INFORMATION SEEKING BEHAVIOUR OF FACULTY AND USE OF THE INTERNET AT GULU UNIVERSITY LIBRARY, KAMPALA, UGANDA

By

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DECLARATION

I Ukech Susan, the undersigned hereby declare that the work contained in this dissertation is my own work and has not previously in its entirety or part been submitted at any university/ institution for an award.

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ABSTRACT

This study examined the information seeking behaviour of faculty and use of the Internet at Gulu University Library. The purpose of the study was to answer the following research questions: What has been reported in the subject literature on the information behaviour of faculty with specific reference to the use of the Internet, which research methods need to be used to study the information behaviour and Internet use of faculty? What is the information seeking behaviour of faculty at Gulu University with specific reference to the following: factors driving information seeking? Information seeking preferences? Use of the Internet? And challenges encountered while seeking information?

The study used descriptive survey design and the respondents were faculty members from Gulu University. No sampling method was used since the whole population was considered. Data for the study was collected using self- administered questionnaires.

The study found that faculty members make considerable use of e-resources available through the Internet for teaching, research, and general work. Faculty members' self rating of information seeking skills is good regarding WWW search engines, Internet browsers, searching electronic journals and using simple/basic search interfaces. Faculty members at Gulu University slightly prefer seeking for electronic information resources more than print information resources. The majority of faculty members use the Internet frequently and the major points of access are: wireless Internet, personal modems and access provided in the main library. The most searched for Internet information resources are reference materials, e-journals, newspapers and magazines. The most frequently used Internet tools are general search engines and e-mail. Subscription databases such as EBSCOhost, HINARI, AGORA, Cochrane Library, Medline, Emerald and Blackwell are unpopular among faculty members at Gulu University with only Google scholar which is free being popular and used frequently. The most important factors influencing non-use of the Internet by faculty members at Gulu University are: slow Internet speed and unreliable Internet connections. The gaps identified in the Gulu University Library service are: absence of a library website, inadequate current textbooks and inadequate e-resources. It was concluded that the University Library with support from Gulu University management and government should increase bandwidth for faster Internet access. Furthermore they should improve on the maintenance of computers and Internet services, invest in alternative power backup such as solar energy and generators, increase the number of

networked computers and integrate information literacy training in the course curriculums at Gulu University.

Keywords

1. Information seeking behaviour

2. Internet

3. Faculty

4. University Library

5. Information seeking

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LIST OF ABBREVIATIONS

AGORA: Access to Global Online Research in Agriculture

AJOL: African Journal Online

CD ROM: Compact Disc - Read Only Memory

EBIT: Engineering, the Built Environment and Information Technology

FAO: Food and Agriculture Organisation

FTP: File Transfer Protocol

HINARI: Health Internetwork Access to Research Initiative

ICT: Information and Communication Technology

IFLA: International Federation of Library Associations and Institutions

NCHE: National Council of Higher Education

PERI: Programme for Enhancement of Researcher Information

SPSS: Statistical Package for the Social Scientist

TCP/IP: Transmission Control Protocol/Internet Protocol.

UNCST: Uganda National Council for Science and Technology

WHO: World Health Organisation

CHAPTER ONE

INTRODUCTION AND OVERVIEW OF THE RESEARCH PROJECT

1.1 INTRODUCTION

Information has become a very important resource in every environment, organisation and nation since it contributes to their development (Majid & Kassim, 2000). Not only are we required to continually seek and acquire information, but there are increasingly more sources and larger volumes of information available (Marchionini, 1995). Over the years the Internet has grown to influence many aspects of the societies we live and work in since it has become part and parcel of our daily life routines. In many academic libraries information literacy courses are conducted in order to educate students and faculty on skills to access, retrieve and evaluate information resources from the Internet (Bankole & Oludayo, 2012; Kadli & Kumbar, 2011). In addition Brown (1999) recommend that science libraries should provide access to a variety of appropriate electronic bibliographic finding aids and databases and give instruction to the users on their use.

Case (2007) describes seeking and using information as a common and essential human behaviour. Information seeking is a very important part of academic life, for example the main aim for seeking academic information is mainly to update knowledge (Onuoba & Awoniyi, 2011). Ajiboye and Teller (2007) noted in their study that students seek for academic information more than health information, personal development information and employment information. The library is often at the fore front helping students using the Internet for their academic resources (George *et al.*, 2006). Therefore academic libraries have continuously been striving to meet the information needs of their users by understanding their information needs and studying their information seeking behaviour (Engel *et al.*, 2011). Bankole and Oludayo (2012), Kadli and Kumbar (2011) and Patitungkho and Deshpande (2005) posit that the increase in information on the Internet today has greatly affected information seeking behavior with a large variety of information from different locations all available by merely accessing the Internet even from remote areas and developing countries. For example Masters (2008), in a review noted that despite challenges in Internet access in developing countries, doctors are able to use email, online journals, attend courses and conferences and receive professional updates electronically. In educational settings, faculty have been able to use the Internet to communicate, exchange files, and access information from remote places to help them in their academic endeavors (Fortin, 2000; Kadli & Kumbar, 2011). The Internet has also been noted to support learning,

teaching and research by providing access to valuable information in formats which are available electronically (Hemminger *et al.*, 2007; Curtis, 1997).

Research on information seeking dates back to as early as the first three decades of the twentieth century with emphasis on the use of sources and venues of information seeking such as libraries, newspapers, books, and the radio (Case, 2007:6). Many academic environments are in the state of transition in terms of information resources moving from traditional print resources to electronic resources or hybrid collections including both traditional and electronic formats. One of the factors that have contributed to such transitions includes Internet access in universities which has helped faculty to have access to timely, accurate and relevant information (Bankole & Babalola, 2012; Patitungkho & Desphand, 2005). Faculty's information seeking behaviour is at the core of this study because faculty habits and practices of seeking for information relates to the quality of learning, teaching and research in universities. It is also important to examine how technology such as the Internet could influence the information seeking behaviour of faculty. A study by Abbasi (2011) already claimed that faculty of the Islamic Azad University prefer to use books rather than the electronic resources available in the library. There thus seems to be a need to deepen understanding of information seeking and use of the Internet in academic contexts.

1.2 BACKGROUND

1.2.1 Universities in Uganda

Universities in Uganda are both public and private. However they all operate under license of the National Council of Higher Education (NCHE) which is an independent body that licenses, monitors and regulates activities of all institutions of higher learning that operate in Uganda. Currently according to NCHE, Uganda has five recognized public universities and 29 private universities (http://www.unche.or.ug/index.php/institutions.html). Gulu University is among the five recognized public universities in Uganda meaning it is funded by the government. The University is situated in Northern Uganda.

1.2.2 Gulu University and its library

Gulu University became operational in the year 2002. The University's vision is to be a pillar for academic, professional and sustainable development. The mission is to provide access to

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higher education and research and to conduct quality professional training for the delivery of appropriate services directed towards community transformation and conservation of biodiversity with a core value of: professionalism, integrity, effectiveness and efficiency, accountability and transparency, teamwork, gender responsiveness, concern for the elderly and people with disabilities. The University motto is "for community transformation" (*Gulu University Annual Report*, 2011). Gulu University has five faculties, and two institutes. These include the faculties of Medicine, Agriculture and Environment, Science, Education and Humanities, Business and Development Studies, the Institute of Peace and Strategic Studies and the Institute of Research, Graduate Studies and Staff Development. The number of staff both administrative and academic is 399 (181 administrative and support staff members and 218 academic staff members) as per 2012 (*Gulu University Annual Report*, 2012).

The development of Information and Communication Technology (ICT) at Gulu University is a gradual process which has mainly been constrained by inadequate funding for ICT infrastructural development (Yagos, 2012). At the time of writing the University had established a few computer laboratories and Internet connections, and provided computers in the library and some offices in the faculties to facilitate research, teaching and administrative activities (*Gulu University Annual Report*, 2011).

Gulu University has one main library on the main campus and a branch library in the Faculty of Medicine. The vision of the University Library is to be a leading agent in rural transformation and conservation of biodiversity by being a comprehensive information and data bank provider. The mission of the Library is to generate and provide access to a wide variety of relevant information suitable for attainment of the overall University mission and enhancement of national developmental aspirations (*Gulu University Strategic Plan 2009-2019*, 2009).

Gulu University Library's collection over the years has expanded to include a print collection of textbooks, reference books, periodicals, newspapers, a special collection, and Government documents. The Library also provides access to electronic information resources through the Programme for Enhancement of Researcher Information (PERI), Food and Agriculture Organisation (FAO) and World Health Organisation (WHO). Examples of databases covered by the Library include Emerald, African Journal Online (AJOL), EBSCOhost databases, Access to Global Online Research in Agriculture (AGORA), and Health Internetwork Access to Research Initiative (HINARI) among others (*Gulu University Library User Guide*, 2012).

1.2.3 Internet use in Uganda

Uganda is a developing country situated in East Africa and is bordered by Kenya in the East, Sudan in the North, Democratic Republic of Congo in the west, Rwanda in southwest and Tanzania in the South.

According to the *IFLA World Report* (2010), the estimated number of Internet users in Uganda was at 2,500,000, Internet penetration at 7.70% and Internet growth at 61.50%. The report also showed that Internet access at universities was at 61-80% and library users in the universities had free access to the Internet.

1.3 DEFINITIONS OF KEY CONCEPTS

The purpose of this section is to define the key concepts to be used in the research project. And these are: information behaviour, information seeking behaviour, information seeking, Internet, university library and faculty.

