



COMPARATIVE STUDY ON INFORMATION NEEDS AND INFORMATION SEEKING BEHAVIOUR AMONG POSTGRADUATE STUDENTS OF MODIBBO ADAMA UNIVERSITY, YOLA AND FEDERAL UNIVERSITY, WUKARI

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ABSTRACT

This study compared the information needs and information seeking behaviour among Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari. The study was guided by five objectives, five research questions and two hypotheses. Survey research design was adopted for the study. The target population comprised 1974 Postgraduate Students in the two universities. Using Krejcie and Morgan's (1970) table for determining sample size, the sample size for this study was 322 and simple random sampling techniques

Introduction

Universities are established as citadels of teaching, research, learning and community services. Societal development largely depends on the quality of students and researches emanating from the universities. This could be the fulcrum upon which they are ranked based on the output of researches conducted as well as the impacts of these researches to the society. Postgraduate Students are integral part of the university environment as their researches are form part of their requirement for graduation. They constitute a large chunk of researchers who are always on the lookout for current, up-to-date and valuable that could assist in the conducting researches as well as other academic activities such as writing thesis or dissertation, research articles or seminar papers, assignment, preparing for test and examinations, solve academic and personal problems, keep current and up to date in their fields as well as career and personal development. The Postgraduate Students are unique people with peculiar challenges. They form a larger proportion of the entire population of any institution of higher learning and are basically into research. They undertake various programmes ranging from Doctorate Degree (Ph.D), Masters (MSc, MBA, MLIS, MA), and Postgraduate Diploma (PGD). Information has always been a vital resource required by students in their academic pursuit. Postgraduate Students in universities are expected to maximally utilize the university libraries as their major source of information for their research and other academic and personal activities. However, they could have variety of information needs and information seeking behavior.



was adopted in order to ensure that all members of the population had equal chances of been selected. The researcher used questionnaire for data collection which was designed using Google Form application and administered through WhatsApp platforms. The data generated from the research questions were analysed using mean and standard deviation, while, z-test was used to test the two null-hypothesis tested at 0.05 level of significance. The study has established that the information needs and information seeking behaviour of Postgraduate Students in FUW was higher than those in MAUY. Furthermore, the study has found that Postgraduate Students' level of searching skills in MAUY was slightly higher than those in FUW and the information sources of Postgraduate Students of FUW was higher those in MAUY. This study further revealed that the factors militating against information needs and information seeking behavior of Postgraduate Students in MAUY was higher than those in FUW. Hypotheses tested in the study had established that there are no significant differences in the opinions of Postgraduate Students' information needs and information seeking behaviour of MAUY and FUW. The study recommended organising library orientation programmes, developing mechanisms that could facilitate easy retrieval of information, organising massive information literacy programmes, developing collections both in printed and electronic formats that are in consonance with the information needs of the Postgraduate Students as will galvanizing financial commitment to the university libraries by their university managements.

Keywords: Information Need, Information Seeking Behaviour, Postgraduate Students, Modibbo Adama, Federal, University, Yola, Wukari.

Information need is the individual's concept of what information he or she needs to satisfy a more basic need, that is, to achieve a goal. According to Okonoko, Njideka and Mazah (2015), information need (or need for information) is a factual situation in which, there exists an inseparable interconnection with "information" and "need", information needs can therefore be said to be the amount of positive information an individual or group of users need to have for their work, recreation and many other like satisfaction. Thus, information need arise wherever individuals find themselves in a situation requiring knowledge to deal with the situation as they see fit. According to Kuhlthau as cited in Onuoha and Obiako (2013), information needs is understood in information science as stemming from a vague awareness of something missing and as culminating in locating information that contributes to understanding and meaning. Information need is a result of an intense desire to acquire knowledge in order to reduce gap in knowledge. However, information need is characterised mostly by the information seeking behaviour of the person in need of information.

Information Seeking Behaviour is a complex information and communication activity requiring access to diverse information system and resources in order to deal with work related personal and social information problems (Nagar & Munshi, 2014). Biswas (2021) sees information seeking behaviour is defined as a human habit that involves searching for information in a deliberate



manner in order to fill a gap. According to Kumari and Sharma (2021), information-seeking behaviour denotes a set of actions that users undertake to obtain access to desired information through library services. Information-seeking is a broad term, as it involves expression of information needs, seeking of information, evaluation and selection of information, and use of this information to satisfy the users personal, career goals and institutional goals. Awareness of information needs and information-seeking behaviour of different users is useful for planning, implementation, and operation of library and information system and services.

The Information Seeking Behaviour is mainly concerned with who need what kind of information and what reason, how information is found, evaluates and used and how these needs can be identified and satisfied. The Information Seeking Behaviour refers to the strategies and actions under taken to located discrete knowledge elements. It is concerned with the integrative utilization the three basic resources: (i). people (ii) information and (iii) system. According to Chandra and Achary (2014), information seeking behaviour is a broad term which involves a set of actions that an individual takes to express information needs, seek information, evaluate and select information, and finally uses this information to satisfy his/her information needs. Various factors may determine the information seeking behaviour of an individual or a group of Individuals. It is, therefore, desirable to understand the purpose for which information is required, the environment in which the user operates users' skills in identifying the needed information, channels and sources preferred for acquiring information, and barriers to information. Ugwu, Ogbu and Aniekwe (2021) highlighted that information seeking behaviour of people varies according to their age, exposure and enlightenment, religion and even culture. It can also be influenced by the source of the information, content, medium and language of communication, time and nature of information. Interest in the information sought, authenticity of the source, motives and past experiences in similar information content do affect seeking behavior.

Modibbo Adama University, Yola (MAUY) and Federal University Wukari are located in North Eastern Nigeria. They were established in 1981 and 2011 respectively. Postgraduate Students in these universities require information for various purposes in order to excel academically and also become lifelong learners. However, numerous studies consulted by the researcher on information needs and information seeking behaviour were conducted in Southern Nigeria and part of North Central Nigeria. Example of these studies include Sambo, Akanbi and Shehu (2021), Oyadeyi (2014), Nwone and Mutula (2018), Fasola and Olabode (2013), Onuoha and Obiako (2013), Makinde, Jiyane and Mugwisi (2020) and Okoh and Ijiekhuamhen (2014) among others. None of the studies focused on North Eastern Nigeria. It is in light of this that this study was carried out to cover this gap with the objectives of examining the information needs and information seeking behaviour among Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari.

Statement of problem

Information is a vital resource needed by Postgraduate Students to perform well in their academic pursuit such as writing thesis or dissertation, research articles or seminar papers, assignment, preparing for test and examinations, solve academic and personal problems, keep current and up to date in their fields as well as career and personal development. They need current, up to date and current information in order to excel in their academy as well as achieve maximally in their



career and personal development. Preliminary investigation conducted by the researcher revealed that Postgraduate Students in Modibbo Adama University, Yola (MAUY) and Federal University, Wukari (FUW) spent long hours in their university libraries and online in their quest for information that could assist in their academic activities. However, the type of information sought, the purpose of seeking information, sources of information searched and problems encountered during information seeking remain largely unknown. This unknown phenomenon affects the university libraries and the Postgraduate Students in the sense that the libraries might not effectively meet the information needs of the students, and as such students' waste time in unfruitful search that could have been used for their study. For this reason, this research is aimed at identifying problems faced by the students of Modibbo Adama University, Yola and Federal University, Wukari in terms of information needs and information seeking behavior, its equally aimed at finding information searching skills, information sources as well as challenges encountered by Postgraduate Students in their quest to meet their information needs.

Objectives of the Study

The main objective of this study was to examine the information needs and information seeking behavior of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari. The specific objectives were to:

1. Ascertain the information needs of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari.
2. Examine the information seeking behavior of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari.
3. Determine the level of information searching skills of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari.
4. To determine the information sources of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari.
5. Identify the factors militating against information needs and information seeking behavior of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari.

Research Questions

The study was guided by the following research questions:

1. What are the information needs of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari?
2. What is the extent of information seeking behavior of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari?
3. What is the level of information searching skills of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari?
4. What are the information sources of information sources of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari?



5. What are the factors militating against information needs and information seeking behavior of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari?

Research Hypothesis

Ho₁: There is no significant difference in the opinions of Postgraduate Students' information needs of Modibbo Adama University, Yola and Federal University, Wukari.

Ho₂: There is no significant difference in the opinions of Postgraduate Students' information seeking behaviour of Modibbo Adama University, Yola and Federal University, Wukari.

Review of Related Literatures

Information Needs of Students

Information needs refers to a gap in person's knowledge which prompt searching through various sources. Information needs varies among students due to several factors. In Asia, Ahmat and Kamarudin (2014) studied information seeking behaviour and information needs satisfaction among Postgraduate Students in Universiti Teknologi MARA (UiTM), Malaysia. The study was conducted using a quantitative research method, 303 full-time and part-time students from Masters and Ph.D. programs participated in the study. Descriptive statistics was used in analyzing the data collected. It was found that the main information needs of Postgraduate Students were the need to fulfill research requirements ($M=2.19$). Result for information needs satisfaction through their ISB of information sources showed the mean scores between 4.96 and 3.11. Most of the respondents were satisfied using internet search engine as their formal source ($M=4.96$; $SD=0.996$) followed by citations ($M=4.50$, $SD=0.992$), while for informal sources, respondents were somewhat satisfied on consultation with experts in the field with a mean score of 4.61 ($SD=1.014$). Hypothesis tested in the study found that there was a positive relationship with the large correlation between ISB (Independent Variable) and Information Needs Satisfaction (Dependent Variable) ($r=.737$, $p<0.01$). The correlation between formal source and information needs satisfaction showed that there was a positive relationship with a large correlation ($r=.692$, $p<0.01$) while for the informal source, it was found that there was a positive relationship with a medium correlation ($r=.460$, $p<0.01$).

Kumar and Jadab (2016) studied information seeking behavior of law students in the digital Age at University of Dhaka, Bangladesh. The study used survey methodology with the help of structured questionnaire comprising of dichotomous, multiple choice, rating and opinion questions. Students of Faculty of Law at University of Dhaka were used as the population in the study. Questionnaires were distributed to the study sample between October and December, 2015 for collecting the data. Among the distributed questionnaire, 183 were returned usable (response rate of 91.5%). Collected data were analysed using simple descriptive statistics and SPSS version 20.0. Results revealed that the highest 45.9% of the respondents' purpose of seeking information is for the preparation of assignment, followed by 33.33% for the preparation for examination. The third highest purpose of seeking information by the respondents is for keeping up-to-date with a total of 14.21%, while 4.92% seek information for conducting legal research and only 1.64% for attending workshop or seminar.



Moreover, Humbhi, Tareen and Humbhi (2022) carried out a study to ascertain the information needs and information-seeking behavior of undergraduate students of University of Balochistan, Pakistan. Survey research method was used to collect data. A structured questionnaire was used as a data collection tool. The obtained data through questionnaires were tabulated and analysed with the help of Microsoft Excel. The study indicated that most of the respondents needed academic semester information 220(62%) for their semester work, respondents 102 (29%) needed job-related information and 90(25%) needed political information. In another study, Valizadeh-Haghi and Rahmatizadeh (2018) conducted a study on learning about the information seeking behavior of Postgraduate Students of Faculty of Allied Medical Sciences of Shahid Beheshti University of Medical Sciences, Iran. The data gathering tool included a researcher-made questionnaire which contains 26 half-closed items. The total number of M.A. and PhD students at the time of the study was 105 and 30 individuals, respectively. The collected data were analysed by SPSS Software using the indicators of frequency and percentage. The study found that the Postgraduate Students search information for preparing of professional lecture, update of professional knowledge, conducting research works, training of others and writing paper. Furthermore, Lalitlanmawii and Verma (2016) studied information seeking behaviour of Faculties and Research Scholars in School of Physical Sciences, Mizoram University, Aizawl, India. Survey method was used. Structure questionnaire were circulated to all faculty members and Ph.D. scholars of School Physical Sciences, Mizoram University in order to obtain required information with regards measure the information seeking behaviour of the faculties and research scholars. The study revealed that the all faculties seek information for teaching, while, all faculties and research scholars sought information for research purpose, writing research paper/complete research project attracted 80% of faculties and 91% of research scholars; solving course queries and updating themselves in their subject attracted 75% responses, general awareness attracted 66%, while, 50% faculties sought information to write a book, and 70% faculties & 45% research scholars sought information for discussion with professionals. Meanwhile, Chopra (2018) carried out a study to ascertain the information seeking behaviour of library users in select PG Degree Colleges of Chhattisgarh State, India. The study observed that most of the respondents (60.78%) seek information for preparing for examinations. Around 20 % do it for preparation of assignments, another 20% for preparation for career, 21% for keeping their general awareness and up-to-date and 18% for appearing in competitive examinations. Only 14% seek information for leisure reading. Kaur and Lal (2016) surveyed information seeking behaviour of different types of users of Public Libraries of Southern Punjab, India. A primary data was collected by using the survey instrument. A structured questionnaire was designed and distributed among the library professionals in district libraries of Sangrur, Mansa and Faridkot. The data was worked out with statistical tools like percentage and average etc. The collected data was represented in the form of tables. The study revealed that the information needs relating to respondents' academic programmes attracted 41%, general information 25.8% and politics 6.2%, agriculture and security 4.6%, sports 2.6%, health 1.7% and personal development 1.7% each. This further indicates that the students who were the majority of the library users needed information to support their academic programmes and to pass their various examinations.



Das and Mandal (2021) carried out comparative study on information seeking behaviour of research scholars and teachers of selective Science Departments in Burdwan University. Online Google form questionnaires were disseminated to teachers and research scholars in three science departments in Burdwan University, India. The received data have deduced through Statistical Package in Social Sciences (SPSS) (Version - 25) and presented in charts. The study revealed that maximum 93.3% faculties and scholars of pure science departments' information needs are research, study, current awareness service, carrier guidance services, seminars / conferences etc., syllabus oriented, etc. Only 1.6% and 1.1% respondent information needs are only study/ research and latest information respectively. In respect of two groups of respondents, majority of 98.1% research scholars and 93.8% faculties of pure science departments key information need were all of the above. Study and research is one second key information need of 1.3% scholars and 3.1% faculty members of pure science departments. Siddiqui (2011) studied information seeking behaviour of B.Tech. and M.B.B.S. Students in Lucknow. The study showed that the maximum respondent gives the first priority to seek information for examination purposes, seeking information for updating knowledge level is a second priority, and the third priority is to seek information for preparing class notes.

