



## LEVEL OF INFORMATION LITERACY SKILLS AND USE OF DATABASES AMONG POSTGRADUATE STUDENTS OF UNIVERSITY OF NIGERIA, NSUKKA, NIGERIA

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### Abstract

**Purpose:** This study examined the level of information literacy skills and use of database among postgraduate students of University of Nigeria, Nsukka, Nigeria.

**Design/Methodology/Approach:** The descriptive survey research design was adopted for this study. Three research questions guided the study. All the eighty-one (81) registered Postgraduate students of Library and Information Science department of 2021/2022 academic session formed the population of this study. Krejcie and Morgan table of determining sample was used to select sixty-six (66) PG students. Structured questionnaire was used to collect data and copies of the questionnaire were distributed to randomly with a return rate of 80%. Data collected were analyzed and presented using frequency count and percentage.

**Findings:** The study revealed that majority of the students possesses high of social networking skill and low level digital information literacy skills. The study also showed that AGORA database is available in University of Nigeria. Frequent power failures, network failure, low bandwidth among others were identified as the major challenges. Based on the findings, the study makes the following recommendations; incorporation of information literacy across curricular and more awareness programmes should be carried out by library management.

**Keywords:** Awareness, Databases, Information literacy, Library, Nigerian Universities.

**Paper type:** Empirical research

### Introduction

Information is vital to the overall academic development of students, with the concept of global village; graduates are increasingly expected to possess information literacy skills for lifelong learning, and to prepare them for gainful employment to remain relevant in the current information age. In modern societies, information is power, whether in politics, economics or any form of human endeavor. Ovia (2003) stated, "look behind the wealth of nations and you find information, look behind the poverty of nations and you find lack of information. We can now appreciate why

countries are beginning to compete and fight over the control of information, not natural resources".

Aina (2004) asserted that information which is the analysis and synthesis of data has unquestionably become one of the most vital resources. According to him, information will be treated as an asset and the corporations that excel will be those that manage information as a resource. Still on the importance attached to information in different parts of the world, he further stated that, many research works are beginning to regard information as the fourth economic resources after land, labour and capital. In order to effectively utilize

information, information literacy skill is required.

successfully find, evaluate, and apply that information. Challenges posed by information explosion in contemporary society today suggest the need for information literacy skill in every sector. ACRL (2005) affirmed that information literacy is increasingly important in the contemporary environment of rapid technological change and multiplying information resources. Because of the increasing complexity of this environment, individuals are faced with diverse, abundant information choices in their academic studies, in the workplace, and in their personal life. Elsa, (2015) defined information literacy as the ability to discover and use various types of information. Following Elsa's definition, it is the ability to discover, search and utilize appropriate information resources which could be different databases, electronic journals or any other information source.

Information literacy programmes are needed to provide students with the techniques and strategies to develop the necessary skills to access and use the databases and also incorporates the knowledge gained to accomplish a specific purpose. Information literacy is needed by students to identify and utilize the available databases in academic environment. Doyel, (2006), explained that it is the ability of a student to recognize when information is needed, identify the various sources available, the appropriate source, evaluate the information and use it in an ethical and legal manner to make informed decisions necessary to succeed academically. Secker, (2018) opined that information literacy is the ability to think critically and make balanced judgments about any information we find and use. It empower information users to develop techniques and strategies in locate, evaluate, retrieve, and making intelligent decision with information retrieved from various databases provided for effective learning.

Database is an organized searchable electronic index of published authentic information resources. Reitz (2004) described database as a large, regularly updated file of digitized

Information literacy as described by ACRL (2013) is a set of abilities that enable people to recognize when information is needed and to information related to a specific subject or field, consisting of records of uniform format organized for ease and speed of search and retrieval and managed with the aid of database management system. Ashok (2016) affirmed that online database is a collection of interrelated data stored so that it may be accessed by authorized users with simple user friendly dialogues. Database resources usually contain materials from professional/trade publications and scholarly/academic journals, articles on business, finance, and management etc. It offers information seekers different opportunities to search and access information in variety of format such as CD ROM, offline and online databases. With database students and staff are sure of accessing quality and current information for their academic work, research on any topic and enhance their knowledge. For these reasons university libraries invest huge sum of money on database subscription, so that students and staff can gain access to various databases of different subject areas (Adamu, Mustapha and Abubakar, 2017).