1.3.1 Information behaviour

According to Wilson (2000: 51) "information behavior is the totality of human behavior in relation to sources and channels of information including both active and passive information seeking and information use". An example of passive information seeking is watching TV adverts without an intention to act on the information given, while active information seeking can involve face-to-face communication with others (Wilson, 2002).

1.3.2 Information seeking behaviour

Wilson (2000: 51) defined Information seeking behaviour as the "purposive seeking for information as a consequence of a need to satisfy some goal". Wilson (2000) explained that in the course of seeking, the individual may interact with manual or computer based systems. This includes the library and the World Wide Web.

1.3.3 Information seeking

Information seeking is a step undertaken by an individual to satisfy a perceived need which includes finding resources that meet information needs (Kakai, Ikoja-Odongo & Kigongo-Bukenya, 2004). Information seeking can also mean a conscious effort to acquire information in response to a need or gap in your knowledge (Case, 2006).

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1.3.4 Faculty

Faculty refers to academic staff that is tasked with the main responsibility of teaching and supporting students with their research at the university (*Gulu University Tenure, Terms and Conditions of Service*, 2005).

1.3.5 University library

A University library is a library established, administered and funded by a university to meet the information, research and curriculum needs of its students, faculty and staff (Reitz, n.d). According to Cahalan and William (2001) an academic library is an entity in an academic institution that provides an organised collection of printed or other materials as well as professional staff to provide services in order to meet the information needs of its users.

1.3.6 Internet

The Internet is the term used for the vast collection of inter-connected networks connected by TCP/IP protocol, connecting millions of independent networks into a vast global Internet, enabling users to communicate via e-mail, to transfer data and program files via FTP (File Transfer Protocol), find information on the World Wide Web and access remote computer systems such as online catalogs and electronic database (Reitz, n.d).

1.4 RESEARCH PROBLEM AND RESEARCH QUESTIONS

Faculty at Gulu University is expected to use the Internet as a major source of information to supplement the print collection of books and journal articles available in the library. There are, however, perceptions that faculty are not making optimal use of the information sources in the library and especially sources available through the Internet. Thus not drawing on the benefits of the Internet as noted in the Introduction. There is no available literature about Gulu University showing studies carried out on information seeking behaviour especially in relation to the use of the Internet in the library or by the faculty. This leaves a gap in information about information seeking behaviour and Internet use by faculty. Examining information seeking behaviour of faculty can inform decisions on how to improve library services with the view of improving teaching and research in the University. In an attempt to address the research problem – that is, the need to understand the information seeking behaviour of faculty at Gulu University and especially their use of the Internet, the following research questions will be answered:

- What has been reported in the subject literature on the information behaviour of faculty with specific reference to the use of the Internet?

- Which research methods need to be used to study the information behaviour and Internet use of faculty?

- What is the information seeking behaviour of faculty at Gulu University with specific reference to the following:
    - factors driving information seeking?
    - information seeking preferences?
    - use of the Internet?
    - challenges encountered while seeking information?

1.5 PURPOSE OF THE STUDY

The purpose of the study is to examine information seeking behaviour of faculty and their use of the Internet at Gulu University Library. More specifically this research intends to explore information seeking preferences, drive for information, and sources of information used by faculty. This study could be a useful tool for decision making by the University and government regarding support in Internet access and use. More specifically it can help the library in making decisions on how to best support information access and information literacy training for academic purposes based on user's knowledge of information seeking behaviour. Overall the purpose is to suggest strategies of improving faculty information seeking skills with the view of improving teaching and research in the University.

1.6 LITERATURE REVIEW

This section presents a general idea of the existing body of knowledge on information seeking and Internet use in various universities by faculty members. The literature available on the information seeking behaviour of faculty on an international scale is quite substantial. The review in this section will only address the information seeking behaviour of faculty members in relation to the use of the Internet.

1.7 METHODOLOGY

Research methodology covers the research design, study population, determination of sample, sampling techniques and procedures, data collection methods, data collection instruments and validity and reliability of the research.

1.7.1 Research design

This study will use a quantitative research approach. Quantitative approaches attempt to answer questions through generating research data which is numerical and that can be analysed through statistical techniques. Furthermore it presents research problems in specific variables where the data can be measured using statistical procedures (Collis & Hussey, 2003; Creswell, 2009; Matveev, 2002; Moule & Goodman, 2009). A qualitative research approach is aimed at developing concepts and themes from the interpretation of observation and interviews (as well as other methods associated with qualitative research), while quantitative approaches attempt to answer questions through generating research data which is numerical and that can be analysed through statistical techniques (Moule & Goodman, 2009). A qualitative approach is a more subjective examining and reflection on perceptions in order to gain an understanding of social and human activities.

1.7.2 Ethical Issues

Ethical consideration is an important aspect in research since it is difficult to carry out any research without running into ethical issues like confidentiality, informed consent, the respondents' work and their dignity (Collis & Hussey, 2003).

In this case, the study had to be approved by the Faculty of Engineering, the Built Environment and Information Technology (EBIT) Committee on Research Ethics at the University of Pretoria. The researcher had to obtain a letter of introduction from the Department of Information Science at the University of Pretoria for introductory purposes to Management at the Gulu University, the Library and the academic staff. The letter was to be used to seek permission from the Institute of Research, Graduate Studies and Staff development at Gulu University to conduct research in the University.

1.8 DIVISION OF CHAPTERS

Five chapters feature in the study. These chapters discuss the following issues:

Chapter 1: Overview and introduction of the research problem and research question
Chapter 1 consists of a brief overview of the dissertation and it includes the introduction, background to the study, problem statement and research questions, purpose of the study, objectives of the study, scope of the study, significance of the study, operational definition of terms and concepts, and the research design.

Chapter 2: Literature analysis
Chapter 2 entails a literature analysis of similar and related research. The importance of this chapter is to show how the study builds on and supplements the work that has already been done by other researchers in the particular field.

Chapter 3: Research methodology
Chapter 3 has detailed information on the actual methodology used and it addresses the research design, study population, sample size determination, data collection methods and instruments, and the viability and reliability of research results.

Chapter 4: Data collection and analysis
In Chapter 4 the data collected, as well as the analysis of the data is presented. The data is intended to answer the research questions.

Chapter 5: Summary, conclusion and recommendation
Chapter 5 contains the summary of all the findings of the study undertaken with regard to the research problem and research questions. It also includes the conclusion, recommendations based on the findings, and suggestions for further research.

CHAPTER TWO

LITERATURE ANALYSIS

2.1 INTRODUCTION

In this chapter, available literature will be analysed along the subject matter of the research project, which is concerned with information seeking behaviour and use of the Internet by faculty. The chapter analyses the literature on the main problem, as well as components that can help to develop the researcher's understanding of the problem. The literature analysis also aims at providing an account of earlier studies in information seeking behaviour in order to identify the gap that exists in the literature and which this study attempts to fill. The emphasis is on literature related to information seeking behaviour of faculty, with specific reference to their use of the Internet.

2.2 INFORMATION BEHAVIOUR OF FACULTY

As indicated in Chapter one, no research has been carried out on the information seeking behaviour of faculty and Internet use at Gulu University Library. Some of the issues in regard to information seeking behaviour of faculty and Internet use has been discussed in chapter one. Case (2012:10) describes information behaviour as a subject of scholarly attention which has been studied in various contexts involving a variety of people, their motives for seeking information, surrounding environment, social groups and specific activities carried out by individuals. Furthermore there is a vast body of literature on information seeking and related topics as seen in the many review studies (Case, 2006, 2007; Courtright, 2007; Fisher & Julien, 2009). Furthermore in a review chapter by Case (2006:295), he presents information behaviour studies in categories of information seekers such as occupation, role, and demography. He also reviews studies according to the theories, models and methods used to study information seekers. Case (2006) notes that the most popular investigations are according to information seeking by occupation; this is followed by investigations according to role and demographic characterisation.

The study of information seeking has its origin in scientific work way back to 1948 with papers presented at the Royal Society Scientific information conference. The papers presented addressed the issue of how people used information in relation to their work and how they used it in Science and Technology (Wilson, 2000). Majid and Kassim (2000:2) also noted that "many

studies have been conducted in relation to the different aspects of information seeking of library users such as on their subject interest, occupation, information environment and geographical location".

A study carried out by Shen (2007), on information seeking in academic research: A study of the sociology faculty at University of Wisconsin-Madison reveals that social scientist's information seeking is, moving from academic information needs, choice of information resources, and searching for information to use of the information. Shen (2007) further writes that searching for information entails implementation of strategies, confrontation of challenges and continuous decision making hence researchers have to move back and forth until their information need is satisfied or fulfilled. Shen (2007) also notes that the changing information activities and information needs of researchers often dictates the choice of information channels used in the information seeking process. Some of the difficulties in information seeking as identified by Shen (2007) were: scattered information in various places with varying qualities, too much information on the Internet to filter, no real mechanism to assist in identifying people with similar research, technology upgrade and system integration and no digital archives for some historical documents for example. The most used channels were email, telephone, face-to-face communication and project reports. The strategies that were discovered to be used by the social scientists for information seeking were: extracting abstracts, tracking citations, limiting searches to a set of sources, filtering and interpreting search results and limiting the number of search results.

Sulemani and Katsepor (2007) explored the information seeking behaviour of health sciences faculty at the College of Health Science, University of Ghana. Their findings revealed that faculty preferred electronic resources such as full text online databases such as HINARI and PERI, with 55% of faculty members using PubMed and 43% using Medline on CD ROM as their source of access to full text articles. HINARI registered 20% usage and 95% of the faculty used the Internet facilities of the library; they preferred electronic resources to traditional print publications.