In Africa, Gyesi (2020) conducted a study on information seeking behaviour of graduate students of the University of Professional Studies, Accra (UPSA). The study employed the survey methodology to select 121 graduate students using stratified random sampling. The main data collection instrument was the questionnaire. Stratified sampling techniques was used to select 121 students (15%) who responded to a questionnaire. Majority of the respondents indicated that they look for information on career development (80.0%), followed by self-development (66.1%), current affairs (61.7%), and employment (61.7%). Other needs were entertainment and politics (34.8%), global information (33.9%), health, and football (33.0%), higher education (27.8%), recreational activities (23.5%), sports (20.0%), and religion (13.9%). Also, majority of the students actively search for information because they need to complete assignments, prepare for presentations/seminars, update lecture notes etc. The students who looked for information to complete projects, theses/dissertations can be said to be using ongoing search.

Moly (2014) focused on information need and information seeking behavior of Information Science Students in Haramaya University, Ethiopia. Qualitative and quantitative research design was used for the study. Survey method was used to collect the information. Structured Questionnaire was the tool which is used to gather data. Total population of this study was 100 students from the Department of Information Science. Data collected were analysed and results tabulated with the relevant headings using percentages and frequencies. The study revealed that main purpose of seeking information by the students are to write assignments/research paper (84%). 80% of the students mentioned that to solve immediate practical problem they seek information. Whereas for career development and to keep up to date needs are preferred by 58 and 50% students respectively.

Similarly, Baayel and Asante (2019) investigated faculty's information seeking behavior in Koforidua Technical University, Ghana. The study adopted a survey approach. The sampling method adopted for the study was simple random sampling techniques. A total of 98 copies of the questionnaire were strictly administered to the respondents with 96 (98%) duly answered and



retrieved. Data collected were analysed using simple descriptive statistics. The study reported that as much as 42(43.7%) seek for e-resources to prepare their teaching lessons, writing papers for publication 21(21.9%), preparing PhD thesis 15(15.6%), conducting literature search 9(9.4%), updating of self-knowledge 5(5.2%) and browse internet for pleasure 2(2.1%).

In Nigerian context, Okonoko, Njideka and Mazah (2015) conducted a comparative study of information seeking behaviour of Researchers in Nigeria Libraries. The design of the study is cross sectional survey of researchers in the libraries and the population consists of 364 (1st Conference of Certified Librarians) from various libraries and institutions across Nigeria by the Librarians' Registration Council of Nigeria (LRCN) held on the 18th– 23rd May, 2014. The instrument used to generate data is the questionnaire and the data generated was analysed using frequency, bar charts, percentages and mean. The study showed that majority of the respondents indicated that they needed academic/research information, personal health information, industrial attachment / employment information, business information, sports/entertainment information and current awareness services in Nigeria library. Similarly, the study reported that majority of the respondents were seeking for information when carry out research, to update their knowledge, reading purpose, current awareness services and for writing assignment.

In North Central Nigeria, Kehinde, Obi, Akinade and Anyim (2016) carried out a study on information needs and seeking behaviour of Masters' Students in the Faculty of Communication and Information Sciences, University of Ilorin, Kwara State. A total of 125 Masters students selected from the three departments constituted the population of the study. Through a survey design, questionnaire was administered. The data collected was analysed using Statistical Package for Social Sciences (SPSS version 21). The study revealed that the respondents' information needs was for academic purpose with 100%, followed by entertainment with 86.3%, political information needs with 81.2%, information for personal development with 72.6%, employment with 67.5%, global information with 65% and least of all 60.7% for social information. The study also revealed that more respondents' purpose of information seeking was for reading with 100%, followed by 90.6% for research work, 88.9% for personal development, 79.5% for general awareness, 76.9% for assignment, next is 61.5% for class discussion, 49.6% for class notes and least is 34.2% for investigative purposes.

Obi, Akanbi and Kehinde (2018) surveyed information needs and seeking behaviour of students of the Nigerian Army School of Education, Sobi Barracks, Ilorin, Nigeria. Descriptive survey was used and the population for the study comprised of students of the Nigerian Army School of Education, Sobi Barrack, Ilori. A self-designed questionnaire was used to collect data from the respondents for this study. The 212 copies of the questionnaire were administered. Data collected was analysed using SPSS version 21.0 to present the data using descriptive statistics of frequency and percentages. The study revealed that academic information (202; 99.0%), information for personal development (194; 95.1%), security information (188; 92.2%), health information (189; 92.7%) and global information (188; 92.1%) top the information needs of students of the Nigerian Army School of Education, while, entertainment (161 (78.9%) and sports (139; 67.1%) related information were the least among the information needs of the students. Also, the study showed that the purpose of seeking for information by the students were to update knowledge (204; 100%), to enhance



professional activities (203; 99.5%), to do assignment (203; 99.5%), for decision making (192; 94.1%) and for personal career development (190; 93.2%).

In another study, Sambo, Akanbi and Shehu (2021) surveyed information seeking behaviour of final year students in three universities in Kwara State. The study used descriptive survey methodology. Questionnaire was used a data collection instrument. Data were presented for analysis using the descriptive statistics which include frequency count and percentages. The study found that that academic development and current affair topped the highest information needs of the final year students in the three universities selected for the study. Academic development (87%) KWASU, (85%) UNILORIN and (82%) AL-HIKMAH and current affairs (79%) UNILORIN / AL-HIKMAH and (69%) KWASU. Furthermore, the study revealed that the final year students seek for information when they were carrying out research, career development and project purpose were the three highest reasons for seeking information by final students in the libraries. (82%) UNILORIN, (75%) AL-HIKMAH and (70%) KWASU respectively whereas career development (54%) UNILORIN/ AL-HIKMAH and (51%) KWASU respectively whereas project purpose (61%) AL-HIKMAH, (53%) KWASU and (51%) UNILORIN respectively indicated for project purpose.

In Southwest Nigeria, Oyadeyi (2014) conducted a study to ascertain the information needs and information seeking behaviour among the students of Ondo State University of Science and Technology, Okitipupa. Questionnaire was the main instrument for collecting data while personal observation was used as a follow-up to verify the information given in the questionnaire and statistical method of analyzing collected data was used with the aid of percentage count and tables of frequencies. The study found that the undergraduate reasons for seeking information were: course works and assignments 51 (62.2%), general reading to enhance lecture notes 50 (61.0%), preparation for examinations and tests 37 (45.1%) which recorded high response rate, preparation for tutorial presentations 20 (24.4) have low response rate followed by preparation for Seminars and workshops 6 (7.3%) and class-group discussions 6 (7.3%) led undergraduate students towards seeking information.

Nwone and Mutula (2018) surveyed information seeking behaviour of the professoriate in selected federal universities in southwest Nigeria. The study was a descriptive survey of the professoriate in the social sciences and humanities. An adapted questionnaire was used to collect data from 246 professors. Data was analysed using descriptive statistics. The results showed that all the professoriate considered information for developing contents used for teaching, information for conducting research, and information to keep abreast of current developments in their fields of study as a 'very important' information need. Educational information was considered 'very important' by 142 (86.1%) respondents. Socio-cultural information was considered 'very important' by ninety-three (56.4%) respondents. Political information was next important, with forty-eight (29.1%) of the professoriate considering it to be 'very important'. Information for planning and for religious purposes were rated, respectively. Economic information followed in importance, with thirty (18.2%) of the respondents stating it is 'very important'. Parenting and health information were considered, respectively, by twelve (7.3%) and ten (6.1%), as 'very important'. Legal and technical information were considered of least importance among the professoriate with only five (3%) and four (2.4%) respondents considering them 'very important'.



Fasola and Olabode (2013) studied the information seeking behaviour of students of Ajayi Crowther University, Oyo, Nigeria. The study is based on the survey research method. Questionnaire was prepared in line with the research objectives, a total of 500 questionnaires were administered to the students using the simple Random Sampling technique. The frequency count and simple percentage table were used to present the findings of the research. It is observed that majority of the respondents seek information for academic purposes (66%), followed by those who seek information to be abreast of happenings in the society (15.6%). Others seek information to get where to go to for their Industrial Attachment (7.6%). The least number of respondents seek information for social purposes (6%) and those who seek information just to meet their social needs (4.8).

Onuoha and Obiako (2013) studied comparative analysis of information seeking behaviour among students of Babcock University, Nigeria. Descriptive research approach was used for the study. The population was made up of 3,684 undergraduate students. Study sample were selected using multistage sampling technique. A sample size of 354 was obtained. A self-designed questionnaire was used for data collection. Data collected was analysed using descriptive statistic such as frequency counts and simple percentage. The study found that both first and final year undergraduates need information mostly for improving knowledge as indicated by 137 (74.9%) and 150 (80.25%) of the respondents respectively and for doing assignment. The least reasons for seeking information were for the purpose of semester registration and debate. Makinde, Jiyane and Mugwisi (2020) surveyed information-seeking behaviour of science and technology researchers in Federal Institute of Industrial Research Oshodi, Nigeria. Survey methodology was used for the study and 114 multidisciplinary science and technology researchers at the Federal Institute of Industrial Research Oshodi served as the respondents, frequency counts, percentages, and narrative and relational descriptions were used for the presentation of the data. Tables were used to express relationships among the variables. The study found that the respondent's information seeking purposes include carrying out research, solving personal needs, general awareness, when attending to clients' needs, when attending to academic needs and for work-related discussions.

In the South-South Nigeria, Baro, Onyenania and Osaheni (2010) surveyed information seeking behaviour of undergraduate students in the humanities in three universities in Nigeria. The study adopted a descriptive survey method. The study covers 100-400 level undergraduate students in history in the humanities in three universities in the South-South geo-political zone of Nigeria. A sample size of 259 was used for the study. Random sampling technique was used in selecting the sampled respondents. The study opted the use of questionnaires, interviews and observation methods. The study revealed that the information needs that make the undergraduate students search for information is academic information with the highest rating 233 (93.2 percent), followed by personal information with 10 (4.0 percent), and sports information with least rating 7 (2.8 percent). The responses revealed that the undergraduate students need academic information to write their course assignment, seminar papers, prepare for their class discussions, and prepare for their examinations and tests, and information to write their final year research papers more than any other information such as personal and sports information.



Okoh and Ijiekhuamhen (2014) focused on information seeking behaviour of undergraduates in Federal University of Petroleum Resources (FUPRE). A structured questionnaire was used for data gathering in the University. The questionnaire data was analysed using frequency, bar chart, and percentage for easy interpretation. The study revealed that (78%) of the respondent use the information obtained for academics, 63% for assignment, 51% for final year research, 15% for relationship issues, 15% for personal development, 30% for health improvement ethics, 63% to read ahead of lectures, 53% for current happenings/ inventions, 15% for entertainment.

Information Seeking Behavior of Students

Information seeking behaviour can be described as an individual's manner of gathering and sourcing information for personal use, knowledge updating and development. Various studies have been made recently on several aspects of information seeking behavior. In Pakistan, Khan and Khan (2020) conducted a study to determine the information seeking behavior of Postgraduate Students in University of Peshawar, Pakistan. This study used a quantitative approach, adopting a survey questionnaire method for data collection. The population of this study was composed of the Master, M.Phil. and PhD research students in the faculties of Arts and Humanities, Social Sciences and Management Information Sciences at the University of Peshawar. The sample size was 300 research students selected conveniently. The study revealed that among the information needs listed, the highest need (42%) of information regarding the research topic selection of the respondents followed by a literature review (41%), research proposal (40%), thesis /dissertation and assignment writing (39%), article writing (36%), and citation management (33%). In Iran, Valizadeh-Haghi and Rahmatizadeh (2018) conducted a study on learning about the information seeking behavior of Postgraduate Students of Faculty of Allied Medical Sciences of Shahid Beheshti University of Medical Sciences, Iran. The study found that the types of information channels used by the students include: help from the faculty members, use of internet and search engines, library, personal collection, conferences' reports, professional newsletter, free use of the electronic resources and non-free use of the electronic resources.

Das and Mandal (2021) carried out comparative study on information seeking behaviour of research scholars and teachers of selective Science Departments in Burdwan University, India. The study revealed that the approaches of information seeking behaviour such as all types of search techniques like print, web documents, human resources, internet, search engine, database, keywords for searching information were applied for maximum of 95.7% scholars and teachers of pure science departments. Only each of 1.6% pure science scholars and faculties has applied keyword and documentary and non-documentary approaches in information seeking techniques. In the views of two categories, majority of 96.1% research scholars and 93.8% teachers utilised all the techniques form information seeking. Only 1.9% and 0.6% scholars of pure science departments have used keywords and "documentary, non-documentary" approaches respectively.

Siddiqui (2011) studied information seeking behaviour of B.Tech. and M.B.B.S. Students in Lucknow, India. Raw data was collected through open and closed ended questionnaires. Questionnaires was distributed to 32 respondents of each institute (total number of respondent = 128) by personal survey methods of selected medical and engineering institution and its library, and also personal Interview of users with questionnaires through random selection of population.



The study showed that the maximum number of respondent gives the first priority to seek information through discussion with colleagues, second priority is discussion with seniors, consult with teachers is a third priority. Consult with a knowledgeable person is fourth priority, and the fifth priority is to seek the information through review of articles.

In Ghana, Gyesi (2020) studied information seeking behaviour of graduate students of the University of Professional Studies, Accra (UPSA). The study found that majority of the respondents make use use of Google and Google Scholar (72.2%), browsing books on the shelf (55.7%), browsing the internet (40.9%) and searching electronic databases (40.0%). Others include inquiring from fellow students (28.7%), using OPAC, inquiring from lecturers and asking the reference librarian (27.8%), reading required textbook (22.6%) and accessing references at the end of journal articles (7.0%) as their information seeking behaviours.