Databases can be organized by the scope of the information they contain. Being aware of what this scope is can be helpful in selecting an area of information search. These resources contain the broadest range of materials and include many different subjects and disciplines. Examples of general interest databases include; EBSCO HOST, Science Direct, Proquest etc, indexes journals articles and books in most subject areas including social sciences, humanities, education, computer sciences, engineering, medical sciences, and ethnic studies. Some databases provides subject specific kinds of information such as research for life HINARI, AGORA, ARDI, OARE and GOALI.

In spite of the importance of databases to academic excellent and the huge amount of money invested on databases subscription and renewal, many studies reported, that these resources are under-utilized as result of lack of resource discovery system (Ilo and Iwundu, 2022). Studies of Adewole and Batagarawa (2011) and Tukur (2014) revealed that majority

of the students do not know how to use the database, which may be as a result of deficiency of information literacy skills. Hence, need for information literacy skills to access and utilize databases provided by the university library for academic purposes is imperative. This paper therefore is guided by the following research questions

1. What types of databases are available in the University of Nigeria Library?
2. What is the level of information literacy skills possessed by postgraduate students?
3. What are the challenges postgraduate student encounters when using databases?

### Literature Review

Information literacy is generally described as a set of abilities that enable people to recognize when information is needed and to successfully find, evaluate, and apply the information (ACRL, 2013). It is the capacity of individuals to acknowledge their information needs; find and assess the quality of information; store and retrieve information; make appropriate use of the information. Overload and explosion of information in contemporary society today suggest that information literacy skill is required in order to access and make rightful decisions on how to make use of the available information. Ojedokun and Lumade (2005) affirmed that it is the ability to locate, evaluate, manage and use information from a range of sources not only for problem solving, but also for decision making and research. Information literacy is very vital in effective utilization of databases, electronic information resources in general. It empowers individuals to be able to utilize information in a dynamic information and communication technology age.

Being information literate as explained by Watson and Johnston cited in Adeleke and Emeahara (2016) requires knowing how to clearly define a subject of investigation, select the appropriate terminologies that express the concept or subject under investigation, formulate a search strategy that takes into consideration different sources of information and various ways information is organized and data are collected and analysed for value,

relevance, quality and suitability; and successively turn information into knowledge. Scholars have carried out a number of studies based on experiences gathered on information literacy and the use of information resources. Encheva, Tamaro and Kumanova (2020) studied comparative analysis of student information literacy skills gap and the difficulty of actually assessing the learning improvement achieved by games. They found that games can be a useful tool in encouraging creativity in information literacy training.

Banki and Kumar (2019) revealed that students Grade Point Average (GPA) was at the medium standard as a result of lower ranges of information literacy skill. The study further revealed that students' GPA may be increased by 0.012 if students' information literacy skill is increased by one. They also found that information literacy skill, study hour, family income, class attendance and past academic result were the significant factors which influence student academic performance. Information literacy skills in searching for appropriate information and evaluating the validity of sources has been a major concern today. It is therefore extremely important that students learn how to carry out research and be self-reliant in the electronic information environment. Schmidt, Tin and Sanderson (2019) asserted that as the volume of information expands and becomes more available, technology changes and improves and methods of research change, it is important to become aware of the increasing complexity of skills to use information effectively in all aspects of our lives.

Shao and Purpur (2016) are of the view that "information literacy skills are part of critical thinking skills and can be learned through library instruction session and when students use library resources". They emphasized that the use of library resources and services improves students' information literacy skills and academic performance. Odede and Zawedde (2018) conducted a survey on Information Literacy Skills in using Electronic Information Resources. The study population consist of 2016/2017 postgraduate students of Delta State University, Abraka, University of Uyo, Uyo and University of Calabar, Calabar. The

study among others found that that students' use of electronic information resources is determined by their ability to evaluate information critically, hence the need for students to be well trained in the basic principles of information literacy. Librarian should wake up to their roles as information providers, be more active in the task of inculcating the principles of information literacy.

In a related survey, by Adeleke and Emeahara (2016) on relationship between information literacy and use of electronic information resources by postgraduate students of the university of Ibadan, 300 postgraduate students from seven faculties where randomly selected to form the population of the study. The study indicated low level of usage of full text database which is linked lack of search technique skills by many postgraduate students. The study also discovered significant relationship between information literacy skills and electronic information resource usage. Edem, N. . and Egbe, N (2016) study on availability and utilization of electronic resources by Postgraduate Students in a University of Calabar Library revealed that to a great extent electronic resources are available in the university library but, the resources were

underutilizes ad a result of lack of computer skills, poor network connectivity and power outage.