Marouf and Answar (2010) investigated the information seeking behaviour of the Social Science faculty at Kuwait University. They used a self administered questionnaire for data collection. The study revealed that the faculty preferred textbooks and print journals to online electronic resources for teaching and research purposes as the most important source of information to

meet their academic information needs. The study also reports low library usage by the faculty reasons being, library staff having inadequate experience, inadequate information resources, lack of time to visit the library and poor marketing strategies of information resources by the library. Besides textbooks the faculty also used informal sources such as conferences, subject experts and colleagues rather than consulting librarians. Other studies supporting this finding, were conducted by Al-Suqri (2007), Francis (2005), and Meho and Tibbo (2003).

Abbasi (2011) studied the information seeking behaviour of the members of faculty of the Islamic Azad University, Roudehen branch, Iran and the role of university libraries in meeting their needs. This study used a questionnaire survey with 350 faculty members. The results indicate that 83.3% of the respondents are familiar with using the library; 55.1% retrieved their information through the librarian. Among these, 43.6% of the respondents said they consider the use of computers and software in the library as important and only 5.4% confirmed that they might use the Internet and its related web services while they are in the library. In Abbasi's (2011) study, it was noted that there is very little interaction between the faculty members when consulting information sources to meet their information needs. The research showed that 39.9% refer to other libraries, 29.1% refer to books and 14.2% borrow from fellow faculty members.

In a study on the information seeking behaviour of the faculty members of Rajabhat University in Bangkok, Patitungkho and Desphande (2005) found the top three methods of information seeking as consulting knowledgeable persons (53%), discussion with colleagues (41%), and discussions with librarians (39%). The four top purposes of information seeking was the preparation of lecture notes (82%), updating knowledge (79%), writing and presenting papers (54%), and carrying out research (48%) respectively. In the study by Patitungkho and Desphande (2005) they found that textbooks were the most popular information sources and those faculty members who used the Internet daily formed only 37%. They mostly used search engines such as Google and Yahoo. The study by Patitungkho and Desphande (2005) shows that faculty members have a stronger preference for sources of information other than the Internet.

A similar study conducted by Serrano and Robbins (2013) investigated the information seeking habits of education faculty from twenty large public research universities across the United States of America and they used a 15 item survey. The majority of the faculty (70%) accessed

information to prepare lectures, 55% to write or do research for publication, 57% to prepare research proposals or grant applications and 52% to prepare for a conference presentation. The study further found out that the respondents referred to both print and electronic resources as important in carrying out their daily tasks or activities. The study also showed that electronic resources improved finding of information needed by the faculty members because of the following reasons: electronic resources allow faculty to work from home, and it helps speed up their research since they are able to have access to full text publications whenever and wherever. Respondents also noted some factors limiting the use of electronic resources in the library such as unavailability of needed electronic resources or services, lack of time to visit the library and access restriction to the online resources. Serrano and Robbins (2013:2) furthermore note that "Knowing, the information that is desired by faculty, for what purposes, and how it is discovered, can guide an array of academic library services".

Majid and Kassim (2000) conducted a survey on information seeking behaviour of law faculty members at the international Islamic University of Malaysia. The results revealed faculty's preference for print materials to information technology based library sources and this was attributed to lack of awareness about the availability of the online resources.

Engel, Robbins and Kulp (2011) investigated the information seeking habits of the engineering faculty of twenty large research institutions across the United States of America with the view of finding out how they meet their research needs, frequency of information seeking, in-person library visits, how they keep abreast in the Engineering fields, their awareness of recent journal articles, and the importance of library services among others. They found that electronic access to current and archived scholarly journals and Internet resources are important in meeting faculty's research and information needs. Because of the preference for electronic resources, Engel *et al.* (2011) argue that the physical space of the library is less important to the respondents surveyed. They pointed out that the library not only should play the role of the procurer and curator of electronic resources that engineering faculty demand but should also market and brand their online services. In terms of the frequency of the information seeking behaviour of faculty, 81% of the engineering faculty members seek information at least weekly, to prepare for student lectures, 74% to conduct research, and 77%, for professional development. The other reasons as to why they seek information are for preparing new research proposals, preparing for conference presentations and determining protocol for laboratory procedures. Engel *et al.* (2011) found that engineers rarely visit the physical library

for information resources and that there is high use of electronic information resources on the Internet. Their study was done in the United States (a developed nation with wide spread use of the Internet) (Engel *et al.* 2011).

A study of academic researchers' information seeking behaviour in the digital age found that electronic information resources played an essential role in the researchers' information seeking and it also found out that the web, databases and e-journals are among the highly used Internet technologies which support the researchers' information seeking behaviour (Ge, 2010).

Brown (1999), in a survey of information seeking behaviour of four categories of scientists (astronomers, chemists, mathematicians and physicists) at the University of Oklahoma found that all of the scientists relied highly on journal articles to support their research. However, among the respondents, mathematicians' preferences were also for monographs, preprints, attendance of conferences and personal communication to support their research overall. The survey by Brown (1999) concluded that the majority of the respondents prefer print journals over electronic format.

2.3 INFORMATION BEHAVIOUR AND INTERNET

Wilson (1999:250) asserts that some framework is needed in order to study users and their information behaviour. He further describes information behaviour models as a framework which prompts thinking about a problem which evolves into a statement of the relationship among theoretical propositions. Information seeking behaviour is one of the fields attempted to be described by the models designed for example Ellis's model which has eight stages well studied and tested namely:

- Starting; where the faculty members may start to seek for information like browse the Internet or search the online databases.

- Chaining; the faculty members may follow links form the online abstracts and indexes.

- Browsing; a search procedure faculty members can use online to search a topic of interest.

- Differentiating; the faculty members can filter from the obtained information online.

- Monitoring; keeping up to date with the new information of interest.

- Extracting; here the faculty members identify relevant information retrieved from the Internet.

- Verifying; the faculty members go through the sources to ascertain the authenticity and

- Ending; meaning if the faculty members are satisfied with their finding then they could use it (Wilson, 1999).

The Internet has become an important aspect to the general public and it has provided the academic communities over the years with an opportunity to access unlimited information online (Bhatti, 2010; Marton & Choo, 2011). Bruce (1998:541) asserts that the Internet which was over the years described as an information superhighway has grown to provide a platform for effective information seeking of information users.

Over the years information sources available electronically through computer network facilities such as online library catalogues, the Internet and digital libraries have been described as electronic information sources (Ekwelem, Okafor & Ukwuoma, 2009).

Bruce (1998) asserts that information seeking on the Internet is perceived as "purposeful interactions with Internet information resource(s) aimed at retrieving information to inform, treat or solve a problem". Bruce (1998) deposits that access to many online resources such as e-books and e-journals are accessed via the Internet. Examples of some resources available through the Internet are library catalogues, websites, campus wide information systems and sites that archive software for file transfers.

Thanuskodi (2009) conducted a study on the information seeking behavior of the law faculty at the Central Law College, Salem. Questionnaires were used for data collection and the findings revealed many respondents used mostly print sources such as books and law reports for teaching and research. According to Thanuskodi the review of electronic information resources in the central law college is important since it is an important tool for effective teaching and research. He further recommends that the library should provide the reference librarians with the necessary equipment and technology to enable them to offer quality services to their users.

In the study carried out by Bruce (1998) to investigate how satisfied Australian academics are when they use the Internet to seek for information. The findings revealed that the majority of Australian academics use the Internet for information seeking, their knowledge of information searching is derived from self instruction and from colleagues, and they do not attend Internet

training courses organized by the library as recommended by the Council of Australian University Librarians. The researcher also found out that "the higher an academic's expectation of success, the greater the satisfaction with information seeking on the Internet". In a similar study carried out by Hadagali and Al-Wabil (2011) it shows that faculty members are interested in using the Internet because of the importance it provides them in the changing environment especially getting access to the latest electronic information resources.

According to a study carried out by Khan and Bhatti (2012) at the University of Peshawar and its seven affiliated law colleges, to ascertain the information needs and seeking behaviour of the law faculty members. The results from this study showed that 91% of law faculty preferred traditional print publication format to electronic resources and in English. Most faculty members indicated their purpose of information seeking for sought for information to prepare for lectures at 89.5%; few faculty members preferred to study at home (36%) while 21% prefer studying in their offices; Using a personal collection of information emerged as the highest preferred information channel, the library registered the lowest usage whereby 27% visited the library daily to borrow books and read newspapers and a minority of 1.2% never visited the library at all.

Kadli and Kumbar (2011) examined information seeking behaviour in the changing ICT environment in Commerce Colleges in Mumbai with the following objectives: to identify the frequency of using the library, to determine the types of computer based services used, to determine the purpose of information seeking, to determine the amount of time spent on information seeking, to identify challenges in information seeking as well as solutions to such challenges, to determine how the environment affects information seeking and to suggest suitable means to improve the library resources and services. Their findings indicate that less than 50% of users visit the library everyday and 7% visit the library once in a fortnight. Their findings also indicated that the majority of respondents use the Internet and e-mail. Respondents mostly seek information to keep abreast of current developments in their field; they do this through reading current issues of print journals or magazines and the latest books. Respondents also indicated that they browse current issues of electronic journals and websites. The main purpose of information seeking was to prepare lecture notes, and to seek information for research and the writing and presentation of papers. The challenges noted by the respondents with regard to information seeking were mainly the scattered nature of information and information overload on the Internet.