In Nigeria, Baro, Onyenania and Osaheni (2010) surveyed information seeking behaviour of undergraduate students in the humanities in three universities in Nigeria. The result revealed the following: 139 (55.6 percent) of the respondents indicated that they used lecturers and colleagues as starting point to obtain academic information; 137 (54.8 percent) of the respondents indicated using references at the back of consulted books (chaining) as a search strategy to source for relevant materials; and 163 (65.2 percent) of the respondents indicated that they browse the library collections to retrieve relevant information materials. Others are: 150 (60.0 percent) indicated using differentiating strategy (selecting among the known sources by noting the distinctions of characteristics and value of the information); 143 (57.2 percent) indicated using monitoring (using the card catalogues, lists on library notice boards); and 126 (50.4 percent) indicated using extracting strategy i.e. using the library card catalogue as a search strategy to retrieve materials. Furthermore, Kehinde, Obi, Akinade and Anyim (2016) carried out a study on information needs and seeking behaviour of Masters' Students in the Faculty of Communication and Information Sciences, University of Ilorin, Kwara State. The study showed that 92.3% of the respondent uses students when starting to seek information, 27.4% uses lecturers, 42.7% uses professional colleagues, 53% use the library, 92.3% use the internet, 81.2% uses personal collections and 65.8 uses official publication. More respondents use students and the internet with 92.3% and least uses lecturers with 27.4% when starting to seek for information.

In another study, Obi, Akanbi and Kehinde (2018) surveyed information needs and seeking behaviour of students of the Nigerian Army School of Education, Sobi Barracks, Ilorin, Nigeria. The study found that a higher percentage 200 (98.0%) of the respondents expressed that they firstly identify the information they need before they begin to consult the information sources, 201 (98.5%) expressed that they compare different sources of information materials before they finally use the resource, 198 (97.1%) of the respondents expressed that they were always anxious whenever they needed information, 186 (91.2%) of the respondents agreed that they usually feel frustrated when consulting a source and not finding what they need, 180 (88.3%) of the respondents agreed that they usually feel overwhelmed when trying to satisfy their information need due to the volume of information available, while, 196 (96.1%) of the respondents agreed that if they did not get the information they need in a particular information material, they will continue searching for information until they are satisfied.



Information Searching Skills of Students

Information searching can be described as the systematic efforts carried out by a user in locating information needed through various sources manually or electronically. In Asia, Munshi and Nagar (2016) studied information literacy skills among the Postgraduate Students at Aligarh Muslim University, India. The study adopted descriptive survey method and covers 329 Postgraduate Students of five selected faculties e.g. Faculty of Arts, Faculty of Science, Faculty of Commerce, Faculty of Theology, Faculty of Social Science at AMU. The study demonstrated that out of 100 per cent respondents, majority of the respondents preferred “simple keywords” methods (68.99 per cent) because they felt that this method was easy for information searching. The second choice of the respondents is “Field Search (Title, URL)” (29.78 per cent), and the third is “Boolean Operators”. Most of the respondents mentioned that they were not aware of the Boolean Operators. Some of the respondents mentioned that they also followed “Truncation” method. Similarly, Shukla and Kumar (2020) assessed information literacy skills among the masters’ students of Social Sciences of Mizoram University and Tezpur University in India. Primary data was collected in February 2020. The collected data have been analysed with a few measures and the statistical computation was also carried out. Out of a total 332 respondents, the maximum 191 (57.53%) of the students have a good accessing information skill, 180 (54.22%) of the respondents have good searching of information skills and a large number of students i.e. 188 (56.63%) have good evaluating of information skills while the maximum 179 constituting (53.92%) of students have good using of information skills. Billah and Rahman (2020) assessed information literacy skills among Feni University Students, Bangladesh. Primary data was collected from library users using questionnaires comprising both open-ended and close-ended questions designed to issues directly related to the objectives of the research. Purposive sampling was used to collect data from students’ using questionnaire. Out of 86 respondents, only 41(47.67%) rated their information literacy and competency level as excellent. Among others, 12(13.95%) evaluated themselves as Very Good, 10 (11.62%) are good, 13 (15.11%) students rated themselves as average and 10(11.62%) students rated them as poor.

In Rwanda, Umuhiza and Unegbu (2021) carried out a study to determine the information literacy skills and use of library resources by Postgraduate Students in Adventist University of central Africa, Kigali, Rwanda. The research adopted a survey research design. A total of 118 Postgraduate Students participated in this study. Data were collected through questionnaire while descriptive analysis was employed in analysis of the data. The results indicated that majority of the students have a high level of information literacy skills. Results also show that “Task Definition” had a highest mean to rank first, which shows that majority of the respondents have a high level of task definition while “Location and Access” had the least mean to rank last, but it shows that the respondents have a high level of location and access.

In North Central Nigeria, Kehinde, Obi, Akinade and Anyim (2016) carried out a study on information needs and seeking behaviour of Masters' Students in the Faculty of Communication and Information Sciences, University of Ilorin, Kwara State. The study showed that 60.7% of the respondents follow up on abstracts while 39.3% do not follow up on abstracts as a strategy when sourcing information material, 23.1% of the respondents follow up on indexes while 76.9% do not, 67.5% of the respondents follow up on references while 32.5% do not, 41.9% of the respondents



follow up on footnotes while 58.1% do not, 59.8% of the respondents rely on reference given by colleagues while 40.2% do not rely on this source as a search strategy, 76.9% follow up reference given by lecturers while 23.1% do not, and library card catalogue is a search strategy source for 44.4% of the respondents but not for 56.6% of them. On evaluation of information, the study revealed that more students use credibility of the author with 26.5% to evaluate information sources consulted followed by up datedness of the material with 24.8%, formats with 21.4% is next and the least are sources of the material and relevance of the material with 13.7% each.

In South-South Nigeria, Baro and Fyneman (2009) studied information literacy among undergraduate students in Niger Delta University. The findings revealed that 56% of the students agreed that they use references at the back of consulted books (chaining) to obtain needed information, 64% agreed that they consult colleagues to obtain needed information, 57% agreed that they browse the library collections in the open shelves to obtain needed information, 67% agreed that they use the library card catalogue to retrieve relevant information resources and 82% agreed that they use reference materials to obtain information.

In South East Nigeria, Israel (2018) conducted a study to ascertain information literacy skills among Library and Information Science Postgraduate Students of Nnamdi Azikiwe University, Awka, Nigeria. The methodology used in this research is descriptive survey. The instrument used to collect data for this study is the questionnaire. The targeted population for this study is 34. This comprised postgraduate student in the Department of Library and Information Science, Nnamdi Azikiwe University admitted for the 2016/2017 academic year. Data collected were analysed using statistical tools such as frequency count and simple percentage. Result of the study showed that majority 33(97.1%) of respondents agreed that they can browse online databases to locate pertinent information. Similarly, 31(91.42%) respondents were affirmative that they can locate information in multiple sources as well as compare and evaluate critically whether the information is timely and appropriate. Thirty (88.2%) of the respondents also affirmed that they can recognise different methods of accessing information resources and compare and evaluate critically whether the information collected is credible and relevant respectively.

In South West Nigeria, Fasola and Oso (2021) assessed information literacy skills of Postgraduate Students of Ajayi Crowther University, Oyo. Survey design was adopted with respondents comprising all the Postgraduate Students of the University, since they were a manageable number. Descriptive statistics were used to analyse the data collected. The study shows that majority of the respondents 58.7% with calculated mean of 3.51 felt that it was not easy for them to plan and search for information at the library using retrieval tools such as OPAC, index, abstract etc. This might be unconnected to issues of awareness; the library may not have given needed attention to creating awareness on the availability of Online Public Access Catalogue and other retrieval tools. However, a sizeable number of the Postgraduate Students affirmed to having the ability to search for information in their area of study; search online databases using the advanced retrieval tools with less significant or moderate calculated mean score.

Moreover, Oyedokun, Adekumisi, Bada and Buraimo (2019) conducted a study on information literacy skills of postgraduates in Olabisi Onabanjo University (OOU) and Federal University of Agriculture, Abeokuta (FUNAAB), Ogun State, Nigeria. Descriptive survey research design of ex-post-facto type was used. The population of the study comprised 2,089 postgraduates, out of



which a sample of 337 was selected using multistage sampling technique. A validated questionnaire with a Cronbach alpha reliability of 0.78 was used to collect data for the study. 337 copies of the questionnaire were administered but only 331 copies were retrieved. Data indicated that the ability to evaluate information products and processes ranked highest (3.87) followed by ability to communicate information (3.83) and ability to retrieve information (3.81). The least ranked by the respondents are ability to interpret, synthesize and use information (3.67) and ability to locate and access information resources (3.63).

Furthermore, Adeniran and Onuoha (2018) surveyed the influence of information literacy skills on Postgraduate Students' use of electronic resources in private university libraries in South-West, Nigeria. The study adopted the survey research design. The study population comprised 2805 Postgraduate Students in five private universities offering postgraduate programmes in South-West, Nigeria. Multistage sampling technique was used in the selection process. The study found that the respondents were most skilled in 'ability to initiate how and where to find needed information ($x = 3.28$); ability to locate information sources ($x = 3.28$) which ranked highest by the mean score rating and was followed by; 'ability to select the information that is most appropriate to needs ($x = 3.27$); and ability to select search strategies by date, subject and language ($x = 3.27$). On the average, the respondents were skilled in areas such as: being able to improve their information literacy skill by learning from information problem solving ($x = 3.26$); being able to use many resources at the same time to make a research ($x = 3.25$); being able to use information to answer questions and/or solve problems ($x = 3.23$). As indicated in the table, the respondents were least skilled in areas such as: being able to define needed information ($x = 3.20$); being able to organize information to present a sound central idea supported by relevant material in a logical order ($x = 3.19$) and lastly, in ability to identify different sources of information ($x = 3.13$).

Omeluzor, Bamidele, Onuoha and Alarape (2013) surveyed information literacy skills among Postgraduate Students of Babcock University, Nigeria. A total enumeration sampling technique was used to select the sample. All the respondents were sampled and a total of 243 questionnaires were retrieved given a return rate of 84% which were found useful and used for the analysis. The results showed that 41.2% and 8.6% of the respondents disagreed and strongly disagreed respectively that it was not easy for them to plan and search for information using retrieval tools like OPAC, index and abstract, while 42% and 20.6% agreed and strongly agreed respectively that they know how to search online databases using search parameters. This results shows that 49.8% and 62.6% of the respondents are able to plan and search online databases for information.

Information Sources of Students

Information source can be described as any medium physically or virtually that contains information that is relevant to users. In Asia, Ahmat and Kamarudin (2014) studied information seeking behaviour and information needs satisfaction among Postgraduate Students in Universiti Teknologi MARA (UiTM), Malaysia. The study revealed that the sources of information for Postgraduate Students were Internet search engines ranked the highest ($M=5.37$; $SD=1.021$) and more often used by respondents followed by journal online ($M=4.37$; $SD=1.184$), while, for the informal source, the study indicated that conversation with friend/colleagues ranked the highest mean score ($M=4.42$; $SD=1.272$). Humbhi, Tareen and Humbhi (2022) carried out a study to ascertain



the information needs and information-seeking behavior of undergraduate students of University of Balochistan, Pakistan. The study found that the largest group 155 (44.2%) used social media to get their needed information, 130(37.1%) followed by a discussion with friends, the next largest group used a newspaper 125(35.7%) to meet their information need and that is followed by a website 110(31.4%).

Valizadeh-Haghi and Rahmatizadeh (2018) conducted a study on learning about the information seeking behavior of Postgraduate Students of Faculty of Allied Medical Sciences of Shahid Beheshti University of Medical Sciences, Iran. The study indicated the types of information resources used by the Postgraduate Students which include: databases, electronic journals, printed scientific journals, books, newspapers and theses. Moreover, Kumar and Jadab (2016) studied information seeking behavior of law students in the digital Age at University of Dhaka, Bangladesh. The study revealed that majority of the students 95(51.91%) indicated high dependence on Textbooks as a source of accessing information; while 33(18.04%) use Encyclopedia, 21(11.47%) use Law reports, 13(7.10%) use Law journals, 9(4.92%) use Legal digest and only 5 (2.73%) use Thesis as a source of information.

Nagar and Munshi (2014) carried out a study to determine the information seeking behavior of female research scholars of Faculties of Social Science and Arts in Aligarh Muslim University, India. The study adopted a survey research design and used a sample of 120 Female Research Scholars of Social Science and Arts Faculties. A total number of 120 questionnaires were distributed among the Female Research Scholars of Social Science and Arts Faculties of Aligarh Muslim University, Aligarh. The study found that both the research scholars of Social Science & Arts prefer Internet as an important source to fulfill the requirement of information with 76.66% and 75%. While the total response is 75.83%. Other preferred sources include: Periodicals, Conference Proceeding, Journals and CD ROM.

Laltlanmawii and Verma (2016) studied information seeking behaviour of Faculties and Research Scholars in School of Physical Sciences, Mizoram University, Aizawl, India. Survey method was used. Structure questionnaire were circulated to all faculty members and Ph.D. scholars of School Physical Sciences, Mizoram University in order to obtain required information with regards measure the information seeking behaviour of the faculties and research scholars. The study found that books and journals were most common source of information with 91% respondents using them. 72% respondents constituting 85% faculties and 64% research scholars used library catalogue; 49% respondents constituting 50% faculties and 48% research scholars used abstract and indexes; 60% respondents consisting 55% faculties and 64% research scholars used thesis/dissertation; 41% of the total respondents used monographs/text book and research report, while, 40% faculties and 55% research scholars (total 49% respondents) used publisher's catalogue to locate their required information. The newspaper and government publication were used by total 57% and 64% respondents respectively. Kaur and Lal (2016) surveyed information seeking behaviour of different types of users of Public Libraries of Southern Punjab, India. The study indicates that the most consulted resources in the library were Newspapers/magazines 25%, this was followed distantly by Novels 21.4%, reference materials 15.1%, textbooks 13.3%, several other kinds of resources were 7.1%, Government publication were 4.4% and Government reports with 1.7% were the least consulted materials in the library.



In Africa, Gyesi (2020) studied information seeking behaviour of graduate students of the University of Professional Studies, Accra (UPSA). The finding revealed that 73.9% of respondents look for the information themselves. 67.0% ask their colleagues, 60.0% use review articles, 51.3% consult their supervisors, 34.8% use the library catalogue, 31.3% consult the reference librarian and 1.1% consult knowledgeable person in the field. The findings further indicated that majority of the respondents use e-books being 77.4%, e-journals being 60.0%, CD-ROMs being 45.2%, e-newspapers being 40.9%, e-magazines being 33.0% and e-images being 17.4%. Also, the result on the print sources revealed that majority of the respondents uses the printed textbooks (58.3%) as against lecture notes and handout (51.3%). Many of the respondents were in the range of forties including dictionary/encyclopedia (40.9%), newspapers (38.3%), reference materials (37.4%), printed pamphlets (37.4%), printed journals (35.7%) and handbooks (34.8%). The least ones were academic databases (27.0%) and research reports (21.7%).

