

**INFORMATION LITERACY SKILLS, SEARCH STRATEGY AND INFORMATION NEEDS  
OF THE POSTGRADUATE STUDENTS OF FEDERAL COLLEGE OF EDUCATION  
(TECHNICAL), UMUNZE.**

**By**

**DR. ADAORA M. ORAKPOR  
and  
DEBORAH UZOMA EZEKWIBE (CLN)**

**Abstract**

The main objective of the study was to examine the information literacy skills, search strategies and information needs of the postgraduate students of Federal College of Education (Technical), Umunze; specifically, the study identified the information literacy skills acquired by the postgraduate students; found out the information search strategies used by postgraduate students; ascertained the information needs of the postgraduate students and ways for the enhancement of information literacy skills and search strategies of students. Descriptive survey design method and a total population of forty (40) Professional Diploma in Education students were used for the study. The instrument for data collection was 40 copies of questionnaire and the data was analyzed with the use of mean scores. The results revealed that information literacy skills; access to online information, evaluation of information, critical thinking and receiving trainings on information literacy, are crucial for academic success in the digital age. The result also showed that postgraduate students rely heavily on Google for research. Furthermore, the result revealed that the information needs of postgraduate students include: academic research resources, professional development, funding and grant writing resources, collaboration and networking and well-equipped library. Finally, the result recommended conducting academic research workshops for postgraduate students, organizing professional development trainings, provision of funding and grant writing resources, encouraging peer-to-peer learning among postgraduate students, equipping the digital library well to serve the postgraduate students' internet needs as ways for the enhancement of information literacy skills.

**Keywords: Information Literacy Skills, Search Strategy, Information Needs, Postgraduate Students.**

**Introduction**

Today's information environment is greatly complex which makes postgraduate students face obvious challenges in locating, evaluating, and utilizing information effectively. According to the American Library Association (2019), information literacy is the ability to find, evaluate, and use information effectively. However, research has shown that many postgraduate students lack the necessary information literacy skills to navigate online resources effectively (Kuhlthau, 2015;

Heinström, 2017). The connection between information literacy research and education research in all sectors is strong (Bruce, 2016). The connection lies in the ability of both to foster critical thinking, student-centred and technology-enhanced learning. Information Literacy researchers usually collaborate with educators to develop assessment that measure students' information literacy skills. However, many postgraduate students find it difficult to search for information relevant to their academic needs. They face challenges in evaluating sources, using academic databases, and applying critical thinking skills. Research shows that students mostly depend on familiar sources, such as Google, rather than exploring more specialized materials.

Several studies like Orakpor, Agbanu and Mokebe, (2024) have identified significant deficiencies in the information literacy skills of students. For instance, a study at Sokoine University of Agriculture in Tanzania found that many students lacked proficiency in key areas such as searching for information from electronic sources and using advanced search techniques like Boolean operators and truncation. (Lwehabura, 2016).

The need to train library user especially, postgraduate students to be information literate is widely accepted since it is impossible for them to easily search and utilize needed information without adequate skills to navigate and manipulate information tools. The postgraduate students are unique people with peculiar challenges. According to Oni, et al, (2023), they form a larger proportion of the entire population of any institution of higher learning that are into research. Majority of them are sometimes already engaged in one job or another before securing admission; which sometimes allow them to have time for research.

Additionally, a study at Nnamdi Azikiwe University, Awka advocated for improving postgraduate students' publishing literacy skills to enable them to effectively create and share content in various formats. (Odede, 2018). Furthermore, improvement of the search strategies of students in the digital era cannot be over looked because of the rapid evolution of digital technologies and information, which have created new challenges for postgraduate students. The proliferation of social media, fake news, and disinformation has made it increasingly difficult for students to evaluate online sources critically in the process of searching for their information needs

## **Statement of the Problem:**

Information literacy skill is very essential in navigating through the vast amount of information in the world. Especially on the internet. Despite the critical role of information literacy skills in academic success, postgraduate students face significant challenges in accessing, evaluating, and utilizing information effectively. It is against this background that this study aims to investigate the information literacy skills, search strategies, and information needs of postgraduate students at Federal College of Education (Technical), Umuze.

## **Research Questions**

Four research questions guided this study as follows:

1. What are the information literacy skills acquired by the postgraduate students of Federal College of Education?
2. What are the Information search strategies used by postgraduate students of Federal College of Education?
3. What are the information needs of the postgraduate students of Federal College of Education?
4. What are the ways for the enhancement of information literacy skills and search strategies of Postgraduate students?

## **Literature Review**

### **Information Literacy Skills**

In today's complex and rapidly evolving information landscape, developing key information literacy skills is crucial for academic, professional, and personal success. Information literacy encompasses the ability to efficiently and effectively locate, evaluate, organize, and use information from various sources to meet specific needs or solve problems. According to the Association of College and Research Libraries (ACRL, 2016), information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced

and valued, and the use of information in creating new knowledge and participating ethically in communities of learning.