2.4 INTERNET AND FACULTY

Faculty members over the years have embraced the use of the Internet when seeking for information to facilitate them in their academic tasks; they used various Internet resources including online databases (Gupta & Sharma, 2010). The Internet, the World Wide Web, online library catalogues and digital libraries have promoted the awareness, growth and use of electronic information resources in academic environments (Owolabi *et al.*, 2012).

Bhatti (2010) investigated Internet use among faculty members in changing the higher education environment at the Islamia University of Bahawalpur, Pakistan. The intention of this study was to explore the use of the Internet by faculty, the purpose of seeking for information online, the Internet resources and services used and the problems encountered by faculty while seeking for information on the Internet. Both open and closed ended questions were used to collect data from 150 faculty members from the 4 different faculties at Islamia University of Bahawalpur, Pakistan. From this research it is clear that Internet use among faculty members in Islamia University of Bahawalpur is high and that the faculty preferred the Internet because of the insufficient provision of reading materials for the new disciplines, and the unavailability and inadequacy of the latest reading materials from the University Library. The main purpose for retrieving information from the Internet was for research and teaching. The sources of information mostly used by the faculty were e-books (14%), e-journals available through the Pakistan Higher Education Digital Library (22%), databases (22%), and discussion groups (24%). The most used Internet services were email (78%), and the World Wide Web (66%). Some of the challenges experienced by faculty in this university were slow Internet speed, too few e-journals in the library because they are expensive, shortage of computers, lack of time to access Internet sources, and information sources scattered in too many places. Based on the problems revealed from this study it is important for universities to carry out research on how to improve the IT infrastructure in the university in order to increase the use of electronic resources for teaching and research coupled with proper training on how to retrieve information from the vast selection of online resources.

Flaxbart (2001) carried out a study at the University of Texas at Austin, interviewing six faculty members from the Department of Chemistry and Biology. The study was an investigation of the faculty members' information seeking behaviour, their favorite resources and their opinion about the transition from print to electronic resources. This study revealed that faculty carried out their own literature searches and relied on their own information seeking skills whereby, they had

good knowledge of their field of research, as well as good skills in the selection of keywords and skills in using the databases of their interest. The study also found a reduction in the use of the physical library and print collection, since online journals and databases offer more information in less time. The faculty used a couple of electronic resources such as SciFinder, Beilstein, Medline, PubMed (for free access), and ISI Web of Science. The two most used electronic resources used by the chemists where SciFinder Scholar and Beilstein and the reason for this was the powerful search capabilities these sources had in supporting topical and keyword searches.

To ascertain how faculty used electronic information sources in Nigeria, Ekwelem, Okafor and Ukwuoma (2009) carried out a study in four universities in Nigeria namely: Obafafemi Awolowo University IIe Ife, University of Ibadan, Olabisi Onabanjo University, and University of Agriculture, Abeokuta. They found that many faculty preferred the Internet and CD-ROMs' as a way to access electronic resources since it provide them with effective and efficient access to digital information for teaching and research purposes. Offices were the highest Internet access point followed by the library, the reason being campus wide Internet connectivity. Some constrains such as low bandwidth and interrupted power supply affected their access to electronic resources.

Ansari and Karachi (2010) investigated the use of electronic resources among academics at the University of Karachi. For data collection a structured questionnaire was used. The results showed that there was availability of Internet connections to 92.9% of the departments. The majority of the faculty members 97.1% had skills to operate computers independently to access electronic resources. Their preference for electronic resources over print was based on the fact that 90% of the faculty considered the e-resources as reliable since they are produced by authentic publishers, and the main purpose for which faculty in Karachi University used electronic resources was for preparing lectures and to enhance their subject knowledge. The challenges noted by the respondents with regard to use of the e-resources were: limited knowledge of the electronic resources available in their library and network problems related to Internet speed and reliability.

Ansari (2006) investigated the pattern of Internet use by faculty members of Kuwait University and the findings revealed that they use the Internet for communication, research and publication. The advantages they attributed to using the Internet was that it saves time to get

information online, helps the faculty members to find up-to-date information, and enhances communication with their colleagues. Some of the problems identified in this study were slow Internet speed, lack of time of the faculty and lack of access from their homes. In the study the respondents suggested introducing regular formal training for the faculty members in order to improve their Internet search skills.

2.5 CONCLUSION

This chapter reviewed related studies conducted by other researchers. The importance was to have a good general understanding of information behaviour of faculty, information behaviour and the Internet, and Internet use by faculty. Based on findings from the studies noted in the preceding paragraphs of the literature analysis it is evident that the information seeking behaviour of faculty is greatly influenced by the presence of the Internet though they also still maintain a preference for traditional print resources; many academic libraries are therefore adopting mechanism to promote the use of online resources in the various institutions. In most of the studies reviewed the information seeking behaviour of faculty members is greatly influenced by the presence of the Internet. Chapter two will be succeeded by chapter three which will consist of a discussion of the research methodology to be used for the research study at hand.

CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

This chapter will cover the research methodology used in conducting research about the information seeking behaviour of faculty and Internet use at Gulu University Library. It will cover the research design, study population, data collection methods, data collection instruments and validity and reliability of the research.

3.2 RESEARCH DESIGN AND METHODOLOGY

Singh (2006:77) defined research design as "a mapping strategy with objects of inquiry and the strategies for collecting the evidences, analyzing the data and reporting the findings".

Wang (1999:54) defined methodology "as a theory of methods that guides the description, explanation and justification of methods in empirical studies". He further described methods as "the actual design and specific scientific technique used in an empirical study".

According to Kothari (2004) a research design includes research methods, sampling design, choice of research tools and statistical techniques. It is important to have a good research design which should at least have a clear statement of the research problem, procedures and techniques to be used for data collection, population to be studied, and methods to be used in processing and analysing data in order to minimise expenditure in terms of money and time and to maximise data collection. Therefore a good research design provides the researcher with a detailed plan which will guide and keep the research focused to ensure validity, objectivity and accuracy (Collis & Hussey, 2003:113; Kumar, 2011:94).

The study at hand used a survey research design which was found suitable because it provides a quantitative description of the attitudes, trends and opinion of the sampled population in the study (Creswell, 2009:145). Case (2007) reported the dominance of the use of surveys in research. Surveys also feature prominently in reviews by Järvelin and Vakkari (1993), as well as McKechnie *et al.* (2002). According to Wang (1999:60) social and behavioural sciences tend to use standard quantitative designs in order to measure users self perceived and reported behaviour. Powell (1997:47) defined survey research as "the research strategy where one

collects data from all or part of a population to assess the relative incidence, distribution and interrelations of naturally occurring variables".

3.3 QUALITATIVE AND QUANTITATIVE RESEARCH APPROACHES

A qualitative research approach is aimed at developing concepts and themes from the interpretation of observation and interviews (as well as other methods associated with qualitative research), while quantitative approaches attempt to answer questions through generating research data which is numerical and that can be analysed through statistical techniques (Moule & Goodman, 2009). A qualitative approach offers a more subjective examining and reflection on perceptions in order to gain an understanding of social and human activities. On the other hand a quantitative approach is considered objective in concentrating on measuring phenomena where the data can be measured using statistical procedures (Collis & Hussey, 2003; Creswell, 2009). The strength of a qualitative approach is its ability to allow close interaction with respondents and that it offers the ability of describing phenomena based on primary and structured data while the strength of a quantitative approach is that research problems are defined in terms of specific variables that can be investigated and that it leads to higher levels of reliability (Matveev, 2002).

3.4 REVIEW OF METHODS FOR APPROACHES

The purpose of Table 1 is to review methods for research approaches, data collection methods, and the sampling of similar studies carried out by information behaviour researchers covered in the literature review.

Table 1: Review of methods for research approaches

AUTHOR	TITLE	APPROACHES	METHODOLOGY	
			Sampling	**Data collection technique**
Ge (2010)	A multidisciplinary study of the information seeking behaviour of academic researchers	Survey	Sampling not discussed	Semi-structured interviews according to interview guidelines. It included both closed and open-ended questions
Abbasi (2011)	Information seeking behaviour of the members of faculty and role of university libraries in meeting their needs	Survey	No particular sampling method mentioned	Questionnaire distributed in print format. Interviews supplemented the questionnaires
Bhatti (2010)	Internet use among faculty members in the changing higher education environment at Islamia University of Bahawalpur, Pakistan	Survey	Stratified random sampling	Questionnaire, including both open and closed ended questions, was distributed in print format. It was supplemented with a literature review on Internet use
Brown (1999)	Information seeking behaviour of scientists (including astronomers, chemists, mathematicians, and physicists)	Survey	Sampling was not discussed	Questionnaire; both emailed and printed questionnaires were distributed
Bruce (1998)	User satisfaction with information seeking on the Internet	Survey	Random sampling (invitation for participation was distributed via email to 200 email addresses)	Structured interview
Engel, Robbin, & Kulp (2011)	Information seeking habits of Engineering faculty	Survey (gathered both qualitative and quantitative data)	Purposive sampling	Questionnaire included both closed- and open- ended questions and invitation to participate in the online survey was by email

Flaxbart (2008)	Information seeking behaviour of Chemistry faculty	Survey	The sample was selected based on the suitable representative cross-section of the department	Interview; based on a set of prepared questions
Francis (2005)	Information seeking behaviour of Social Science faculty at the University of the West Indies, St Augustine campus	Survey	No mention of the sample method used	Questionnaire comprised of both open- and closed-ended questions distributed through the campus mail system
Kadli, & Kumbar (2011)	Faculty information seeking behaviour in a changing ICT environment at commerce colleges in Mumbai	Case study	No mention of the sampling method used	Print-based questionnaire physically distributed to respondents
Marouf & Anwar (2010)	Information seeking behaviour of the social sciences faculty at Kuwait University	Survey	Stratified random sampling	Self administered questionnaires
Sulemani & Katsekpor (2007)	Information seeking behaviour of health sciences faculty at the College of Health Sciences, University of Ghana	Cross sectional survey	Random sampling	Questionnaire; distributed through department letterboxes

3.5 CHOICES FOR STUDY

3.5.1 Research approach: quantitative approach

Quantitative approaches attempt to answer questions through generating research data which is numerical and that can be analysed through statistical techniques (Moule & Goodman, 2009). According to Creswell (2009) the use of both qualitative and quantitative approaches gives the study greater strength compared to either qualitative or quantitative data. The choice of approach for this study is based on the fact that it presents a high level of reliability for the collected data.