Mnguni and Kekana (2022) surveyed web information seeking behaviour of undergraduate students of Library and Information Studies at the University of Zululand. The study adopted positivist paradigm to gain better understanding of web information seeking behaviour of undergraduate students through observing and reasoning of reality facts that were collected through close-ended questionnaires. Data and the findings were presented through graphs and charts. Out of 169 respondents, 38(22%) indicated electronic databases as their chosen content, 10(6%) of the respondents indicated videos, 7(4%) of the respondents indicated images, only 17(10%) selected audios and 30(18%) of the respondents indicated that they search for documents on the web.

In Nigerian context, Baro, Onyenania and Osaheni (2010) surveyed information seeking behaviour of undergraduate students in the humanities in three universities in Nigeria. The findings revealed that 206 (82.4 percent) of the respondents indicated using the library as source of information to obtain information to meet their information needs; 177 (70.8 percent) indicated using archival materials as sources of information to obtain information for their academic work; and 173 (69.2 percent) indicated using chiefs / community heads as sources of information. Others are: 172 (68.8 percent) indicated using journal articles as sources of information; 164 (65.6 percent) indicated using the Internet as source of information they used in obtaining information; and 139 (55.6 percent) indicated using databases as sources of information they used in obtaining information. Other sources indicated by the students are lecturers, colleagues, lecture notes, reference materials as sources of information they used in obtaining information to meet their information needs. The result revealed that the undergraduate students in the humanities used sources such as the library, archival materials, journal articles, Internet, databases, chiefs / community heads, lecturers, colleagues, reference materials to obtain information to meet their academic information needs. The study revealed heavy reliance on library books and Journals, also on human resources such as community heads/chiefs, lecturers and colleagues for information to meet their information needs. Okonoko, Njideka and Mazah (2015) conducted a comparative study of information seeking behaviour of Researchers in Nigeria Libraries. The study showed that majority of the respondents indicated consulting textbooks, e-books, e-journals, government publication, reference books, serials publication, project report as the most information materials consulted by the researchers in Nigeria libraries.



In North Central Nigeria, Obi, Akanbi and Kehinde (2018) surveyed information needs and seeking behaviour of students of the Nigerian Army School of Education, Sobi Barracks, Ilorin, Nigeria. The study found that Internet (204; 100%), library (199; 97.6%), textbooks (197; 96.6%), radio (196; 96.0%), newspaper (192; 94.1%) and lecturers (190; 92.2%) were the major information sources of students of the Nigerian Army School of Education, while, personal note (176; 86.3%), friends (174; 85.3%), relatives (159; 77.9%) were the least consulted information sources by the students. Sambo, Akanbi and Shehu (2021) surveyed information seeking behaviour of final year students in three universities in Kwara State. The study showed most consulted information materials by the respondents (89%) UNILORIN, (83%) AL-HIKMAH and (76%) KWASU affirmed that internet access were the most consulted materials, followed by project report/thesis (80%) UNILORIN, (77%) AL-HIKMAH and (72%) KWASU while, online public catalogue (86%) UNILORIN, (83%) KWASU and (81%) AL-HIKMAH, whereas print materials (65%) AL-HIKMAH (61%) KWASU and (50%) UNILORIN.

In South-South Nigeria, Okoh and Ijiekhuamhen (2014) focused on information seeking behaviour of undergraduates in Federal University of Petroleum Resources (FUPRE). The study found that 63% of respondent used goggle or other search engines and printed textbooks, 45% used e- books, 31% used reading list as their major source of information, 78% used Google scholar, 30% used Wikipedia, 61% used social media, 57% used library materials, 33% used friends and family and 16% used other sources of information. Baro and Fyneman (2009) studied information literacy among undergraduate students in Niger Delta University. The study adopted descriptive survey method and covered 350 undergraduate students of four departments in the Faculty of Social Sciences: Economics, Sociology, Political Science, and Geography and Environmental Studies, from which a sample of 105 students is drawn. A questionnaire was designed as data collection instrument. Data collected were analysed using frequency counts and percentages, also chi-square (X^2) test of significance was employed to test the null hypotheses. The study sought to establish what information sources the students used in meeting their information needs. The finding revealed that 75% expressed they are aware and consult journals as sources of information, 60% expressed that they know and consult The Reference Librarian, 61% agreed that they are aware and consult the library to locate information resources, while, 56% agreed that they were aware and consult subject experts for information within the university community.

In Southwest Nigeria, Oyadeyi (2014) conducted a study to ascertain the information needs and information seeking behaviour among the students of Ondo State University of Science and Technology, Okitipupa. The study revealed the information sources used by undergraduate students which include: internet (67.1%) lecture notes (51.1%), Test Books (46.3%), and Handout (39.0%) were frequently used, while e-books, Reference Materials, newspapers, print and e-journals were the least used with (23.2, 9.8, 8.5, 6.1 and 3.7%) respectively. On how undergraduate students begins their information search, the study indicated 'browsing the internet' 66 (80.5%), 'using the shelf guide on the library shelves to locate books 59 (72.0%), 'inquiring from lecturers and fellow students (39.0%) and searching the electronic database 29 (35.4%) were the first point of call when they (students) want to start searching for information. Others with low response rates include 'seeking assistance from Librarians' 18 (22.0%) and 'searching the CD-ROM database' 4 (4.9).



Nwone and Mutula (2018) surveyed information seeking behaviour of the professoriate in selected federal universities in southwest Nigeria. The results revealed that the majority of the professoriate 'always' seek information for teaching and research in online databases (127; 77%) and electronic journals (119; 71.5%), a larger number 'occasionally' use newspaper (129; 77.6%), radio (sixty-two; 37.6%) and TV (eighty-four; 50.9%) for teaching and research. Furthermore, journal articles were 'always' used by all the professoriate for seeking information for teaching and research, followed by textbooks (163; 98.8%), encyclopaedia (sixty-nine; 41.8%), maps (thirty-one; 18.8%), and magazines (four; 2.4%), maps (nineteen; 11.5%) and magazines (sixty-two; 37.6%).

Moreover, Fasola and Olabode (2013) studied the information seeking behaviour of students of Ajayi Crowther University, Oyo, Nigeria. Majority of the respondents seek information from textbooks (55.4%), followed by the internet (29.9%), then from newspapers (9.4%). Journals were also a preferred source of information (3.5%), while, the least number of respondents seek for information from thesis (1.9%). Onuoha and Obiako (2013) studied comparative analysis of information seeking behaviour among students of Babcock University, Nigeria. The study found that the preferred sources of information for first and final year students of Babcock University. Generally, greater number of students (338, 91.6%) preferred printed textbooks for meeting their information need. Another source of information preferred by the students is newspaper as indicated by 253(68.6%) of the respondents. Annual reviews and Government publications were the least preferred sources of information.

More recently, Makinde, Jiyane and Mugwisi (2020) surveyed information-seeking behaviour of science and technology researchers in Federal Institute of Industrial Research Oshodi, Nigeria. The study revealed that different information sources were available to the science and technology researchers at FIIRO but not all of them were used satisfactorily. Generally, the prioritized and most frequently used information sources include Internet sources, journals, knowledgeable persons, review articles, books and discussion with colleagues. Apart from these, conference abstracts or proceedings, research reports, patents, factsheets, emails, webinars, discussion forums and pamphlets or leaflets are used, although not prioritised.

Factors Militating Against Information Needs and Information Seeking Behavior of Students

Studies have shown that users are confronted with various challenges in their quest to search information through variety of sources. In Asia, Humbhi, Tareen and Humbhi (2022) carried out a study to ascertain the information needs and information-seeking behavior of undergraduate students of University of Balochistan, Pakistan. The study found the difficulties faced by undergraduate while seeking information. The top-ranking problem by majority 100 (28.57%) mentioned slow internet speed, 50(14.28%) of the undergraduate students mentioned lack of ICT knowledge, majority 50(14.28%) of the respondents complained about the poor ICT facilities, other problem the respondents mentioned 50(14.28%) was lack of knowledge on how to use the library OPAC. Valizadeh-Haghi and Rahmatizadeh (2018) conducted a study on learning about the information seeking behavior of Postgraduate Students of Faculty of Allied Medical Sciences of Shahid Beheshti University of Medical Sciences, Iran. The study indicated the problems encountered while searching for information include: unavailability of the required resources, incompleteness of the information resources, being out-of-date of some resources, long access to



information, lack of awareness of how to search in internet and databases, lack of awareness of how to use from library and lack of English proficiency.

Moreover, Al-Suqri and Lillard (2011) focused on barriers to effective information seeking of social scientists in Sultan Qaboos University, Oman. Qualitative data were collected using e-mail interviews and face-to-face interviews. A total of 70 faculty members responded to this initial e-mail, expressing their willingness to participate in the e-mail interview. Content analysis technique was used to analyze the qualitative data generated from the email and face-to-face interviews. It was found that social scientists at SQU faced two different types of challenges and barriers which were library-related barriers, such as inadequate library resources, problems with the organization of library resources, information technology limitations, and lack of adequate training; and non-library related barriers, such as inadequate internet connections, lack of adequate time for research, and language/cultural related barriers. The study reported that the SQU main Library could overcome these barriers by improving and expanding library resources, providing better information technology facilities, and providing more support and training to users.

In addendum, Kumar and Jadab (2016) studied information seeking behavior of law students in the digital Age at University of Dhaka, Bangladesh. The study revealed the problems that students encounter during information seeking and use including lack of currency of information (45.9%), unavailability of open access legal information sources, accounting for 22.40% of total respondents, 14.21% stated it was so time consuming to find information, 10.38% faced difficulty for constructing effective searches, and 4.38% got bored for the scattering of information in many sources. However, only 2.73% mentioned about the problem of time required for learning new technologies. Athukorala (2021) sought to determine the information seeking behavior among public library users of Horana Public Library in Kalutara, Horana, Sri Lanka. Descriptive survey methodology was applied. A total number of 400 open and close-ended questionnaires were distributed to respondents. The response rate was 87% (n = 348). Non-probability purposive sampling procedure was utilized to select the respondents. Excel was used to analysis of the data. The study found that several of library users (25.28%) stated that the library's existing space was not adequate. A significant sample (20.68%) of the study noted that the library only offers restricted resources, so their information needs were not met. Fewer users had suggested that low internet access facilities were badly affected by information seeking behavior. Most of the studied sample (29.02%) noted that the library also had no adequate books available as a concern.

In India, Chopra (2018) carried out a study to ascertain the information seeking behaviour of library users in select PG Degree Colleges of Chhattisgarh State, India. The study observed that lack of time (44%) had been felt as the main reason for not getting relevant information by respondents. It is followed by other reasons like scattered information (28%), outdated information (21%), non-availability of relevant material (21%), information overload (18%). A few respondents 5% feel uncooperative library staff is a hindrance in getting relevant information. Kaur and Lal (2016) surveyed information seeking behaviour of different types of users of Public Libraries of Southern Punjab, India. The study indicates that the major constraints that hindered meeting users' information needs include: lack of information retrieval tools in the library 25.8%; inadequate relevant materials 24.1%; inadequate time to seek needed information 17.8%; library proximity problem 14.2%; ignorance of where to obtain needed materials 10.7%; hardly conducive state of the



library 5.3%; and uncooperative attitude of the library staff 1.7%. Others specified constraints were: erratic power supply, inadequate toilet facilities and internet facility in the library for the users.

In African setting, Baayel and Asante (2019) investigated faculty's information seeking behavior in Koforidua Technical University, Ghana. The study revealed that 47.9% of respondents' lack searching skills, 21.9% lack awareness, 65.6% lack time, 10.4% of respondents said there was inadequate library staff to assist them. Also from the results, 5.2% of respondents experienced unstable internet connectivity, 3.1% did not find available current resources, while, 3.1% also found too much information to choose from. Gyesi (2020) conducted a study on information seeking behaviour of graduate students of the University of Professional Studies, Accra (UPSA). The study revealed the challenges of information seeking include unstable internet connection (Likert scale 3.09), the need for passwords to access information (Likert scale 3.09) and low internet speed (Likert scale 3.06). Others are inadequate computers (Likert scale 3.54), information overload (Likert scale 2.90) and lack of skills (2.89).

In Tanzania Komba and Lwoga (2016) carried out a study to find out government information seeking behaviour of citizens in selected districts of Tanzania. Questionnaire survey was self-administered to 450 citizens in selected districts, with a rate of return of 99.6 per cent. Questionnaire survey was self-administered to 450 citizens in selected districts, with a rate of return of 99.6 per cent. The study revealed that the major barriers to respondent's information seeking behaviour were related to poor ICT infrastructure, difficulty in retrieving information, lack of search skills, the information is complicated, the information source is expensive, the information is located far, language and policy and regulations do not support access of information. In South Africa, Mnguni and Kekana (2022) surveyed web information seeking behaviour of undergraduate students of Library and Information Studies at the University of Zululand. The study revealed that the challenges of web information seeking behavior include: poor internet/ WI-FI connection, limited library/computer laboratory hours, shortage of computer desktops in the lab, lack of computer laptop to access the internet, lack of experience and limited access hours at the library and computer laboratories.

In Nigeria, Okonoko, Njideka and Mazah (2015) conducted a comparative study of information seeking behaviour of Researchers in Nigeria Libraries. The study showed that (75%) identified network fluctuation as a major challenges associated with information seeking behavior of researchers in Nigeria libraries, (73%) emphasised on inadequate knowledge of use of catalogue, (57%) indicated insufficient librarians in the library, (44%) indicated incompleteness of records, (40%) indicated information scattered in too many sources, (39%) indicated nonchalant attitude of library staff, (26%) indicated lack of time to access information resources were some of the numerous challenges facing researchers seeking for information behavior in Nigeria libraries.

In North Central Nigeria, Kehinde, Obi, Akinade and Anyim (2016) carried out a study on information needs and seeking behaviour of Masters' Students in the Faculty of Communication and Information Sciences, University of Ilorin, Kwara State. The study showed that 72.6% of the respondents do encounter problem of incomplete materials when seeking information, 44.4% of the respondents do encounter problem of lack of time, some information are old to 63.2% of the respondents, lack of internet access is a problem to 44.4% of the respondents, high cost of purchasing textbooks is a problem to 53.8% of the respondents, 44.4% encounter psychological



factor as a problem, inaccessible library materials is a problem for 53.8% and finally, 33.9% find formats of the material sourced as a problem.