As considered by Bainashovah, (2023) information is the ability of a person to express their information needs, search, analyze, evaluate and use ethically, which is formed by understanding information and how it (information) works, as a set of skills/abilities to work with information, identify and navigate information resources, and the skills necessary for the correct search, analysis and use of information. In particular, information literacy involves understanding the personal boundaries of others, ethical and legal issues related to access and use of information, personal qualities and development of the psycho-emotional sphere of the individual. Also, 'Information literacy is the ability to think critically and make balanced judgments about any information we find and use. It empowers us as citizens to reach and express informed views and to engage fully with society' (CILIP, 2018).

With the vast amount of information available online, students must develop skills to identify credible sources, use appropriate search strategies, and exploit various information resources. Effective information access lays the foundation for subsequent information literacy skills. Information literacy translates to the ability to use available information to accommodate your information needs in the best possible manner. This includes knowing where to find relevant information, evaluating its relevance and quality, and using it to suit your purpose, for instance creating new knowledge or enhancing your own or others' understanding of something. (Løkse et al, 2017). Evaluation of information is important in postgraduate research. This skill requires an individual to critically analyze authority, accuracy, and relevance of information sources in order to discern credible from non-credible sources, recognize biases, and identify potential misinformation. The Evaluation component must be given more attention and in more hours, for it is a complex and demanding application of critical thinking, with clear criteria for quality and solution search. The component use of information must educate the students about copyright and its fair use. This would, of course, be more efficient than purchasing expensive plagiarism detection software (Petermanec & Sebjan, 2018).

Furthermore, applying information to solve problems requires critical thinking and analytical skills. This skill as Kuhlthau (2015), stated enables individuals to think creatively, make informed decisions, and develop innovative solutions. Advanced information technologies are changing our lives and our work habits Ethical use of Information is a critical part of students' information literacy development. It is the ability to understand copyright, plagiarism, and intellectual property laws because information literacy skill ensures responsible information use, respects authors' rights, and maintains academic integrity. Ennis, (2016) opined that "critical thinking is reasonable reflective thinking that is focused on deciding what to believe or do." However, research at the Federal University of Agriculture, Abeokuta, Nigeria, revealed that postgraduate students struggled with accessing the library's online catalogue and electronic databases without assistance, indicating a need for better information literacy training. (Gulvara & Gani, 2023).

### **Search Strategies**

Search Strategies are skills required to retrieve required information from search tools. Examples are Online Public Access Catalogues- OPAC, Google, Yahoo, boolean operators, truncation search directories, and portals as well as online databases or deep web. To achieve good search results, it is necessary to use According to Yarima, (2024), search strategy techniques are designed to help users to locate the information they need effectively and efficiently. These techniques help users to find out the required information easily.

However, an information literate person knows that successful information search depends on the strategies used and not so much on the technology used. Postgraduate students require advanced search strategies to locate and evaluate relevant information efficiently. The following are some of the most common search strategies techniques that are used in various searching tools: Boolean Logic, Parenthesis, keywords, subject heading search, Phrase searching, Truncation, Wildcards, and Field searching. Buba & Muhammed (2017), Ajuwon (2011), Skyline (2021), and Onwuchekwa, (2011)

### **Information Needs of Postgraduate Students**

Postgraduate students have complex and diverse information needs, driven by their research-focused academic pursuits. According to Yahaya, (2019), Postgraduate students need academic information, information for research activities and employment-related information. Postgraduate students need access to specialized databases, journals, and other academic resources to help their academic pursuits. They also need information on new trends in their various fields of study. Moreso, Olorunfemi, (2018), said that Information needs of international postgraduate students were identified as information on the course of study and research-related needs.

## Methodology

This study adopted a descriptive survey design to examine information literacy skills, search strategies and Information needs of the Postgraduate Students of Federal College of Education (Technical), Umunze. A total population of 40 professional diploma in Education students of Federal College of Education (Technical) students was used for the study. The instrument for data collection was 40 copies of questionnaire; with 21 items to elicit responses from the population. The data collected for this study were analyzed using frequency tables and mean scores; with the adoption of a criterion mean point of (2.50).

## Research Question One:

What are the information literacy skills acquired by the postgraduate students of Federal College of Education (Technical), Umunze?

### Cluster A: Information Literacy Skills

S/N	Item Statements	SA	A	D	SD	$\bar{x}$	Decision
1.	Access to online information	15	20	3	2	3.20	Agreed
2.	Evaluation of information	12	18	5	5	2.93	Agreed
3	Critical thinking	10	15	10	5	2.75	Agreed
4	Ethical use of information	8	12	12	8	2.50	Agreed
5	Received trainings on information literacy	5	8	15	12	2.15	Disagreed

	Cluster Mean					2.71	Agreed
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Table 1 represents responses by postgraduate students on information literacy skills. The results show that access to online information was the highest item with a mean score of (3.2) which is an indication that the postgraduate students strongly agree to the item. Evaluation of Information ranked 2<sup>nd</sup> with a mean of (2.93). Critical thinking ranked 3<sup>rd</sup>, with a mean score of (2.75). Organisation of information ranked 4<sup>th</sup>, with a mean score of (2.5). All the items were accepted because they were above the mean criterion of (2.50), except item 5, received trainings on information literacy which ranked 5<sup>th</sup>, with a mean score of (2.15) which indicates that the respondents did not receive training on information literacy. The finding supports that information literacy and high-quality online-learning processes are very important skills in the digital age (Yuan, Liu & Kuang, 2021).