### Methodology

Descriptive survey involves using questionnaires and sometimes interview and generalizing the results of the sample to the population from which it is drawn (Ndagi, 1984). Since the study was interested in finding out the types of databases and level of information literacy skills possessed by PG students, survey method was adopted. The total population consist of eight-on (81) registered PG students for 2021/2022 academic session from the department of Library and Information Science. Krejcie and Morgan table of determining sample was used to select sixty-six (66) PG students. Random sampling was used to administer questionnaire to PG student available at the department of Library and Information Science as at the time of data collection. The collected data were presented using frequency table and simple percentage

### Data Presentation

The response rates of the students involved in the study are presented in Tables 1.

**Table 1. Questionnaire Response Rate**

Questionnaire Administered	F	Percentage (%)
Distributed	66	100
Returned	53	80
Unreturned	13	20

Table 1 showed the questionnaires response rate, 53 representing 80% were correctly filled

and returned while 13 questionnaire representing 20% were not returned.

**Table 2. Gender distribution**

Gender	Frequency	Percentage %
Male	22	42%
Female	31	58%
TOTAL	53	100%

Table 2 reveals that 31 (58%) of the respondents are females while 22 (42.8%) are males. This shows that PG programme in the department is dominated by female students.

**Research Question 1:** What type of databases available in the University of Nigeria Library?

**Table 3. Databases available in the university**

S/N	Variables	Yes		No	
		F	%	F	%
1	AGORA	37	70	16	30
2	ARDI	14	26	39	74

3	GOALI	12	22	41	77
4	OARE	07	13	46	87
5	HINARI	09	17	44	83

Table 3 shows responses to the types of databases available in the university library it is clear that the university have online databases including AGORA has the highest number of responded with 37 (70%), followed by ARDI

14(26%), GOALI 12(22%) while OARE and HINARI got 7(13%) and 9(17%) respectively. This implies that most of the PG students have little idea on the availability of databases in the university library.

**Table 4. What type of information literacy skills acquired?**

S/N	Variables	Yes		No	
		F	%	F	%
1	Online Biblio. Skill	05	09	48	91
2	Social Network Skill	46	87	07	13
3	Online Database Skill	41	77	12	22
4	Digital Info. Lit. Skill	46	87	07	13
5	Digital Ref. Skill	09	17	44	83
6	E-mailing Lit. Skill	46	87	07	13
7	Search Eng. Lit. Skill	18	34	35	66
8	Data Storage Lit. Skill	13	25	40	75
9	Cyberspace Skill	05	09	48	91

Table 4 indicated the type of information literacy skill which Online Bibliographic skill (OBS) and Cyberspace Skill (CSS) has the lowest response with 5(9%) while Social Networking Skill (SN), Digital Information Literacy Skill (DLS) and E-mailing Literacy Skill (ELS) have the highest number of respondents with 46(87%), 46(87%) and 46(87%) respectively.. This implies

that most of the students are more concern with the social networking skills, digital information literacy skills and e-mail literacy skills.

**Research Question 2:** What is the level of information literacy skills possessed by postgraduate students?

**Table 5 level of information literacy skills**

S/N	Variables	High		Very High		Low		Very Low	
		F	%	F	%	F	%	F	%
1	Online Biblio. Skill	27	51	14	26	09	17	03	07
2	Social Network Skill	46	87	06	11	01	02	00	00
3	Online Database Skill	11	21	11	21	27	51	04	08
4	Digital Info. Lit. Skill	18	34	16	30	10	19	09	17
5	Digital Ref. Skill	27	51	15	08	12	15	03	06
6	E-mailing Lit. Skill	36	68	15	08	02	04	00	00
7	Search Eng. Lit. Skill	30	57	12	23	09	17	02	04
8	Data Storage Lit. Skill	28	53	12	23	11	21	02	04
9	Cyberspace Skill	08	15	02	04	37	70	06	11

Table 5, reveals the level of information literacy skills possessed by PG students. Forty-six (46) respondents representing 87% indicated high level on Social networking skills, and E-mailing 36(68%). The findings also revealed that 9(17%) and 6(11%) possesses very low level in Digital information Literacy and Cyberspace skills

respectively. This implies that majority of the students were not skillful in using Digital information and Cyberspace skills.