3.5.2 Method of data collection: questionnaire

A data collection method refers to how information will be gathered for the study. There are various methods of data collection such as questionnaires, surveys, interviewing, observation and content analysis (Adams *et al.*, 2007; Case, 2012; Kothari, 2004; O'Leary, 2006; Singh, 2006). The data collection methods can be used in combination or separately in both qualitative and quantitative research (Kombo & Tromp, 2006; Kumar, 2011:138).

A structured questionnaire was developed for data collection for this study. A self-administered questionnaire consisting of questions constructed to obtain facts about individuals, events and situations or measure the beliefs, attitudes, opinions and knowledge of respondents was used (Muole & Goodman, 2009). The study used open-ended questions to explore the respondents' views (collecting qualitative data) and closed-ended questions which included checklist responses and rating of options (collecting quantitative data) (Collis & Hussey, 2003). The main advantage of closed-ended questions over open-ended questions is that it saves time and the management of data is much easier during coding and analysis (Barifaijo *et al.*, 2010).

The general advantage of a questionnaire over other data collection methods such as interviews and focus group discussions is that with questionnaires cost is low and it is free from bias that might be caused by the presence of the interviewer since the respondent gives answers in his or her own time. Respondents have adequate time to think through their answers. Questionnaires are also convenient for respondents who cannot easily be reached for face-to-face meetings and a large sample of the population can be covered with ease (Blumberg *et al.*, 2008:282; Kothari, 2004; Singh, 2006).

The questionnaire comprised of two parts as follows; part one demographic information on faculty members including, academic rank, employment type, faculty/institute, years spent teaching and their level of education. Faculty members were required to choose appropriate answers. Part two of the questionnaire covered information seeking behaviour and Internet use of faculty at Gulu University.

The questionnaire used Likert scales because it offered the respondents a set of options which enables them to agree and disagree to the existing options presented by the researcher.

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3.5.3 Population and sample

The population of this study comprised of all academic staff of Gulu University which stand at 218 from the five existing faculties and one institute – thus the faculties of Business and Development Studies, Medicine, Agriculture, Science, Education and Humanities, and the Institute of Peace and Strategic Studies.

Table 2: Population of academic staff per faculty

Faculty/ Institute	Number
Faculty of Business and Development Studies	39
Faculty of Education and Humanities	41
Faculty of Science	48
Faculty of Agriculture and Environment	39
Faculty of Medicine	46
Institute of Peace and Strategic Studies	5
Total	**218**

Source: Gulu University Approved Budget 2012/2013

A sample was not drawn since involving the whole population was manageable. There was no need to consider sampling methods.

3.5.4 Ethical clearance

Ethical consideration is an important aspect in research since it is difficult to carry out any research without running into ethical issues like confidentiality, informed consent and right to privacy of the respondents (Collis & Hussey, 2003).

In this case, the study was approved by the Faculty of Engineering, the Built Environment and Information Technology (EBIT) Committee on Research Ethics at the University of Pretoria. The researcher obtained a letter of introduction/permission from the Institute of Research and Postgraduate Studies Gulu University granting the researcher permission to conduct research at Gulu University. According to the Uganda National Council for Science and Technology (UNCST) (2007:21), the purpose of informed consent is to enable individuals to control whether or not they wish to participate in a research study and if it is consistent to their values, interest

and preference. Questionnaires, letter granting researcher permission to carryout research and copy of the informed consent are included in appendix 2, 3 and 4 respectively.

3.6 RELIABILITY AND VALIDITY

Reliability and validity are important aspects that a researcher should consider while carrying out research. Reliability and validity in a study is important because they strengthen confidence in the data collected and trust in the successful application and use of the research results (Reige, 2003).

According to Muole and Goodman (2009:186) "Reliability is the consistency with which a tool measures what it is intended to measure". Collis and Hussey (2003:58) noted that reliability is concerned with the findings and credibility of the research. The findings of research can only be reliable if it can be repeated in similar situations and similar results are obtained (Collis & Hussey, 2003). In this study, the data collected was entered in the Statistical Package for the Social Scientist (SPSS) software for analysis using the Cronbach alpha reliability test, where an alpha value of 0.07 was considered appropriate for the questionnaire to be administered (Golafshani, 2003).

Validity is defined as the degree with which the measured value reflects the characteristics it is intended to measure (Lewis, 1999). Kumar (2011) asserts that validity in research is based on the appropriateness and accuracy as applied to a given research process to ascertain the quality of research. The tool for data collection is valid when it measures what it is intended to achieve (Moule & Goodman, 2009; Collis & Hussey, 2003: 59). Validity problems in research can arise due to research errors for example poor samples, faulty research procedures and inaccurate measures used by the researcher. Validity thus apply at any stage in the research process such as in the study design and sampling strategy (Collis & Hussey, 2003; Kumar, 2011). In this study, the researcher ensured content validity by pre-testing the data collection instrument to ensure representation of the phenomena under study (Kumar, 2011).

3.7 ANALYSIS OF DATA

The data was analysed using statistical techniques to draw results. The quantitative data collected was analyzed using the Statistical Package for the Social Scientists (SPSS) while content analysis was used for the questions with qualitative content. According to Blumber *et al.*

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(2008:75) data analysis enables researchers to reduce accumulated data to a manageable amount such that they are able to develop summaries, look for patterns and apply statistical techniques. Furthermore statistical techniques such as SPSS is preferred by researchers dealing with large amounts of data since it allows them to easily summarise and detect a given pattern in research.

3.8 CONCLUSION

Chapter three discusses the methodology used in conducting research on information seeking behaviour and Internet use by faculty at Gulu University library while addressing the research design study population, data collection method and instrument, reliability and validity. Chapter three will be succeeded by chapter four which will consist of a discussion of the findings and analysis of the data collected.

CHAPTER FOUR

DATA COLLECTION AND ANALYSIS

4.1 INTRODUCTION

This chapter contains the presentation of the data collected as well as the analysis for the research problem based on the following statement as presented in Chapter 1: "faculty at Gulu University is expected to use the Internet as a major source of information to supplement the print collection of books and journal articles available in the library. There are, however, perceptions that faculty are not making optimal use of the information sources in the library and especially sources available through the Internet".

The chapter is divided into different sections, of demographic characteristics and the research sub-questions namely: factors driving information seeking, information seeking preferences, use of the Internet and lastly challenges encountered.

The data was collected by means of a self-administered questionnaire consisting of 16 closed-ended questions and 1 open-ended question. The data was analysed using SPSS version 19.0. The analysed data is presented in tables to summarise and report the outcome of data collected.

The target population for the study was 218 faculty members at Gulu University. The researcher managed to administer the questionnaires to 150 faculty members, out of which 114 were returned; of the 114 questionnaires 6 were not usable leaving 108 which were used for the analysis. The reason as to why not all 218 faculty members could be approached is that some were for study leave and others were not on campus.

4.2 DEMOGRAPHIC CHARACTERISTICS

Table 3, reflects data on the demographic characteristics of respondents. The characteristics examined include their academic rank, employment type, faculty/institute, year spent teaching and level of education.

Table 3: Demographic characteristic of respondents (N=108)

Demographic data	Frequency	Percentage
Academic rank		
Teaching assistant	48	44.4%
Lecturer	49	45.4%
Senior lecturer	8	7.4%
Associate professor	2	1.9%
Professor	1	0.9%
Employment type		
Part-time	33	30.6%
Contract	26	24.1%
Permanent	49	45.4%
Faculty/Institute		
Faculty of Business and Development Studies	25	23.1%
Faculty of Education and Humanities	20	18.5%
Faculty of Science	39	36.1%
Faculty of Agriculture and Environment	6	5.6%
Faculty of Medicine	15	13.9%
Institute of Peace and Strategic Studies	3	2.8%
Year spent teaching		
Less than 1 year	13	12.0%
1-2 years	38	35.2%
3-4 years	26	24.1%
5-6 years	16	14.8%
7-8 years	9	8.3%
9-10 years	3	2.8%
Above 10 years	3	2.8%
Level of education		
Bachelors degree	49	45.4%
Masters degree	52	48.1%
Doctoral degree	7	6.5%

In Table 3, the breakdown of respondents by academic rank indicates that the highest frequency (49/108; 45.4%) are lecturers, followed by teaching assistants at 48/108; (44.4%), senior lecturers at 8/108 (7.4%), associate professors at 2/108 (1.9%), with only a single professor representing (1/108; 0.9 %) of respondents.

In terms of employment type, those on permanent employment were the majority with (49/108; 45.4%), followed by part-time appointments at 33/108 (30.6%) and lastly contract employment at 26/108 (24.1%).

