Improve institutional subscriptions to peer- review medical databases.
4. Encourage collaboration between librarians and faculty to support information literacy skills development.

References

Ani, O. E., Atseye, E. U., & Esin, J. E. (2022). Adoption of information literacy skills in Nigerian universities. *Library Philosophy and Practice*, https://digitalcommons.unl.edu/libphilprac/6883

Association of College and Research Libraries. (2022). *Framework for information literacy for higher education*. ACRL

Daramola, C. F. (2016). Availability and utilization of electronic resources by students in Nigerian universities. *Journal of Academic Librarianship, 42*(4), 480–488.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319–340.

Diki, B. (2022). Challenges in the use of electronic information resources by university students. *African Journal of Library, Archives and Information Science, 32*(1), 44–53.

Eisenberg, M. B. & Berkowitz, R. E. (1990). Information problem-solving: The big six skills approach to library and information skills instruction. Ablex Publication Corporation.

Hashim, H., Shuhidan, S. M., Anwar, N. & Heriyanto, H. (2021). Postgraduate students' use of electronic databases during COVID-19. *International Journal of Library Science, 10*(2), 23–31.

Sandeep, K., & Chakravarthy, R. (2022). Understanding web-based information resources. *International Journal of Digital Libraries, 23*(3), 112–125.

Ullah, M., & Ameen, K. (2016). Current status of information literacy instruction practices in medical libraries of Pakistan. Journal of the Medical Library Association, 102(4), 281-287

UNESCO. (2023). *Media and information literacy curriculum for teachers*. UNESCO.