Also, Obi, Akanbi and Kehinde (2018) surveyed information needs and seeking behaviour of students of the Nigerian Army School of Education, Sobi Barracks, Ilorin, Nigeria. The study revealed that the challenges encountered by students of the Nigerian Army School of Education when gathering information include: insufficient library opening hours (195; 95.6%), inadequate internet connectivity (191; 93.7%), low level of awareness (185; 90.7%), ineffective skill (181; 88.7%) and inadequate ICT facilities (176; 81.3%). Sambo, Akanbi and Shehu (2021) surveyed information seeking behaviour of final year students in three universities in Kwara State. The study showed that the major constraints that hindered information seeking behaviour include: libraries were uncomfortable (noisy, hot and poor lighting) (67%) KWASU, (60%) UNILORIN and (59%) AL-HIKMAH, followed by inadequate internet bandwidth (57%) KWASU, (55%) UNILORIN, and (53%) AL-HIKMAH. Also, Computers were not sufficient (55%) KWASU, (51%) AL-HIKMAH and (50%) UNILORIN/ AL-HIKMAH as their major challenges that hinder their research in the three university libraries selected.

In South-South Nigeria, Okoh and Ijiekhuamhen (2014) focused on information seeking behaviour of undergraduates in Federal University of Petroleum Resources (FUPRE). The study revealed that 64% of the respondents indicated lack of computer skills among the factors affecting undergraduate's information seeking behavior, 10% indicated poor infrastructure, 11% indicated lack of time, 53% indicated irregular electricity supply, 63% indicated lack of good search skills, 10% indicated that they do not know where to go to meet their information need while 57% indicated poor internet available within the school premises and 16% indicated other factors.

In Southwest Nigeria, Fasola and Olabode (2013) studied the information seeking behaviour of students of Ajayi Crowther University, Oyo, Nigeria. The study shows that lack of internet connectivity was a major challenge faced by respondents (31.6%) while seeking for information. 27.1% of the respondents were of the view that information scattered in too many sources was also a challenge to information seeking. 15.6% of respondents posit that non-supportive behaviour of library staff was a challenge, while, the least number of respondents, 7.8% considered outdated materials as a challenge to seeking information. Onuoha and Obiako (2013) studied comparative analysis of information seeking behaviour among students of Babcock University, Nigeria. The study found that the problem encountered while seeking for information by first and final year undergraduates. Majority of the respondents agreed that they do not know how to use the catalogue 53 (25.5%) followed by library staff being unwilling to help in finding materials 31 (18.2%). The least problems encountered were lack of time to search for information 21 (12.3%) and materials not being available 20 (11.7%).

Research Methodology

The design adopted for this study was survey research design. This technique has been used by many researchers as it yields positive result. The survey research is using questionnaire for data collection because it falls within empirical research design that is aimed at discovering fact, and it was most appropriate for the study. Davis, (1989). A survey design was used as the most convenient method as acknowledged by Behah, (2001) and Kamba (2007). It also allows the



researcher to gather information from a large number of users. To ensure convergent and discriminate validity of the scales, most of the research constructs measured using existing validated scale. The targeted population of the study comprised of all Postgraduate Students in Modibbo Adama University, Yola and Federal University, Wukari. Findings by the researcher indicated that there were a total of 1974 Postgraduate Students in the two universities. The following table showed the distribution of the population.

Table 1: Table showing the distribution of the population.

S/N	Name of the University	Year of Establishment	PhD	MSc	PGD	Total
1	Modibbo Adama University, Yola, Adamawa State	1981	298	1261	44	1603
2	Federal University, Wukari, Taraba State	2011	-	341	30	371
	Grand Total		298	1602	74	1974

Source: Universities' Postgraduate Schools

Due to the large number of the population, Krejcie and Morgan's (1970) table for determining sample size for research activities was used in determining a sample size of three hundred and twenty-two (322) sample. Simple random sampling techniques was adopted in order to ensure that all members of the population had equal chances of been selected.

The researcher used self-developed questionnaire for data collection because the respondents were literate and have the capability of filling the questionnaires without any assistance from anybody. According to Osuala (2013), questionnaires are advantageous whenever the sample size is large enough to make it uneconomical for reasons of time or funds to observe or interview every subject. Powell (1997) opined that questionnaire is the most popular instrument frequently used in educational research. The popularity is demonstrated by the number of published studies in educational researches across the globe. The self-developed questionnaire was designed using Google Form mobile application with 4-Points-Likert scale. The title of the questionnaire was "QCINISBAPS" and was administered by the researcher by posting the links to the respondents on the various Postgraduate Students' WhatsApp platforms as well as other professional platforms. The research instrument was validated by three experts each from the field of librarianship, measurement and evaluation as well as social science discipline. The topic, objectives of the study, the research questions, hypothesis and the questionnaire items were sent to the experts for validation. Umoru (2005) observed that validity is concerned with whether the instrument measured what it purported to measure and if they are a representative sample of the opinion domain of investigation. According to Muhammad (2005) the instrument for data collection is said to be valid when it is able to produce correct responses from the subjects of the sample study. The personal data of the respondents was analysed using frequency counts, table, charts and simple percentages for descriptive analysis. The data generated from the research questions were analysed using mean and standard deviation. The decision rule was, any mean score of 2.50 and above was accepted, while, any mean score of 2.49 and below was rejected. z-test was used to test the two null-hypothesis tested at 0.05 level of significance. The analysis was carried out using Microsoft Excel and Statistical Package for Social Sciences (SPSS Inc., Chicago, IL) version 23.

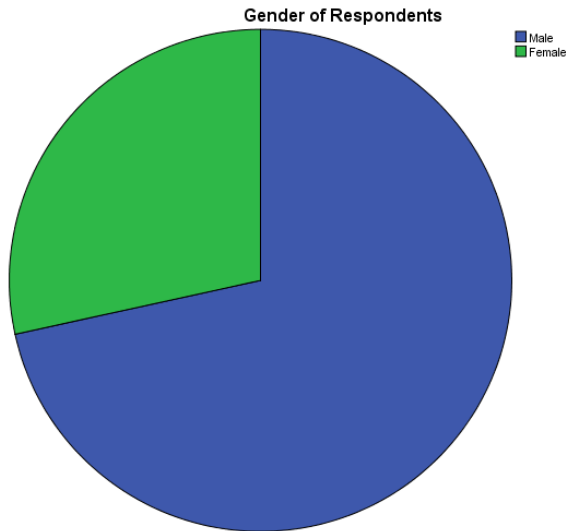
Data Presentation and Analysis

Response Rate

Out of the three hundred and twenty-two (322) questionnaires administered, two hundred and eighteen (218) were returned and used for the study, representing 67.7% of the total respondents.

Demographic Data of Respondents

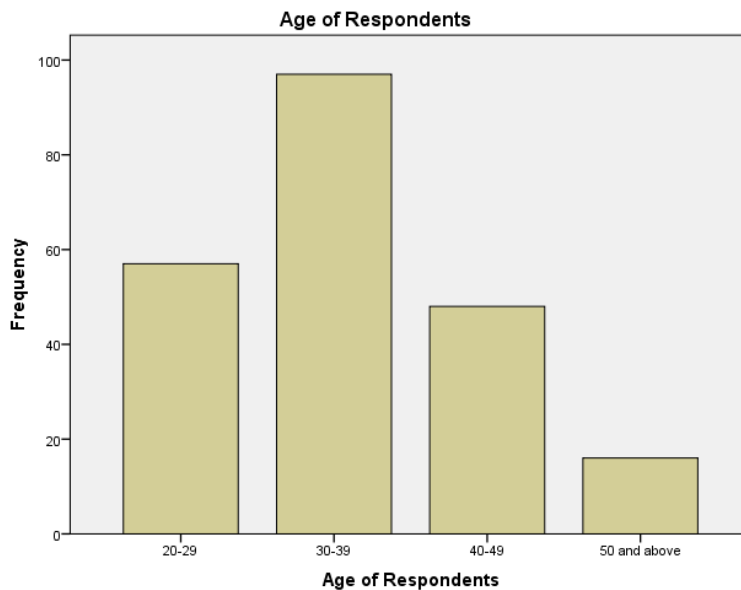
Figure 1: Gender of Respondents



Source: Field survey, 2023

Figure 1 above shows the result of the gender of the respondents. From the pie chart, male respondents with 156(71.6%) constituted higher than the females with 62(28.4%).

Figure 2: Age of Respondents



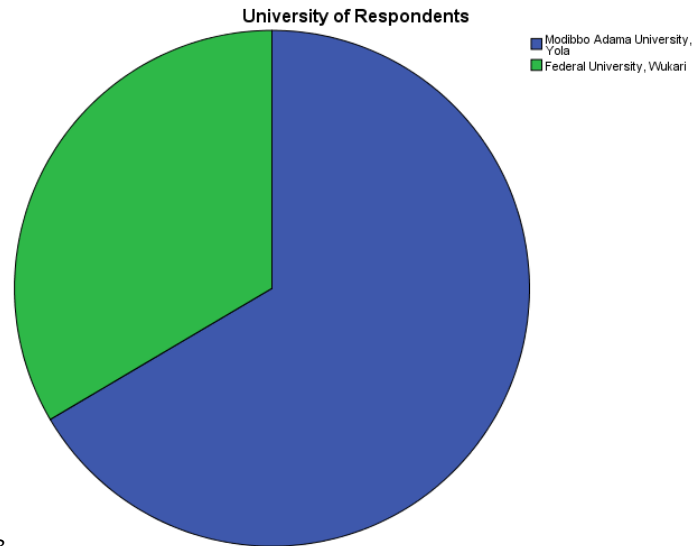
Source: Field survey, 2023

Figure 2 above shows the age distribution of the respondents. Respondents that were between 30-39 years of age constituted the majority with 97(44.5%), followed by those between 20-29 years



with 57(26.1%), those who were 40-49 were 48(22.0%), while those who were 50 and above were only 16(7.3%) and constituted the lowest among the respondents.

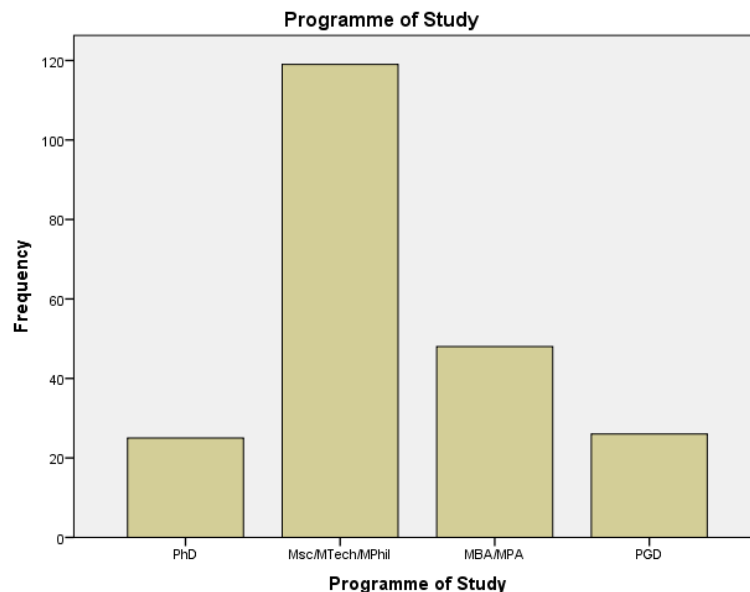
Figure 3: University of Respondents



Source: Field survey, 2023

Figure 3 above shows the university distribution of the respondents. Respondents that were from Modibbo Adama University, Yola constituted the majority with 145(66.5%), while those from Federal University, Wukari were 73(33.5%).

Figure 4: Programme of Study of the Respondents



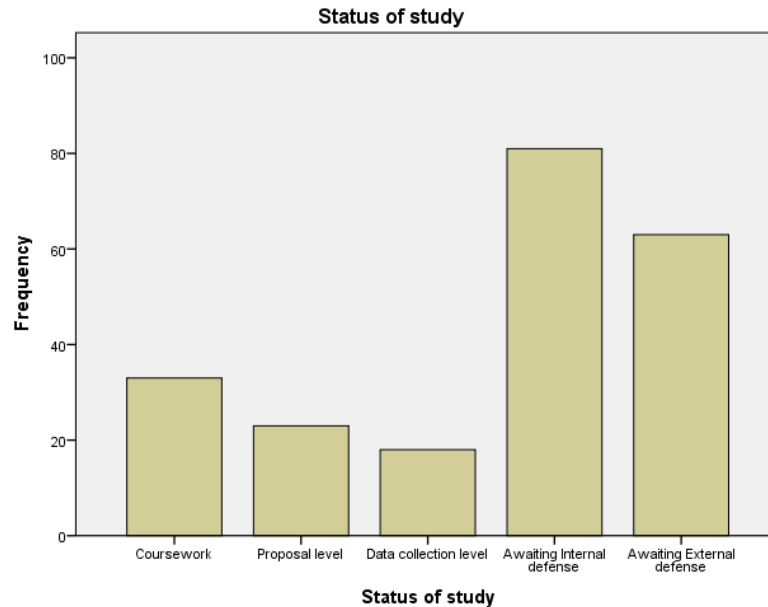
Source: Field survey, 2023

Figure 4 above shows the programme of study of the respondents. Respondents that were in Msc/MTech/MPhil constituted the majority with 119(54.6%), followed by those in MBA/MPA with



48(22.0%), those who were in PGD were 26(11.9%), while those who were in PhD were only 25(11.5%) and constituted the lowest among the respondents.

Figure 5: Status of Study of the Respondents



Source: Field survey, 2023

Figure 5 above shows the status of study of the respondents. Respondents that were awaiting internal defense constituted the majority with 81(37.2%), followed by those awaiting external defense with 63(28.9%), those who were undergoing course work were 33(15.1%), those who were at proposal level were 23(10.6%), while those who were at data collection level were only 18(8.3%) and constituted the lowest among the respondents.

Research Question 1: What are the information needs of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari?