### Research Question Two:

What are the information search strategies used by postgraduate students of Federal College of Education (Technical), Umunze?

#### Cluster B: Information Search Strategies

S/N	Items	SA	A	D	SD	$\bar{x}$	Decision
1.	Frequent use of Google for information search.	35	5	0	0	3.88	Agreed
2.	Frequent use of OPAC for information search.	5	8	12	15	2.08	Disagreed
3	Frequent use of wildcards for information search.	3	5	18	14	1.93	Disagreed
4	Online information search using keywords.	25	10	3	2	3.53	Agreed
5	Use of Boolean Operators to filter information search	10	15	8	7	2.7	Agreed
6	Use of Truncation to broaden information	6	7	2	25	1.9	Disagreed

	search query options.						
	<b>Cluster Mean</b>					2.67	Agreed

Table 2 represents responses on information search strategies used by postgraduate students of Federal College of Education (Technical), Umuze

Students agree that they frequently make Use of Google for online search, followed by the Use of keywords and the Use of boolean operators. This is seen in their respective mean scores of (3.88), (3.53) and (2.7). However, the students disagree in items 2, 3, and 6 that they use OPAC, Wildcards and Truncation for search. This is seen in their respective mean scores of (2.08), (1.93) and (1.9)

This finding is in line with Jamali and Asadi (2010) report in Alotaibi and Johnson (2020), that academics (students, faculty members, and research staff) in their study preferred to utilise web search engines such as Google. The results confirm this, with 35 students who agree strongly that they use Google for information search.

### Research Question Three:

What are the information needs of the postgraduates of Federal College of Education (Technical), Umuze?

Cluster C: Information Needs

S/N	Items	SA	A	D	SD	$\bar{x}$	Decision
1.	Academic research resources.	35	5	0	0	3.88	Agreed
2.	Professional development.	20	12	5	3	3.23	Agreed
3	Funding and grant writing resources.	15	10	8	7	2.83	Agreed
4	Collaboration and networking.	12	8	10	10	2.55	Agreed
5.	Well-equipped and functional digital library	30	7	2	1	3.65	Agreed
	<b>Cluster Mean</b>					3.23	Agreed

Table 3 shows responses on information needs of post-graduates with a cluster mean of (3.23) shows that all the items are information needs of postgraduate students. Academic research resources



ranked 1st with a mean score of (3.88), well-equipped and functional library ranked 2nd, professional development with a mean score of 3.23 ranked 3rd, funding and grant writing resources with a mean score of (2.83) ranked 4th and collaboration and networking with a mean score of (2.55) ranked 5th.

These findings agree with what Yahaya (2019), and Olorunfemi (2018), said that students need information for academic purposes and research activities.

#### Research Question Four:

What are the ways for the enhancement of information literacy skills and search strategies for postgraduate students?

#### Cluster D: Enhancement of Information Literacy Skills

S/N	Items	SA	A	D	SD	$\bar{x}$	Decision
1.	Conducting academic research workshops for postgraduates	20	12	5	3	3.23	Agreed
2.	Organizing professional development trainings	18	10	8	4	3.05	Agreed
3	Provision of funding and grant writing resources.	15	10	10	5	3.88	Agreed
4	Encouraging peer-to-peer learning among students.	12	12	5	3	2.73	Agreed
5	Equipping the digital library well to serve the postgraduates' internet needs.	20	12	5	3	3.23	Agreed
	<b>Cluster Mean</b>					3.22	Agreed

Table 4 shows that students agree with all the items on enhancement of information literacy skills with a cluster mean score of (3.22)

Provision of funding and grant writing resources ranked the highest with a mean of (3.88) followed by conducting academic research workshops for postgraduates and equipping the digital library well to serve the postgraduates with the same meaning of (3.23). Organising professional development trainings

and encouraging peer-to-peer learning amongst students ranked 4th and 5th with mean scores of (3.05) and (2.73) respectively.

## **Conclusion**

In conclusion, this study highlights the importance of information literacy skills, effective search strategies, and adequate information resources for postgraduate students' academic success. The findings reveal gaps in students' information literacy skills, reliance on basic search strategies, and significant information needs. To bridge these gaps, the study recommends targeted interventions, including academic research workshops, professional development trainings, funding and grant writing support, and digital library enhancements. By addressing these recommendations, educators, librarians, and policymakers can foster a supportive environment for postgraduate students to develop essential skills and achieve research excellence. Ultimately, this study contributes to the ongoing conversation on enhancing information literacy and research capacity among postgraduate students, informing evidence-based practices in higher education institutions.

## **Recommendations:**

Based on the findings of the study, the following recommendations are made:

1. Educators and Librarians should design and implement targeted information literacy programs for postgraduate students, focusing on advanced search strategies, critical evaluation, and ethical use of information.
2. Institutions should organise information literacy trainings and sensitized students to attend.
3. Governments and funding agencies should provide resources to support research infrastructure and information literacy initiatives.

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