In terms of the faculty/institute to which participants belong at Gulu University, most respondents were from the Faculty of Science (39/108; 36.1%), followed by the Faculty of Business and Development Studies (25/108; 23.1%), Faculty of Education and Humanities (20/108; 28.5%), Faculty of Medicine (15/108; 13.9%), Faculty of Agriculture and Environment (6/108; 5.6%) and the least was from the Institute of Peace and Strategic Studies (3/108; 2.8%).

In terms of the number of years spent teaching at Gulu University, the majority of respondents (38/108; 35.2%) have spent between 3-4 years at Gulu University followed by (26/108; 24.1%) who have been at Gulu University for 5-6 years, and then (16/108; 14.8%) who have been at Gulu University for 1-2 years. Those with less than one year at Gulu University at 13/108; (12.0%). Faculty members who have spent 7-8 years at Gulu University at 9/108; (8.3%). The groups with the least responses were those who have spent between 9-10 years and above 10 years at Gulu University; they at 3/108 (2.8%) and 3/108 (2.8%) respectively.

Considering the level of education of respondents, the highest percentage hold masters degrees (52/108; (48.1%), followed by those with bachelor's degrees at 49/108 (45.4%) and at 7/108 (6.5%) hold doctoral degrees.

4.3 RESPONDENTS' COMPUTER SKILLS

Faculty members were asked to rate their computer skills on a four point Likert scale of 1= very poor, 2= fair, 3= good, 4= very good. The levels of computer skills are presented in Table 4.

Table 4: Participants' self-rating of their levels of computer skills (N=108)

Computer Skills	Frequency	Percentage
Very poor	1	0.9%
Fair	17	15.7%
Good	49	45.4%
Very good	41	38.0%
Total	**108**	**100%**

Table 4 indicates that the majority of faculty members who rated their computer skills as good stands at 49/108 (45.4%), followed by very good at 41/108 (38%). Only 17/108 (15.7%) of the faculty members indicated that they consider their levels of computer skills as fair, with only 1/108 (0.9%) rating their computer skills as very poor. From the results it can thus be deduced that faculty members are mostly confident about their computer skills.

4.4 FACTORS DRIVING INFORMATION SEEKING

4.4.1 Reasons for using e-resources available through Gulu University Library Services

The respondents were asked to mark all options to disagree or agree on a four point Likert scale of 1=strongly disagree (SD), 2= disagree (D), 3= agree (A) and 4= strongly agree (SA) on the reasons for using e-resources available through Gulu University Library Services. Their levels of disagreement and agreement are presented in Table 5.

Table 5: Reasons for using e-resources (N=108)

Reason for using e-resources	SD		D		A		SA	
	f	%	f	%	f	%	f	%
Gaining access to full-text information sources	12	11.1	15	13.9	41	38.0	40	37.0
Availability of computers connected to the Internet	27	25.0	21	19.4	34	31.5	26	24.1
Saving time	14	13.0	17	15.7	43	39.8	34	31.5
Ease of use	14	13.0	15	13.9	54	50.0	25	23.1
Currency of e-resources (e.g. early cite articles)	18	16.7	14	13.0	51	47.2	25	23.1
Ease of sharing information with colleagues	11	10.2	15	13.9	37	34.3	45	41.7
Gaining access to a wide range of reputable information resources	7	6.5	12	11.1	36	33.3	53	49.1
Having access to information with advanced search features e.g. EBSCOhost	18	16.7	26	24.1	40	37.0	24	22.2
Opportunity to search several databases at once e.g. through EBSCOhost	17	15.7	32	29.6	40	37.0	19	17.6
Convenience of access	19	17.6	12	11.1	45	41.7	32	29.6
Getting materials for teaching and research	8	7.4	7	6.5	38	35.2	55	50.9

f= frequency %= percentage

As shown in Table 5, faculty members strongly agreed on the following reasons for using e-resources: getting materials for teaching and research at 55/108 (50.9%) followed by gaining access to a wide range of reputable information resources at 53/108 (49.1%) and then ease of sharing information with colleagues at 45/108 (41.7%). The table also shows those who agreed on the following: ease of use (54/108; 50%) followed by currency of e-resources at 51/108 (47.2%) then convenience of access at 45/108 (41.7%) and saving time at 43/108 (39.8%).

When agree and strongly agree are combined, we find that getting materials for teaching and research account for 93/108 (86.1%), gaining access to a wide range of reputable information resources for 89/108 (82.4%), ease of sharing information with colleagues for 82/108 (76%), gaining access to full-text information sources for 81/108 (75%), saving time for 77/108 (71.3%) and convenience of access for 77/108 (71.3%). These are the six top most reasons for using e-resources. In summary, we can generalise that faculty members agreed that they use e-

resources because it offers a wide range of reputable information, ease of information sharing, access to full-text, and it is time saving and convenience of access are factors that drives them to use e-resources.

4.4.2 Purpose of using Internet information resources

The respondents were asked to indicate the purpose of using Internet information resources. The results of their responses are computed and presented in Table 6.

Table 6: Purpose of using the Internet (N=108)

Purpose of using Internet	Frequency	Percentage
Research information	73	67.6%
Teaching information	9	8.3%
Entertainment	2	1.9%
Communication	4	3.7%
General information	20	18.5%
Total	**108**	**100%**

Based on the presentation in Table 6, there are indications that the majority of faculty members who use the Internet for research information is at 73/108 (67.6%), followed by use of the Internet for general information at 20/108 (18.5%), teaching information at 9/108 (8.3%), communication at 4/108 (3.7%) and the least is entertainment at 2/108 (1.9%). Surprisingly in this presentation, use of the Internet for accessing teaching information is very low at 9/108 (8.3%). Arguably, it can be noted that the majority of faculty members use the Internet for finding research information and general information. It is literally the need for research and general information which drive the majority of the faculty to use the Internet.

4.4.3 Information seeking skills

Respondents were asked to rate their information seeking skills. The responses are computed and summarised in Table 4.5 based on a Likert scale of 1 – 6; where 1= very weak, 2= weak, 3= fair, 4= good, 5=very good, and 6= excellent.

Table 7: Information seeking skills (N=108)

Information seeking skills	1		2		3		4		5		6	
	f	*%*	*f*	*%*	*f*	*%*	*f*	*%*	*f*	*%*	*f*	*%*
Use of Internet browsers e.g. Explorer, Firefox, Google Chrome	2	1.9	1	0.9	2	1.9	10	9.3	18	16.7	75	69.4
Use of simple/basic search interfaces	10	9.3	2	1.9	4	3.7	19	17.6	31	28.7	42	38.9
Use of advanced search interfaces	8	7.4	3	2.8	11	10.2	22	20.4	34	31.5	30	27.8
Searching electronic full-texts databases e.g. EBSCOhost, HINARI, AGORA	17	15.7	14	13.0	11	10.2	14	13.0	23	21.3	29	26.9
Searching electronic journals	13	12.0	4	3.7	7	6.5	14	13.0	25	23.1	45	41.7
Searching bibliographic databases such as Scopus	17	15.7	14	13.0	13	12.0	16	14.8	23	21.3	25	23.1
WWW search engines such as Google	2	1.9	1	0.9	1	0.9	3	2.8	26	24.1	75	69.4

As we can deduce from the presentation in Table 7, areas where faculty members rated their skills as excellent are in: using WWW search engines such as Google (75/108; 70.1%), Internet browsers e.g. Explorer, Firefox, Google Chrome (75/108; 69.4%), followed by searching electronic journals (45/108; 41.7%) and using simple/basic search interfaces (42/108; 38.9%). Low information seeking skills among faculty members was registered in: searching bibliographic databases such as Scopus, searching electronic full-texts databases e.g. EBSCOhost, HINARI, AGORA and use of advanced search interfaces.

Table 7 shows somewhat surprising results. Faculty members' self-rating of their information seeking skills is very high for search engines and browsers which may not directly provide good and reliable quality academic and research information and low in some of the quality databases such as EBSCOhost, HINARI and others. The low information seeking skills found could be attributed to the lack of training and infrequent access to these databases by faculty members at Gulu University.

4.5 INFORMATION SEEKING PREFERENCES

4.5.1 Preference for print versus electronic information resources

The respondents were asked to indicate their preferences for print versus electronic information resources. The variations in preferences are determined by combining those who use print and electronic resources occasionally and frequently. Their levels of preferences on print and electronic information resources are presented in Table 8.

Table 8: Preferences for print versus electronic materials (N=108)

Collection type	Never		Almost Never		Occasionally		Frequently	
	F	%	f	%	f	%	f	%
Print books	7	6.5	16	14.8	51	47.2	34	31.5
E-books	9	8.3	9	8.3	48	44.4	42	38.9
Print journals	9	8.3	15	13.9	49	45.4	35	32.4
E-journals	8	7.4	5	4.6	51	47.2	44	40.7
Print reference materials	7	6.5	17	15.9	54	50.0	30	27.8
Electronic reference materials	9	8.3	21	19.4	33	30.6	45	41.7
Print statutes	19	17.6	41	38.0	28	26.2	19	17.8
Electronic statutes	18	16.7	27	25.0	35	32.4	28	25.9
Print reports	13	12.0	19	17.6	45	41.7	31	28.7
Electronic reports	10	9.3	22	20.4	37	34.3	39	36.1
Print theses/dissertations	11	10.2	23	21.3	47	43.5	27	25.0
Electronic theses/dissertations	10	9.3	24	22.2	40	37.0	34	31.5
Offline databases (TEAL)	21	19.4	38	35.2	26	24.1	23	21.3
Bound newspapers	21	19.4	30	27.8	33	30.6	24	22.2

Table 8 shows that the majority of faculty members at Gulu University prefer electronic books (90/108; 83.3%) which is more than print books (85/108; 78.7%). Preferences for e-journals are also very good at 95/107 (88.8%) with print journals at 84/108 (77.8%). For reference materials, preferences among the faculty members for print reference materials are at 83/107 (77.5%) with electronic reference materials at 78/108 (72.2%).