Table 2: Information needs of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari

S/N	Statement	University	N	Mean	Std.	Decision
1	I search for information when carrying out research proposals	MAUY	145	2.43	0.88	Accepted
		FUW	73	2.71	0.96	Accepted
2	I search for information when writing thesis/dissertation	MAUY	145	2.93	1.11	Accepted
		FUW	73	3.40	0.86	Accepted
3	I search for information when writing research articles or seminar papers	MAUY	145	3.14	0.93	Accepted
		FUW	73	2.64	1.42	Accepted
4	I search for information to carry out assignment	MAUY	145	2.79	1.09	Accepted
		FUW	73	2.63	0.49	Accepted



5	I search for information to prepare for test and exams	MAUY	145	2.54	0.76	Accepted
		FUW	73	2.99	0.70	Accepted
6	I search for information to keep current and up to date in my field	MAUY	145	2.90	0.73	Accepted
		FUW	73	3.03	0.88	Accepted
7	I search for information for career and personal development	MAUY	145	1.50	0.58	Rejected
		FUW	73	2.32	1.11	Accepted
8	I search for information to solve problems	MAUY	145	1.80	0.62	Rejected
		FUW	73	2.30	1.13	Accepted
9	I search for information to increase my knowledge	MAUY	145	2.44	0.80	Accepted
		FUW	73	2.74	0.82	Accepted
10	I search for information for leisure and entertainment	MAUY	145	1.60	0.95	Rejected
		FUW	73	1.95	0.99	Rejected
	Weighted Means	MAUY		2.41	0.85	Accepted
		FUW		2.67	0.94	Accepted

Source: Field survey, 2023

The table above compared the information needs of Postgraduate Students in the two universities. In all the items listed, MAUY attracted higher mean scores in writing research articles or seminar papers and when carrying out assignment ($\bar{X} = 3.14$, $SD = 0.93$) and ($\bar{X} = 2.79$, $SD = 1.09$) respectively, while, FUW attracted higher mean scores in eight of the remaining items listed. They include: when carrying out research proposals ($\bar{X} = 2.71$, $SD = 0.96$); when writing thesis/dissertation ($\bar{X} = 3.40$, $SD = 0.86$); when preparing for test and exams ($\bar{X} = 2.99$, $SD = 0.70$); keeping current and up to date in their fields ($\bar{X} = 3.03$, $SD = 0.88$), for career and personal development ($\bar{X} = 2.32$, $SD = 1.11$), to solve problems ($\bar{X} = 2.30$, $SD = 1.13$), to increase their knowledge ($\bar{X} = 2.74$, $SD = 0.82$) and for leisure and entertainment ($\bar{X} = 1.95$, $SD = 0.99$). Meanwhile, the overall weighted mean score of Postgraduate Students in FUW was higher ($\bar{X} = 2.67$, $SD = 0.94$) than that of those in MAUY whose mean score was ($\bar{X} = 2.41$, $SD = 0.85$). With this result, it is concluded that the information needs of Postgraduate Students in the two universities include: carrying out research proposals, writing thesis/dissertation, writing research articles or seminar papers, carrying out assignment, prepare for test and exams, to keeping current and up to date in their field and to increase their knowledge. Moreover, career and personal development and to solve problems were expressed by Postgraduate Students in FUW.

Research Question 2: What is the extent of information seeking behavior of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari?

Table 3: Information seeking behavior of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari

S/N	Statement	University	N	Mean	Std.	Decision
1	I use lecturers and colleagues as starting point to obtain academic information	MAUY	145	3.01	1.08	Accepted
		FUW	73	3.08	0.94	Accepted
2	I use references at the back of consulted books (chaining) as a	MAUY	145	2.03	0.81	Accepted
		FUW	73	2.38	0.84	Accepted



	search strategy to source for relevant materials					
3	I usually browse the library collections to retrieve relevant information materials	MAUY	145	2.61	0.89	Accepted
		FUW	73	2.52	1.00	Accepted
4	I use extracting strategy i.e. using the library card catalogue as a search strategy to retrieve relevant materials.	MAUY	145	2.98	0.88	Accepted
		FUW	73	3.25	0.43	Accepted
5	I use shelf guide and lists on library notice boards to browse library collections on the shelves	MAUY	145	2.13	0.86	Accepted
		FUW	73	2.11	0.59	Accepted
6	I only browse the Internet whenever I need information	MAUY	145	2.80	0.80	Accepted
		FUW	73	2.52	0.50	Accepted
7	I seek assistance from librarians whenever I need academic information	MAUY	145	2.92	0.65	Accepted
		FUW	73	2.96	1.12	Accepted
8	I continue searching for information until I am satisfied	MAUY	145	2.92	1.06	Accepted
		FUW	73	3.16	0.93	Accepted
9	I usually feel overwhelmed when trying to satisfy my information need	MAUY	145	2.04	0.69	Accepted
		FUW	73	1.74	0.97	Rejected
10	I usually feel frustrated when consulting a source and not finding the information needed	MAUY	145	2.79	0.75	Accepted
		FUW	73	2.74	0.96	Accepted
11	I am always anxious whenever I need information	MAUY	145	2.59	0.77	Accepted
		FUW	73	3.36	0.69	Accepted
12	I like to compare different sources of information materials before I finally use the resource	MAUY	145	2.89	0.99	Accepted
		FUW	73	2.71	0.66	Accepted
	Weighted Means	MAUY		2.64	0.85	Accepted
		FUW		2.71	0.80	Accepted

Source: Field survey, 2023

The table above compared the information seeking behavior of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari. From the items listed, each of the universities attracted higher mean scores in six. MAUY attracted higher mean scores in browsing the library collections to retrieve relevant information materials ($\bar{X} = 2.61$, $SD = 0.89$), using shelf guide and lists on library notice boards to browse library collections on the shelves ($\bar{X} = 2.13$, $SD = 0.86$), browsing the Internet whenever they needed information ($\bar{X} = 2.80$, $SD = 0.80$), they feel overwhelmed when trying to satisfy their information needs ($\bar{X} = 2.04$, $SD = 0.69$), they feel frustrated when consulting a source and not finding the information needed ($\bar{X} = 2.79$,



SD = 0.75) and they compared different sources of information materials before they finally used the information resources ($\bar{X} = 2.89$, SD = 0.99). In the other hand, FUW attracted higher mean scores in items such as: using lecturers and colleagues as starting point to obtain academic information ($\bar{X} = 3.08$, SD = 0.94), they used references at the back of consulted books (chaining) as a search strategy to source for relevant materials ($\bar{X} = 2.38$, SD = 0.84), using the library card catalogue as a search strategy ($\bar{X} = 3.25$, SD = 0.43), seek assistance from librarians whenever when they needed academic information ($\bar{X} = 2.96$, SD = 1.12), searching for information until they were satisfied ($\bar{X} = 3.16$, SD = 0.93) and always anxious whenever they needed information ($\bar{X} = 3.36$, SD = 0.69).

Meanwhile, the overall weighted mean score of Postgraduate Students in FUW was higher ($\bar{X} = 2.71$, SD = 0.80) than that of those in MAUY whose mean score was ($\bar{X} = 2.64$, SD = 0.85). With this result, it is concluded that the information seeking behavior of Postgraduate Students in MAUY include: browsing the library collections, using shelf guide and lists on library notice boards, browsing the Internet, they feel overwhelmed when trying to satisfy their information needs, frustrated when consulting a source and not finding the information needed and they compared different sources of information materials before they finally used. Moreover, the information seeking behavior of Postgraduate Students in FUW include: used lecturers and colleagues as starting point to obtain academic information, used references at the back of consulted books, using the library card catalogue as a search strategy, seek assistance from librarians, searching for information until they were satisfied and always anxious whenever they needed information.

Research Question 3: What is the level of information searching skills of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari?

Table 4: Information searching skills of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari

S/N	Statement	University	N	Mean	Std.	Decision
1	I know where to get materials that could solved my information needs	MAUY	145	2.97	0.82	Accepted
		FUW	73	2.53	0.99	Accepted
2	I have the ability to limit search strategies by author, title, subject or date	MAUY	145	2.87	1.01	Accepted
		FUW	73	2.74	0.65	Accepted
3	I can use any of the search engines to get any kind of information	MAUY	145	1.72	0.74	Rejected
		FUW	73	2.14	0.77	Accepted
4	I have the ability to browse library collections on the shelves	MAUY	145	2.75	1.04	Accepted
		FUW	73	2.99	0.70	Accepted
5	I have the ability to search for information through the library catalogue and OPAC	MAUY	145	1.64	0.90	Rejected
		FUW	73	2.12	0.33	Accepted
6	I can search information through the various library databases	MAUY	145	3.12	0.93	Accepted
		FUW	73	2.86	0.79	Accepted



7	I can evaluate information searched so as to sort out bad information	MAUY	145	3.35	0.83	Accepted
		FUW	73	2.44	1.01	Accepted
8	I know how to cite and make references	MAUY	145	2.86	0.86	Accepted
		FUW	73	2.81	1.20	Accepted
9	I can search information through the Internet	MAUY	145	2.84	1.04	Accepted
		FUW	73	3.40	0.49	Accepted
	Weighted Means	MAUY		2.68	0.91	Accepted
		FUW		2.67	0.77	Accepted

Source: Field survey, 2023

The table above compared the information searching skills of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari. From the items listed, MAUY attracted higher mean scores in five items such as: ability to get materials that could solved their information needs ($\bar{X} = 2.97$, $SD = 0.82$), the ability to limit search strategies by author, title, subject or date ($\bar{X} = 2.87$, $SD = 1.01$), ability to search information through the various library databases ($\bar{X} = 3.12$, $SD = 0.93$), ability to evaluate information searched so as to sort out bad information ($\bar{X} = 3.35$, $SD = 0.83$) and the ability to cite and make references ($\bar{X} = 2.86$, $SD = 0.86$). In the other hand, FUW attracted higher mean scores in items such as: ability to use any of the search engines to get any kind of information ($\bar{X} = 2.14$, $SD = 0.77$), ability to browse library collections on the shelves ($\bar{X} = 2.99$, $SD = 0.70$), ability to search for information through the library catalogue and OPAC ($\bar{X} = 2.12$, $SD = 0.33$) and the ability to search information through the Internet ($\bar{X} = 3.40$, $SD = 0.49$). Meanwhile, the overall weighted mean score of Postgraduate Students in MAUY was slightly higher ($\bar{X} = 2.68$, $SD = 0.91$) than that of those in FUW whose mean score was ($\bar{X} = 2.67$, $SD = 0.77$). With this result, it is concluded that the information searching skills of Postgraduate Students of Modibbo Adama University, Yola include: ability to get materials that could solved their information needs, the ability to limit search strategies by author, title, subject or date, ability to search information through the various library databases, ability to evaluate information searched so as to sort out bad information) and the ability to cite and make references, while, the information searching skills of Postgraduate Students of Federal University, Wukari include: ability to use any of the search engines to get any kind of information, ability to browse library collections on the shelves,), ability to search for information through the library catalogue and OPAC and the ability to search information through the Internet.

Research Question 4: What are the information sources of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari?

Table 5: Information sources of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari.

S/N	Statement	University	N	Mean	Std.	Decision
1	Books	MAUY	145	2.81	1.06	Accepted
		FUW	73	2.95	1.27	Accepted



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2	Journals	MAUY	145	3.12	0.89	Accepted
		FUW	73	3.66	0.67	Accepted
3	Internet sources	MAUY	145	2.99	0.86	Accepted
		FUW	73	3.37	0.95	Accepted
4	Electronic information resources	MAUY	145	2.90	1.01	Accepted
		FUW	73	3.36	0.48	Accepted
5	Review articles	MAUY	145	3.14	0.85	Accepted
		FUW	73	3.15	0.62	Accepted
6	Discussion with colleagues and friends	MAUY	145	2.79	1.15	Accepted
		FUW	73	3.01	0.49	Accepted
7	Library catalogues and OPACs	MAUY	145	1.86	0.94	Rejected
		FUW	73	2.12	0.60	Accepted
8	Email/webinar / discussion forums	MAUY	145	1.70	0.82	Rejected
		FUW	73	1.92	0.80	Rejected
9	Professional meetings / workshops	MAUY	145	1.75	0.74	Rejected
		FUW	73	1.64	0.69	Rejected
10	Projects / Theses / dissertations	MAUY	145	3.04	0.94	Accepted
		FUW	73	3.25	0.66	Accepted
11	Research reports / patents / factsheets	MAUY	145	3.18	0.94	Accepted
		FUW	73	3.15	0.62	Accepted
12	Newspapers and magazines	MAUY	145	2.08	0.69	Accepted
		FUW	73	2.19	1.19	Accepted
13	Telephone/mobile phone	MAUY	145	1.62	0.73	Rejected
		FUW	73	2.01	0.87	Accepted
	Weighted Means	MAUY		2.57	0.90	Accepted
		FUW		2.72	0.76	Accepted

Source: Field survey, 2023

The table above compared the information sources of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari. In all the items listed, MAUY in attracted higher mean scores in research reports / patents / factsheets ($\bar{X} = 3.18$, $SD = 0.94$), while, FUW attracted higher mean scores in ten other items listed. They include: books ($\bar{X} = 2.95$, $SD = 1.27$), journals ($\bar{X} = 3.66$, $SD = 0.67$), Internet sources ($\bar{X} = 3.37$, $SD = 0.95$), electronic information resources ($\bar{X} = 3.36$, $SD = 0.48$), review articles ($\bar{X} = 3.15$, $SD = 0.62$), discussion with colleagues and friends ($\bar{X} = 3.01$, $SD = 0.49$), library catalogues and OPACs ($\bar{X} = 2.12$, $SD = 0.60$), projects / theses / dissertations ($\bar{X} = 3.25$, $SD = 0.66$), newspapers and magazines ($\bar{X} = 2.19$, $SD = 1.19$) and telephone/mobile phone ($\bar{X} = 2.01$, $SD = 0.90$). The other two items listed including email/webinar / discussion forums and professional meetings / workshops attracted low mean scores below the acceptable 2.0-point scale in the two universities studied. Meanwhile, the overall weighted mean score of Postgraduate Students in FUW was higher ($\bar{X} = 2.72$, $SD = 0.76$) than that of those in MAUY whose mean score



was ($\bar{X} = 2.57$, $SD = 0.90$). With this result, it is concluded that the information sources of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari include: research reports / patents / factsheets, books, journals, Internet sources, electronic information resources, review articles, discussion with colleagues and friends, library catalogues and OPACs, projects / theses / dissertations, newspapers and magazines as well as telephone/mobile phone.

Research Question 5: What are the factors militating against information needs and information seeking behavior of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari?