**Research Question 3:** What are the challenges postgraduate student encounters when using databases?

**Table 6 What are the Challenges encountered while using Databases?**

S/N	Challenges	F	%
1	Nobody attend to me	09	17
2	Frequent power failure	49	92
3	Network failure	50	94
4	Low bandwidth/ Slow saver	47	89
5	Improper orientation programme	07	13
6	Lack of awareness	36	68
7	In sufficient databases	24	45
8	Lack of training on how to search	29	55
9	Lack of time to spend on searching	31	58
10	Unclear terminology	38	72

Table 6, sought to identify the challenges postgraduate students encounter while using databases, 9 respondents represent 17% have the view that there is no body attend to them. Frequent power failure 49(92%), network failure 50(94%) while bandwidth problem has 47(89%), improper orientation has 7(13%), lack of awareness 36(68%) and insufficient databases 24(45%). Others are lack of training on how to search with 31(58%), lack of time to spend on searching 31(58%) as well as unclear terminology with 38(72%).

#### Discussion of the major findings

It was deduced generally from the analysis of responses relating to research question one that use of databases in academic sector has been significantly slowed down as a result of lack awareness. All the databases investigated are in research for life programme, once an institution subscribe to research for life database, access will be granted for the entire five subject specific database (AGORA, HINARI, GOALI, ARDI and OARE).The study indicating unavailability suggests lack of awareness of the provided databases.The result also falls in line with those of Adeola, Femi &Lawal (2018) who reported from a related study on usage of e-resources that the pressing factors hindering maximum utilization of online databases include lack of awareness and technical difficulty of the facilities. These problems have constituted a hindrance to maximum utilization of e-resources among students. If these are allowed to persist, there will be low patronage to the library by the students, consequently, waste of limited resource for subscription of databases. This will bring about an economic and educational setback to the institution.

An examination of the level of information literacy skills possessed by postgraduate students shows that out of the nine skills studied emailing skills, data storage literacy skills, search engine literacy skills, digital reference literacy skillsand social media network skills are possessed to a high level with social networking literacy skills (87%) ranking highest. This finding is in consonant with Nowsheeba and Madhusudhan (2018) whose study revealed that postgraduate students and research scholars use social networking to a large extent mostly to connect with research scholars, sharing ideas and following other research activities. Social networking platform is for meeting and keeping in touch with other students or colleague from different parts of the world with whom communication would normally be difficult due to different location. It is interactive tools that allow students to network and remain connected. This implies that they can work and use information in social networking platform but, mostsocial media platforms are not academic database where quality scholarly research information is indexed.

The findings of the study also reveal that majority of the studentspossess low level digital information literacy skills (17%) and cyberspace skills (11%). The finding of this study corroborated with the work of Madu, (2013) who argued that a mere abundance of information will not create a more informed citizenry without a complimentary cluster of abilities necessary to use information effectively.Digital information and cyberspace skills which relates to ability to use technological tools effectively, to retrieve,

critically analyze and evaluate digital information, involve knowing how to act sensibly and appropriately online and understanding with whom to use technology and when and how to use them. These skills are essential skill every student should possess in the world of information explosion.

The result also indicated that frequent power failure, network failure, bandwidth problem and unclear terminology are the major challenges encountered by the students. Others includes: lack of training on how to search, lack of awareness and lack of time to spend on searching. This findings is in line with Adamu, Mustapha and Abubakar, (2017) whose work revealed that that, medical students of Kaduna state university encounter technical difficulties such as frequent power outage, poor network, system problem while using online databases.

Information literacy skill is very vital for all students. It enhances literature search, improves the level of students communication and how to identify different sources of information. Therefore, the library still has great role to play in creating awareness of the availability of databases in the university, through regular information literacy programmes, library weeks, user education programmes, library exhibitions, organization of seminars/symposia and workshops. It is important that Librarians should make constant contact with students and improve communication links with them. The academic departments of postgraduate students should integrate courses like library visit and orientation programmes in their curriculum as this will enhance promotion and marketing of library resources. There is need for university management to invest more on procurement of ICT facilities in the library to enable the students harnesses the gains of digital world.

### Conclusion and Recommendations

Information literacy skill has been widely acclaimed as a veritable skill for information search, retrieval and evaluation amidst information explosion age. The level of information literacy skill possessed by a learner determines the extent of use of information resources provided and as result academic excellence among student. Therefore

information handling competencies in the use of databases is considered as a necessity for optimum utilization of the databases available in the library.

In the light of the research findings, the following recommendations were made:

- Library management should subscribe for more databases and organize workshops, orientation and seminars to educate students and create awareness on available resources, information literacy and its importance.
- The management should provide adequate and reliable power supply and network facilities. Also qualified and user-friendly staff should be assigned to take care of the e-library, who will always be ready to attend to user's request at all the times.
- University management should incorporate of information literacy programmes across curricular

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