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Further, preferences are good for electronic statutes at 63/108 (58.3%) and print statutes at 47/108 (44%), print reports at 76/108 (70.4%) and electronic reports at 76/108 (70.4%). Preferences for print theses/dissertations are the same among faculty members at 74/108 (68.5%) and electronic thesis/dissertations at 74/108 (68.5%). Preferences for offline databases (TEAL) are low among faculty members at Gulu University at 48/108 (44.4%) and bound newspapers at 57/108 (52.8%).

Statistically, when the percentages of preferences for print materials are added and divided by the different resources under print, we get an average of 66.1% and for electronic resources the average is 70.0%. With this, it can therefore be generalised that faculty members at Gulu University slightly prefer seeking for electronic information resources more than print information resources.

4.6 USE OF THE INTERNET

4.6.1 Frequency of using the Internet to get information

The respondents were asked to indicate how often they use the Internet to get information. They were required to indicate the frequency of use by using a 4 point Likert scale of 1= never, 2= rarely, 3= occasionally,   4= frequently. The resulting data is presented in Table 9.

Table 9: Frequency of using the Internet (N=108)

Use of Internet	Frequency	Percentage
Never	0	0%
Rarely	8	7.4%
Occasionally	13	12.0%
Frequently	87	80.6%
Total	**108**	**100%**

Table 9 indicates that the majority of the faculty members (87/108; 80.6%) use the Internet frequently, followed by occasional use (13/108; 12.0%) and rarely (8/108; 7.4%). It can be argued that the Internet has become part of everyday academic life. We can generalise here that, a majority of faculty members at Gulu University use the Internet frequently.

4.6.2 Places of accessing the Internet at Gulu University

The respondents were asked to indicate places where they access the Internet while at the University. The data is presented in Table 10.

Table 10: Places of accessing the Internet (N=108)

Places of accessing the Internet	Frequency	Percentage
University Main Library	17	15.7%
University Medical Library	6	5.6%
Internet cafe within the University	3	2.8%
Computer labs in faculties	13	12.0%
Wireless access within the University	37	34.3%
Others	32	29.6%
Total	**108**	**100%**

The data in Table 10 indicates that the majority of faculty members who use wireless Internet stands at 37/108 (34.3%), followed by 32/108 (29.6%) who access the Internet from other sources and the University main library at 17/108 (15.7%). Other places within the University with minimal access were: computer laboratories (13/108; 12.0%), medical library (6/108; 5.6%), and the Internet cafe (3/108; 2.8%). It is important to note that most faculty members at Gulu University who indicated other sources (32/108; 29.6%) use their own Internet modem for accessing the Internet. The data therefore shows that 76/108 (70.4%) access the Internet using facilities within the University and 32/108 (29.6%) use personal modems to access the Internet.

4.6.3 Searching for Internet information resources

Respondents were asked to indicate their frequency of searching Internet information resources on a four point Likert scale of 1 = never, 2 = almost never, 3 = occasionally, and 4 = frequently. Their responses are presented in Table 11.

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Table 11: Searching Internet resources (N=108)

Internet resources	Never		Almost Never		Occasionally		Frequently	
	f	%	f	%	f	%	f	%
E-books	18	16.7	6	5.6	44	40.7	40	37.0
E-journals	12	11.1	7	6.5	38	35.2	51	47.2
Conference papers	11	10.2	14	13.0	49	45.4	34	31.5
E-theses/dissertations	14	13.1	11	10.3	49	45.8	34	31.5
Reference materials (e.g. dictionaries, encyclopaedias)	5	4.6	5	4.6	45	41.7	53	49.1
Newspapers and magazines	4	3.7	14	13.0	40	37.0	50	46.3
Abstracts and indexes	9	8.3	7	6.5	53	49.1	39	36.1

The data in Table 11 indicates that faculty members frequently search the Internet for reference materials at 53/108 (49.1%), e-journals at 51/108 (47.2%) and newspapers and magazines at 50/108 (46.3%). They also occasionally search abstracts and indexes (53/108; 49.1 %), conference papers (49/108; 45.4%) and e-theses/dissertations (49/108; 45.4%) Furthermore through the Internet, publishers provide researchers with online abstracting and indexing services where researchers can browse through the journal abstracts and indexes and are able to find relevant journals made available through online databases for example Pubmed,Scopus, CABI abstracts, African Journal Online (AJOL).

However, if the results of those who search the Internet for information resources occasionally and frequently are treated as one, reference materials use is ranked highest at 98/108 (91%), followed by abstracts and indexes at 92/108 (85.2%), newspapers and magazines at 90/108 (83.3%), e-journals at 89/108 (82.4%), e-books at 84/108 (78%), the least being conference papers at 83/108 (77%) and e-theses/dissertations at 83/108 (77%).

From the above findings, it is noted that the level of searching Internet information resources by faculty members at Gulu University for all the seven resources is relatively high.

4.6.4 Frequency of using Internet tools

Respondents were asked to indicate the frequency with which they use Internet tools based on a Likert scale of 1=never, 2=almost never, 3=occasionally and 4=frequently. Their responses are summarised and presented in Table 12.

Table 12: Using Internet tools (N=108)

Internet tools	Never		Almost never		Occasionally		Frequently	
	f	%	f	%	F	%	f	%
Academic websites	4	3.7	7	6.5	41	38.0	56	51.9
Blogs	21	19.4	43	39.8	31	28.7	13	12.0
General search engines such as Google	1	0.9	5	4.6	15	13.9	87	80.6
Specialised search engines such as Google Scholar	3	2.8	16	14.8	39	36.1	50	46.3
Social media such as Facebook, LinkedIn	5	4.6	15	13.9	31	28.7	57	52.8
Online databases	13	12.0	17	15.7	42	38.9	36	33.3
Publishers' catalogues	12	11.1	20	18.5	42	38.9	34	31.5
E-mail	3	2.8	4	3.7	21	19.4	80	74.1
LISTSERV list	48	44.4	26	24.1	21	19.4	13	12.0

Table 12 indicates that faculty members frequently used general search engines such as Google (87/108; 81%) followed by e-mail (80/108; 74.1%), then social media such as Facebook and LinkedIn (57/108; 53%) and academic websites (56/108; 51.9%). Internet tools used occasionally are online databases (42/108; 39%) and publishers' catalogues (42/108; 39%). However, the results also indicate that blogs and LISTSERV lists are rarely used by respondents. Based on these findings, it shows that faculty members at Gulu University frequently use search engines such as Google, as well as e-mail, social media and academic websites, but to a lesser extent tools like LISTSERV lists and blogs are used.

4.6.5 Frequency of using electronic databases

Respondents were asked to indicate their frequency of using electronic databases available through Gulu University Library based on a Likert scale of 1=never, 2=almost never, 3= occasionally, and 4=frequently. Their responses are summarised and presented in Table 13.

Table 13: Using electronic databases (N=108)

Electronic databases	Never		Almost Never		Occasionally		Frequently	
	f	*%*	*f*	*%*	*f*	*%*	*f*	*%*
HINARI	46	42.6	15	13.9	27	25.0	20	18.5
AGORA	45	41.7	19	17.6	22	20.4	22	20.4
Emerald	42	38.9	17	15.7	26	24.1	23	21.3
Cambridge University Press Journals Online	34	31.5	22	20.4	31	28.7	21	19.4
Blackwell	40	37.0	22	20.4	37	34.3	9	8.3
The Cochrane Library	54	50.0	20	18.5	21	19.4	13	12.0
Walter de Gruyter electronic journals	58	53.7	22	20.4	20	18.5	8	7.4
Royal Society of London	46	42.6	22	20.4	29	26.9	11	10.2
EBSCOhost	52	48.1	27	25.0	21	19.4	8	7.4
Medline	48	44.4	15	13.9	28	25.9	17	15.7
Google Scholar	15	13.9	10	9.3	24	22.2	59	54.6

Table 13 indicates that, in terms of popularity Google scholar ranks first (59/108; 55%). The unpopular electronic databases indicated by faculty members are: Walter de Gruyter (58/108; 54%), followed by the Cochrane Library (54/108; 50%), EBSCOhost (52/108; 48%), Medline (48/108; 44.4%), HINARI (46/108; 43%), AGORA (45/108; 42.6%), Emerald (42 /108; 40%) and Blackwell (40/108; 37%). The situation looks even worse if one adds the percentages of almost never.

The findings from Table 4.11 surprisingly indicate that electronic databases subscribed to by the University library such as Cochrane Library, EBSCOhost, Medline, HINARI and AGORA are unpopular among faculty members.

4.7 CHALLENGES ENCOUNTERED WHILE SEEKING INFORMATION

4.7.1 Factors influencing use of the Internet

The respondents were asked to indicate the factors that influence use of the Internet based on a Likert scale of 1 – 6 where, 1=no influence, 2=low influence, 3=slight influence, 4=moderate

influence, 5=high influence, and 6=strong influence. Their responses are summarised and presented in Table 14.