Table 6: Factors militating against information needs and information seeking behavior of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari.

S/N	Statement	University	N	Mean	Std.	Decision
1	Lack of searching skills	MAUY	145	2.18	0.95	Accepted
		FUW	73	1.48	0.50	Rejected
2	Insufficient information resources	MAUY	145	2.81	0.98	Accepted
		FUW	73	3.25	0.43	Accepted
3	Poor ICT infrastructure	MAUY	145	2.39	1.02	Accepted
		FUW	73	1.89	0.59	Rejected
4	Difficulty in retrieving information	MAUY	145	2.97	1.18	Accepted
		FUW	73	2.47	1.14	Accepted
5	Some of the materials are outdated	MAUY	145	3.24	0.87	Accepted
		FUW	73	3.41	0.68	Accepted
6	Lack of technical know-how on the information sources	MAUY	145	2.23	0.86	Accepted
		FUW	73	2.38	0.98	Accepted
7	Slow internet connectivity and low bandwidth	MAUY	145	2.61	1.02	Accepted
		FUW	73	2.71	0.83	Accepted
8	Non-supportive behavior of library staff	MAUY	145	2.90	0.82	Accepted
		FUW	73	2.90	0.82	Accepted
9	Information scattered in too many sources	MAUY	145	2.66	1.09	Accepted
		FUW	73	4.00	0.00	Accepted
10	Time consuming / lack of adequate time	MAUY	145	2.89	0.95	Accepted
		FUW	73	2.58	1.03	Accepted
11	Lack of awareness of various electronic databases	MAUY	145	3.59	0.61	Accepted
		FUW	73	2.19	1.19	Accepted
	Weighted Means	MAUY		2.77	0.94	Accepted
		FUW		2.66	0.75	Accepted

Source: Field survey, 2023

The table above compared the factors militating against information needs and information seeking behavior of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari. From the results, the Postgraduate Students in the two universities indicated



that the non-supportive behavior of library staff ($\bar{X} = 2.90, SD = 0.82$). Also, MAUY attracted higher mean scores in lack of searching skills ($\bar{X} = 2.18, SD = 0.95$), poor ICT infrastructure ($\bar{X} = 2.39, SD = 1.02$), difficulty in retrieving information ($\bar{X} = 2.97, SD = 1.18$), time consuming / lack of adequate time ($\bar{X} = 2.89, SD = 0.95$) and lack of awareness of various electronic databases ($\bar{X} = 3.59, SD = 0.61$), while, FUW attracted higher mean scores in other five items listed. They include: insufficient information resources ($\bar{X} = 3.25, SD = 0.43$), outdated materials ($\bar{X} = 3.41, SD = 0.68$), lack of technical know-how on the information sources ($\bar{X} = 2.38, SD = 0.98$), slow internet connectivity and low bandwidth ($\bar{X} = 2.71, SD = 0.83$) and information scattered in too many sources ($\bar{X} = 4.00, SD = 0.00$). Meanwhile, the overall weighted mean score of Postgraduate Students in MAUY was higher ($\bar{X} = 2.77, SD = 0.94$) than that of those in FUW whose mean score was ($\bar{X} = 2.66, SD = 0.75$). With this result, it is concluded that the factors militating against information needs and information seeking behavior of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari include: non-supportive behavior of library staff, lack of searching skills, poor ICT infrastructure, difficulty in retrieving information, time consuming / lack of adequate time, lack of awareness of various electronic databases, insufficient information resources, outdated materials, lack of technical know-how on the information sources, slow internet connectivity and low bandwidth and information scattered in too many sources.

Hypothesis Testing

Ho: There is no significant difference in the opinions of Postgraduate Students' information needs of Modibbo Adama University, Yola and Federal University, Wukari.

Table 7: Summary of z-test on the significant difference in the opinions of Postgraduate Students' information needs of Modibbo Adama University, Yola and Federal University, Wukari.

Grouping variable (University)	N	Mean	Std.D	Df	z	P	z-critical value	Remark
MAUY	145	2.41	0.25	217	-	4.116	1.96	No Significant
FUW	73	2.67	0.41		5.064			

Source: Field survey, 2023

Table 7 showed the differences in the opinions of Postgraduate Students' information needs of Modibbo Adama University, Yola and Federal University, Wukari. The table indicated that the mean score for MAUY Postgraduate Students is 2.41 while that of FUW is 2.67. The values of the mean scores revealed a difference, but, there is no significant differences. Therefore, the hypothesis was accepted. This implies that, there is no significant differences in the opinions of Postgraduate Students' information needs (Df = 217; z = -5.064; z critical value = 1.96). Hence, hypothesis 1 is accepted.

Ho: There is no significant difference in the opinions of Postgraduate Students' information seeking behaviour of Modibbo Adama University, Yola and Federal University, Wukari.



Table 8: Summary of z-test on the significant difference in the opinions of Postgraduate Students' information seeking behaviour of Modibbo Adama University, Yola and Federal University, Wukari.

Grouping variable (University)	N	Mean	Std.D	Df	z	p	z-critical value	Remark
MAUY	145	2.64	0.30	217	-	0.079	1.96	No Significant
FUW	73	2.71	0.25		1.7555			

Source: Field survey, 2023

Table 8 showed the differences in the opinions of Postgraduate Students' information seeking behaviour of Modibbo Adama University, Yola and Federal University, Wukari. The table indicated that the mean score for MAUY Postgraduate Students is 2.64, while, that of FUW is 2.71. The values of the mean scores revealed a difference, but, there is no significant differences. Therefore, the hypothesis was accepted. This implies that, there is no significant differences in the opinions of Postgraduate Students' information seeking behaviour (Df = 217; z = -1.7555; z critical value = 1.96). Hence, hypothesis 2 is accepted.

Discussion of Findings

This study sought to compare the information needs and information seeking behavior of Postgraduate Students of Modibbo Adama University, Yola and Federal University Wukari. Male respondents constituted higher than their female counterparts among those who participated in the study. This shows that male dominance still lingers in Northern part of the country, where parents still give more priority to male education and even when the females who are opportune to enrolled, they being married off after completing first degree.

This study revealed that the information needs of Postgraduate Students in FUW was higher than those in MAUY and their information needs include: carrying out research proposals, writing thesis/dissertation, writing research articles or seminar papers, carrying out assignment, prepare for test and exams, to keeping current and up to date in their field and to increase their knowledge. This finding corroborates the study conducted by Kumar and Jadab (2016) which reported the purpose of seeking information is for the preparation of assignment, followed preparation for examination, keeping up-to-date, conducting legal research and attending workshop or seminar. Valizadeh-Haghi and Rahmatizadeh (2018) found that Postgraduate Students search information for preparing of professional lecture, update of professional knowledge, conducting research works, training of others and writing paper.

Similarly, Lalitlanmawii and Verma (2016) revealed that the all faculties seek information for teaching, while, all faculties and research scholars sought information for research purpose, writing research paper/complete research project, solving course queries and updating themselves in their subject and general awareness. Chopra (2018) observed that most of the respondents seek information for preparing for examinations, preparation of assignments, preparation for career, keeping general awareness and up-to-date. The finding disagrees with the study of Gyesi (2020) also found respondents indicated that they look for information on career development, self-development, current affairs and employment. Other needs were entertainment and politics,



global information, health and football, higher education, recreational activities, sports, and religion.

In another finding, this study revealed that the information seeking behavior of Postgraduate Students in FUW was higher than those in MAUY and that the information seeking behavior of Postgraduate Students in MAUY include: browsing the library collections, using shelf guide and lists on library notice boards, browsing the Internet, they feel overwhelmed when trying to satisfy their information needs, frustrated when consulting a source and not finding the information needed and they compared different sources of information materials before they finally used. Moreover, the information seeking behavior of Postgraduate Students in FUW include: used lecturers and colleagues as starting point to obtain academic information, used references at the back of consulted books, using the library card catalogue as a search strategy, seek assistance from librarians, searching for information until they were satisfied and always anxious whenever they needed information. This finding is consistent with Baro, Onyenania and Osaheni (2010) indicated that they used lecturers and colleagues, references at the back of consulted books and they browse the library collections to retrieve relevant information materials.

Obi, Akanbi and Kehinde (2018) further revealed that respondents expressed that they firstly identify the information they need before they begin to consult the information sources, they compare different sources of information materials before they finally use the resource and they were always anxious whenever they needed information. Contrary to these findings, Das and Mandal (2021) revealed that the approaches of information seeking behaviour such as all types of search techniques like print, web documents, human resources, internet, search engine, database, keywords for searching information were applied for maximum by scholars and teachers of pure science departments.

Analysis of research question three revealed that Postgraduate Students' level of searching skills in MAUY was slightly higher than those in FUW and that the information searching skills of Postgraduate Students of Modibbo Adama University, Yola include: ability to get materials that could solved their information needs, the ability to limit search strategies by author, title, subject or date, ability to search information through the various library databases, ability to evaluate information searched so as to sort out bad information and the ability to cite and make references, while, the information searching skills of Postgraduate Students of Federal University, Wukari include: ability to use any of the search engines to get any kind of information, ability to browse library collections on the shelves,), ability to search for information through the library catalogue and OPAC and the ability to search information through the Internet.

This finding substantiates Shukla and Kumar (2020) which found that masters' students of Social Sciences of Mizoram University and Tezpur University in India had good searching of information skills and a large number of students had good evaluating of information skills. Umuhoza and Unegbu (2021) also indicated that majority of the students have a high level of information literacy skills. Israel (2018) supports this finding and affirmed that Postgraduate Students of Nnamdi Azikiwe University, Awka, Nigeria can locate information in multiple sources as well as compare and evaluate critically whether the information is timely and appropriate. Other findings that are in line with this finding include Oyedokun, Adekumisi, Bada and Buraimo (2019), Adeniran and Onuoha (2018) and Omeluzor, Bamidele, Onuoha and Alarape (2013). However, the finding



disagrees with Fasola and Oso (2021) which reported that Postgraduate Students of Ajayi Crowther University, Oyo felt that it was not easy for them to plan and search for information at the library using retrieval tools such as OPAC, index, abstract etc.

In another finding, this study revealed that the information sources of Postgraduate Students of FUW was higher those in MAUY and that the information sources of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari include: research reports / patents / factsheets, books, journals, Internet sources, electronic information resources, review articles, discussion with colleagues and friends, library catalogues and OPACs, projects / theses / dissertations, newspapers and magazines as well as telephone/mobile phone. This finding also substantiates Valizadeh-Haghi and Rahmatizadeh (2018) which indicated the types of information resources used by the Postgraduate Students which include: databases, electronic journals, printed scientific journals, books, newspapers and theses. Moreover, Kumar and Jadab (2016) revealed that majority of the students indicated high dependence on Textbooks as a source of accessing information; use Encyclopedia, Law reports, Law journals, Legal digest and Thesis as a source of information.

Laltlanmawii and Verma (2016) found that books and journals were most common source of information. Others include library catalogue, abstract and indexes, thesis/dissertation, monographs/text book, research report, publisher's catalogue to locate their required information. Okonoko, Njideka and Mazah (2015) showed that majority of the students indicated consulting textbooks, e-books, e-journals, government publication, reference books, serials publication, project report as the most information materials consulted by the researchers in Nigeria libraries. In contrast, Mnguni and Kekana (2022) indicated electronic databases, videos, images, audios and web as the means of seeking information by students, Baro and Fyneman (2009) found that students consult The Reference Librarian and subject experts for information within the university community.

This study further revealed that the factors militating against information needs and information seeking behavior of Postgraduate Students in MAUY was higher than those in FUW and that the factors militating against information needs and information seeking behavior of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari include: non-supportive behavior of library staff, lack of searching skills, poor ICT infrastructure, difficulty in retrieving information, time consuming / lack of adequate time, lack of awareness of various electronic databases, insufficient information resources, outdated materials, lack of technical know-how on the information sources, slow internet connectivity and low bandwidth and information scattered in too many sources. This finding concurred with Humbhi, Tareen and Humbhi (2022) which reported that slow internet, lack of ICT knowledge and poor ICT facilities.

In another study, Baayel and Asante (2019) revealed respondents' lack searching skills, lack awareness, lack time, inadequate library staff to assist, unstable internet connectivity, unavailable current resources and too much information to choose from. Komba and Lwoga (2016) reported poor ICT infrastructure, difficulty in retrieving information, lack of search skills, the information is complicated, the information source is expensive, the information is located far, language and policy and regulations do not support access of information. Okonoko, Njideka and Mazah (2015) identified network fluctuation as a major challenges associated with information seeking behavior



of researchers in Nigeria libraries. Others include inadequate knowledge of use of catalogue, insufficient librarians in the library, incompleteness of records, information scattered in too many sources, nonchalant attitude of library staff, lack of time to access information resources were some of the numerous challenges facing researchers seeking for information behavior in Nigeria libraries.

The hypothesis one tested revealed that there is no significant differences in the opinions of Postgraduate Students' information needs of Modibbo Adama University, Yola and Federal University, Wukari. This is because, the difference between the two universities was not significant hence the hypothesis was accepted. Similarly, the hypothesis two tested revealed that there is no significant differences in the opinions of Postgraduate Students' information seeking behaviour of Modibbo Adama University, Yola and Federal University, Wukari. This is because, the difference between the two universities was not significant hence the hypothesis was accepted.

Conclusion

Information is one the most important ingredient that facilitate academic success in the life of a postgraduate student. This study has established that there are no significant differences in the opinions of Postgraduate Students' information needs of MAUY and FUW. Although, the information needs of Postgraduate Students in FUW was higher than those in MAUY and their information needs include: carrying out research proposals, writing thesis/dissertation, writing research articles or seminar papers, carrying out assignment, prepare for test and exams, to keeping current and up to date in their field and to increase their knowledge. The study further established that there is no significant differences in the opinions of Postgraduate Students' information seeking behaviour of MAUY and FUW and that the information seeking behavior of Postgraduate Students in FUW was higher than those in MAUY and that that the information seeking behavior of Postgraduate Students in MAUY include: browsing the library collections, using shelf guide and lists on library notice boards, browsing the Internet, they feel overwhelmed when trying to satisfy their information needs, frustrated when consulting a source and not finding the information needed and they compared different sources of information materials before they finally used. Moreover, the information seeking behavior of Postgraduate Students in FUW include: used lecturers and colleagues as starting point to obtain academic information, used references at the back of consulted books, using the library card catalogue as a search strategy, seek assistance from librarians, searching for information until they were satisfied and always anxious whenever they needed information.

Furthermore, the study has found that Postgraduate Students' level of searching skills in MAUY was slightly higher than those in FUW and that the information searching skills of Postgraduate Students of Modibbo Adama University, Yola include: ability to get materials that could solved their information needs, the ability to limit search strategies by author, title, subject or date, ability to search information through the various library databases, ability to evaluate information searched so as to sort out bad information and the ability to cite and make references, while, the information searching skills of Postgraduate Students of Federal University, Wukari include: ability to use any of the search engines to get any kind of information, ability to browse library collections on the shelves), ability to search for information through the library catalogue and OPAC and the ability



to search information through the Internet. In another finding, this study revealed that the information sources of Postgraduate Students of FUW was higher those in MAUY and that the information sources of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari include: research reports / patents / factsheets, books, journals, Internet sources, electronic information resources, review articles, discussion with colleagues and friends, library catalogues and OPACs, projects / theses / dissertations, newspapers and magazines as well as telephone/mobile phone.

This study further revealed that the factors militating against information needs and information seeking behavior of Postgraduate Students in MAUY was higher than those in FUW and that the factors militating against information needs and information seeking behavior of Postgraduate Students of Modibbo Adama University, Yola and Federal University, Wukari include: non-supportive behavior of library staff, lack of searching skills, poor ICT infrastructure, difficulty in retrieving information, time consuming / lack of adequate time, lack of awareness of various electronic databases, insufficient information resources, outdated materials, lack of technical know-how on the information sources, slow internet connectivity and low bandwidth and information scattered in too many sources. This cause for serious concerns and require concerted efforts of all stakeholders concerned in order to mitigate these challenges.

Recommendation

Based on the findings of this study and the conclusion drawn, the following are recommended:

1. Postgraduate Students in MAUY and FUW should avail themselves for library orientation programmes organised by their university libraries so that they could understand their information needs and prioritize when searching information.
2. University libraries of MAUY and FUW should develop mechanisms that could facilitate easy retrieval of information needed by the Postgraduate Students. This could go a long way in helping the students retrieve information seamlessly and save them from frustration usually experienced while searching for information.
3. The university libraries of MAUY and FUW should embark on massive information literacy programmes and the students be mandated to attend as this could enhance their ability to use available information sources in various formats.
4. The university libraries of MAUY and FUW should as a matter of priority develop collections both in printed and electronic formats that are in consonance with the information needs of the Postgraduate Students.
5. There is the need for the management of MAUY and FUW to expedite action towards supporting the university libraries in all ramifications, most especially through galvanizing financial commitment so that they could overcome the challenges they are experiencing which are hampering effective service delivery in the university libraries

References

- Adeniran, P. O. & Onuoha, U. D. (2018) Influence of Information Literacy Skills on Postgraduate Students' Use of Electronic Resources in Private University Libraries in South-West, Nigeria. *Communications and Network*, 10, 164-179. <https://doi.org/10.4236/cn.2018.104014>.



TIMBOU-AFRICA ACADEMIC PUBLICATIONS
NOVEMBER, 2023 EDITIONS, INTERNATIONAL JOURNAL OF:
SOCIAL SCIENCE RES. & ANTHROPOLOGY VOL. 15

- Ahmat, N. H. C. & Kamarudin, W. N. B. (2014). Information Seeking Behaviour (ISB) and Information Needs Satisfaction Among Postgraduate Students in Universiti Teknologi MARA (UiTM), Malaysia. *Journal of Tourism, Hospitality & Culinary Arts*, 6(2): 65-73. Available via: <https://www.researchgate.net/publication/361760270>.
- Al-Suqri, M. N. & Lillard, L. L. (2011). Barriers to Effective Information Seeking of Social Scientists in Developing Countries: The Case of Sultan Qaboos University in Oman. *Journal of Library & Information Science*, 1(2): 86-100.
- Athukorala, A. W. V. (2021). Information seeking behavior among public library users: Understanding nature of information searching. *Journal of Advanced Research in Social Sciences and Humanities*, 6(2): 42-50. DOI: <https://dx.doi.org/10.26500/JARSSH-06-2021-0202>.
- Baayel, P. & Asante, E. (2019). Faculty's Information Seeking Behavior in an ICT Environment: A Study of Koforidua Technical University. *Library Philosophy and Practice (e-journal)*. 2529. <https://digitalcommons.unl.edu/libphilprac/2529>.
- Baro, E. E. & Fyneman, B. (2009). Information literacy among undergraduate students in Niger Delta University. *The Electronic Library*. DOI: 10.1108/02640470910979606
- Baro, E. E., Onyenania, G. O & Osaheni, O. (2010). Information seeking behaviour of undergraduate students in the humanities in three universities in Nigeria. *South African Journal of Libraries & Information Science*, 76(2). DOI: 10.7553/76-2-74.
- Billah, A. & Rahman, M. R. (2020). Assessment of Information Literacy Skills among Feni University Students. *International Journal of Creative Research Thoughts (IJCRT)*, 8(11): 2556-2564.
- Biswas, T. (2021). Information Seeking Behaviour of Professors and Students of Allahabad University and Aligarh Muslim University: A Comparative Study. *Journal NX- A Multidisciplinary Peer Reviewed Journal*, 7(9): 32-37.
- Chandra, K. A. & Achary, J. (2014). Information needs, information seeking behaviour and use of Electronic resources by Research scholars and Faculties in the University and Research libraries of Odisha. *Journal of Library & Information Science*, 3(3): 552-566.
- Chopra, V. (2018). Information Seeking Behaviour of Library Users in Select PG Degree Colleges of Chhattisgarh State, India. *Journal of Library & Information Science*, 8(1):90-99.
- Das, A. K. & Mandal, S. (2021). Comparative Study on Information Seeking Behaviour of Research Scholars and Teachers of Selective Science Departments in Burdwan University. *Library Philosophy and Practice (e-journal)*. 6026. <https://digitalcommons.unl.edu/libphilprac/6026>.
- Fasola, O. S. & Olabode, S. O. (2013). Information Seeking Behaviour of Students of Ajayi Crowther University, Oyo, Nigeria. *Brazilian Journal of Information Science*, 7(2): 47-60. Available via: <http://www2.marilia.unesp.br/revistas/index.php/bjis/index>.
- Fasola, O. S. & Oso, O. O. (2021). An Assessment of Information Literacy Skills of Post Graduate Students of Ajayi Crowther University, Oyo. *MBJLIS - Middlebelt Journal of Library and Information Science*, 19. Available via: <https://www.mbjlisonline.org/>
- Gyesi, K. (2020). Information Seeking Behaviour of Graduate Students of the University of Professional Studies, Accra (UPSA). *Library Philosophy and Practice (e-journal)*. 4155. <https://digitalcommons.unl.edu/libphilprac/4155>.
- Humbhi, S., Tareen, S. A. & Humbhi, A. (2022). Information needs and Information-seeking behavior of undergraduate students: A remote area perspective. *Library Philosophy and Practice (e-journal)*. 6838. <https://digitalcommons.unl.edu/libphilprac/6838>.
- Israel, O. (2018). Information Literacy Skills among Library and Information Science Postgraduate Students of Nnamdi Azikiwe University, Awka, Nigeria. *International Journal of Library Science*, 7(2): 32-36. DOI: 10.5923/j.library.20180702.03.
- Kaur, A. & Lal, P. (2016). Information Seeking Behaviour of Different types of Users of Public Libraries of Southern Punjab, India. *International Journal of Digital Library Services*, 6(4): 95-104.
- Kehinde, A. A., Obi, S. A., Akinade, A. A. & Anyim, A. O. (2016). Information Needs and Seeking Behaviour of Masters' Students in the Faculty of Communication and Information Sciences, University of Ilorin, Kwara State. *Library Philosophy and Practice (e-journal)*. 1463. <http://digitalcommons.unl.edu/libphilprac/1463>.
- Khan, A. & Khan, A. (2020). Information Seeking Behavior of Postgraduate Students in the University of Peshawar, Pakistan" (2020). *Library Philosophy and Practice (e-journal)*. 4380. <https://digitalcommons.unl.edu/libphilprac/4380>.
- Komba, M. M. & Lwoga, E. T. (2016). Government information seeking behaviour of citizens in selected districts of Tanzania. *Journal of Library & Information Science*, 6(1): 175-187.
- Kumar, R. D. & Jadab, A. (2016). Information Seeking Behavior of Law students in the Digital Age: A User Study at University of Dhaka. *Journal of Library & Information Science*, 6(3): 381-396.
- Kumari, K. & Sharma, S. (2021). Information-Seeking Behaviour of the Users of Academic Libraries: A Critical Review of Literature. *DESIDOC Journal of Library & Information Technology*, 41(6):469-475. DOI: 10.14429/djlit.41.5.16646.
- Laltlanmawii, R. & Verma, M. K. (2016). Information Seeking Behaviour of Faculties and Research Scholars in School of Physical Sciences, Mizoram University, Aizawl: A Study. *Journal of Library & Information Science*, 6(2): 265-274.
- Makinde, O. B., Jiyane, G. V. & Mugwisi, T. (2020). Information-seeking behaviour of science and technology researchers in Nigeria: A survey of the Federal Institute of Industrial Research Oshodi. *International Federation of Library Associations and Institutions*, 47(1): 20-36. DOI: 10.1177/0340035220931877.
- Mnguni, K. M. & Kekana, M. D. (2022). Web Information Seeking Behaviour of Undergraduate Students of Library and Information Studies at the University of Zululand. *Library Philosophy and Practice (e-journal)*. 7174. <https://digitalcommons.unl.edu/libphilprac/7174>.



TIMBOU-AFRICA ACADEMIC PUBLICATIONS
NOVEMBER, 2023 EDITIONS, INTERNATIONAL JOURNAL OF:
SOCIAL SCIENCE RES. & ANTHROPOLOGY VOL. 15

- Munshi, S. A. & Nagar, P. (2016). Information literacy skills among the Postgraduate Students at Aligarh Muslim University, India. *Library Philosophy and Practice (e-journal)*. 1419. Available via: <http://digitalcommons.unl.edu/libphilprac/1419>.
- Nagar, P. & Munshi, S. A. (2014). Information Seeking Behavior of Female Research Scholars of Faculties of Social Science and Arts in Aligarh Muslim University: A Comparative Study. *Journal of Library & Information Science*, 4(4): 459-474.
- Moly, T. M. (2014) Information Need and Information Seeking Behavior of Information Science Students in Haramaya University, Ethiopia. *Journal of Library & Information Science*, 4(2): 244-252.
- Nwone, S. & Mutula, S. (2018) Information seeking behaviour of the professoriate in selected federal universities in southwest Nigeria. *South African Journal of Libraries & Information Science*, 84(1). Available via: <http://sajlis.journals.ac.za> doi:10.7553/84-1-1733.
- Obi, S. A., Akanbi, L. M. & Kehinde, A. A. (2018). Information Needs and Seeking Behaviour of Students of the Nigerian Army School of Education, Sobi Barracks, Ilorin, Nigeria. *Library Philosophy and Practice (e-journal)*. 1876. <http://digitalcommons.unl.edu/libphilprac/1876>
- Okoh, M. I. & Ijiekhuamhen, O. P. (2014). Information Seeking Behaviour of Undergraduates in a Nigerian University. *Information Impact: Journal of Information and Knowledge Management*, 5(2): 69 – 83.
- Okonoko, V. N., Njideka, N. O. & Mazah, D. (2015). A comparative study of information seeking behaviour of Researchers in Nigeria Libraries: Librarians Perceptive. *International Journal of Academic Research and Reflection*, 3(4): 76-88.
- Omeluzor, S. U., Bamidele, I. A., Onuoha, U. D. & Alarape, A. A. (2013). Information literacy skills among Postgraduate Students of Babcock University, Nigeria. *International Journal of Innovative Research in Management*, 12(2): 1-19.
- Onuoha, U. D. & Obiako, A. N. (2013). Comparative analysis of information seeking behaviour among students of Babcock University, Nigeria. *IOSR Journal of Research & Method in Education (IOSR-JRME)*, 2(2): 1-6.
- Oyadeyi, A. E. (2014). The information needs and information seeking behaviour among the students of Ondo State University of Science and Technology, Okitipupa. *International Journal of Digital Library Services*, 4(1): 65-82. Available at: <https://www.researchgate.net/publication/307957664>.
- Oyedokun, S. O., Adekumisi, S. R., Bada, B. A. & Buraimo, O. (2019). Information Literacy Skills of Postgraduates in two Public Universities in Ogun State, Nigeria. *Gateway Information Journal*, 20(1): 1-19. Available via: <https://www.gatewayinfojournal.org>.
- Sambo, A. S., Akanbi, L. M. & Shehu, H. (2021). Information Seeking Behaviour of Final Year Students in three Universities in Kwara State. *Journal of Nigerian Library Association Bauchi State Chapter*, 5(7): 1-12. Available at: <https://www.researchgate.net/publication/354545026>.
- Shukla, R. & Kumar, M. V. (2020). Assessment of Information Literacy Skills Among the Masters Students of Social Sciences of Mizoram University and Tezpur University in India. *International Journal of Information Studies*, 12(3): 92-105. DOI:10.6025/ijis/2020/12/3/92-105.
- Siddiqui, S. (2011). Information Seeking Behaviour of B.Tech. and M.B.B.S. Students in Lucknow: A Comparative Study. *Journal of Library & Information Science*, 1(1): 55-70.
- Ugwu, E. I., Ogbu, F.U. & Aniekwe, C. C. (2021). Emerging Challenges in Information Seeking Behaviour of Users of Academic Libraries in Nigeria. *IMT International Journal of the Arts and Sciences*, 1(1): 92-101.
- Umuhzoza, C. & Unegbu, V. E. (2021). Information literacy skills and use of library resources by Postgraduate Students in Adventist University of central Africa, Kigali, Rwanda. *International Journal of Academic Library and Information Science*, 9(6): 287-295. DOI: 10.14662/IJALIS2021.215.
- Valizadeh-Haghi, S. & Rahmatizadeh, S. (2018). Learning About the Information Seeking behavior of Allied Medical Sciences Students: Advices for Libraries of multidisciplinary Colleges. *Library Philosophy and Practice (e-journal)*. 1746. <https://digitalcommons.unl.edu/libphilprac/1746>.