Table 14: Factors influencing non-use of the Internet (N=108)

Factors causing non-use of the Internet	1		2		3		4		5		6	
	f	%	f	%	f	%	f	%	F	%	f	%
Lack of computers with Internet connection	18	16.7	10	9.3	11	10.2	11	10.2	12	11.1	46	42.6
Sharing a computer laboratory with students	19	17.6	11	10.2	11	10.2	15	13.9	15	13.9	37	34.3
Slow Internet speed due to the low bandwidth	6	5.6	6	5.6	11	10.2	8	7.4	8	7.4	69	63.9
Problems in finding relevant articles/information	17	15.7	10	9.3	12	11.1	26	24.1	10	9.3	33	30.6
Lack of information skills to search	41	38.0	8	7.4	11	10.2	14	13.0	18	16.7	16	14.8
Information overload	26	24.1	12	11.1	13	12.0	21	19.4	16	14.8	20	18.5
Constant power outage	13	12.0	8	7.4	12	11.1	11	10.2	17	15.7	47	43.5
Unreliable Internet connection	6	5.6	9	8.3	6	5.6	18	16.7	8	7.4	61	56.5
Lack of time	40	37.0	17	15.7	11	10.2	11	10.2	11	10.2	18	16.7
Inadequate support of library staff in e-resource usage	24	22.2	19	17.6	10	9.3	14	13.0	10	9.3	31	28.7
Supportive library staff	25	23.1	6	5.6	9	8.3	18	16.7	20	18.5	30	27.8
Good current awareness programmes	14	13.0	5	4.6	15	13.9	16	14.8	20	18.5	38	35.2
Information literacy training	23	21.3	2	1.9	11	10.2	13	12.0	17	15.7	42	38.9

Table 14 shows results of factors influencing non-use of the Internet by respondents. The major causes are: slow Internet speed due to the low bandwidth (69/108; 64%), unreliable Internet connection (61/108; 57%), constant power outages (47/108; 44%), lack of computers with an Internet connection (46/108; 43%), and lack of information literacy training (42/108; 39%). Factors that have a low influence on the non-use of the Internet by faculty members are: lack of time, lack of information skills to search, information overload and supportive library staff.

4.7.2 Services not currently provided by the University Library

In an open type question, faculty members were asked to indicate if there are any services not currently provided by the University Library that can help improve research and teaching. Through content analysis, the data reveals that respondents focused on gaps which exist in the Library services that need to be urgently addressed. Only the responses considered most important are summarised and presented in Table 15. Some respondents indicated more than one issue.

Table 15: Gaps in services provided by the University Library (F=110)

Gaps	Frequency	Percentage
Slow Internet speed	32	29.1%
No library website	16	14.5%
Inadequate current textbooks	15	13.6%
Inadequate e-resources	11	10.0%
Poor current awareness services	8	7.3%
Lack of computer laboratories for staff	8	7.3%
Low information literacy training	6	5.5%
Unsupportive library staff	6	5.5%
Old print journals and reports	6	5.5%
Power outages	2	1.8%

Note: frequency referring to the number of responses by faculty members

Table 15 indicates the gaps identified in services provided by the University Library. The top gaps are slow Internet speed at 32/110 (29.1%), no library website at 16/110 (14.5%), inadequate current textbooks at 15/110 (13.6%) and inadequate e-resources at 11/110 (10.0%). The other important gaps identified by faculty members are poor current awareness services at 8/110 (7.3%), lack of computer laboratories for staff at 8/110 (7.3%), low information literacy training at 6/110 (5.5%), unsupportive library staff at 6/110 (5.5%), old print journals and reports at 6/110 (5.5%) and power outages at 2/110 (1.8%).

4.8 CONCLUSION

Based on the results of this study, the following findings are of special importance:

1) Faculty members make considerable use of e-resources available through the Internet for teaching and research, and general work. Faculty members' self rating of information seeking skills is good for WWW search engines, Internet browsers, searching electronic journals and using simple/basic search interfaces.

2) Faculty members at Gulu University slightly prefer seeking for electronic information resources more than print information resources.

3) The majority of faculty members use the Internet frequently and the major points of access are: wireless Internet, personal modem and access provided in the main library. The most searched for Internet information resources are reference materials, e-journals and, newspapers and magazines. The most frequently used Internet tools are general search engines and e-mail. Subscription databases such as EBSCOHost, HINARI, AGORA, Cochrane Library, Medline, Emerald and Blackwell are unpopular among faculty members at Gulu University with only Google scholar being popular and used frequently.

4) The most important factors influencing non-use of the Internet by faculty members at Gulu University are: slow Internet speed and unreliable Internet connections. The gaps identified in the Gulu University Library service are: absence of a library website, inadequate current textbooks and inadequate e-resources.

Based on the findings and this conclusion, the next chapter will comprise of a summary of how the findings address the research problem, recommendations based on the study, and suggestions for further studies.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter presents a summary of research findings, how the research problem has been answered, recommendations, suggestions for further studies, and a conclusion. The main purpose of the study was to examine the information seeking behaviour of faculty and the use of the Internet at Gulu University Library. The research problem was based on the following statement: "faculty at Gulu University is expected to use the Internet as a major source of information to supplement the print collection of books and journal articles available in the library. There are, however, perceptions that faculty are not making optimal use of the information sources in the library and especially sources available through the Internet."

The research questions to address the problem were as follows:

- What has been reported in the subject literature on the information behaviour of faculty with specific reference to the use of the Internet?
- Which research methods need to be used to study the information behaviour and Internet use of faculty?
- What is the information seeking behaviour of faculty at Gulu University with specific reference to the following:
  - Factors driving information seeking?
  - Information seeking preferences?
  - Use of the Internet?
  - Challenges encountered while seeking information?

5.2 SUMMARY OF FINDINGS

The findings and a summary for each of the research sub-questions are presented in the following sections:

5.2.1 Literature on the information behaviour of faculty with specific reference to the use of the Internet

The literature review in chapter 2 revealed that although there is a considerable number of research reports on the information seeking behaviour of faculty as well as on their use of the

Internet, this does not apply to Uganda. The overview of the literature in Chapter 2 therefore covered the global trends in studying information seeking behaviour, Internet use, and the information seeking behaviour of faculty in order to prepare for the study regarding Uganda.

5.2.2 Research methods used to study the information behaviour and Internet use of faculty

The study at hand used a quantitative approach to investigate the information seeking behaviour of faculty and use of the Internet at Gulu University Library since it presents a high level of reliability for collected data. The whole population of faculty members (218) were approached, of which 150 faculty members agreed to participate, returning 114 questionnaires out of which 108 questionnaires could be used for analysis.

The questionnaire was handed to 150 faculty members out of 218 because some were on study leave and others were not on campus.

5.2.3 Information seeking behaviour of faculty and use of Internet at Gulu University

To determine the information seeking behaviour and Internet use of faculty the following sub-questions were asked with specific reference to: factors driving information seeking, information seeking preferences, use of the Internet and challenges encountered while seeking information.

5.2.3.1 Factors driving information seeking

To determine the factors driving information seeking the following issues were addressed:

Reasons for using e-resources available through Gulu University Library Services
The results showed that faculty members indicated the reason for using e-resources available through Gulu as: e-resources provided them with a wide range of reputable information to select from, ease of information sharing no matter the geographical location, access to full-text journals, the time saving factor, and convenience of access.

Purpose of using Internet Information resources
The results from the study revealed Internet resources were mainly used for research information and that there was low usage for information relevant to teaching. This creates a gap for further studies to probe and understand why faculty do not use Internet resources for acquiring teaching information to be used for lecturing students and why they prefer it for research information for knowledge development. As the findings showed in Table 4.3, Table

4.4, and Table 4.5, their main driving factors are to use the Internet to access information for research and for general information.

Information seeking skills

The results from the study showed that faculty self-rated their information skills as good for search engines and Internet browsers, while they self-rated their information seeking skills in searching bibliographic databases such as Scopus, and electronic full-texts databases such as EBSCOHost, HINARI, AGORA and the use of advanced search interfaces as low.

5.2.3.2 Information seeking preferences

Preference for print versus electronic information resources

The results from the study showed faculty members indicated that they used both print and electronic information resources frequently though the study indicated a slight preference for electronic resources compared to print.

5.2.3.3 Use of the internet

Frequency of using the Internet to get information

The results from the study indicated that the majority of faculty members used the Internet frequently, followed by occasionally and a very small percentage indicated that they rarely used the Internet. This shows that the Internet has become part and parcel of academic world.

Places of accessing the Internet at Gulu University

The results showed that the majority of the faculty members while at the University use facilities on the campus to access the Internet such as wireless access points and computer laboratories. The results further revealed that a fair number of faculty members use their personal modems to access the Internet. It is evident that Internet searching became a standard practice in everyday life.

Searching for Internet information resources

The results showed that faculty members at Gulu University search the Internet to access information resources such as reference materials, abstracts and indexes, newspapers and magazines, journals, e-books, conference papers and e-thesis/dissertations. Furthermore through the Internet, publishers provide researchers with online abstracting and indexing

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services where researchers can browse through the journal abstracts and indexes and are able to find relevant journals made available through online databases for example Pubmed,Scopus, CABI abstracts, African Journal Online (AJOL).

Frequency of using Internet tools

The result indicated that faculty members at Gulu University frequently used search engines such as Google and almost never used tools like LISTSERV lists and blogs.

Frequency of using electronic databases

The findings showed that the electronic databases to which the University Library subscribed such as EBSCOhost, Medline and others were not fully utilised by the faculty members. The question on the usage of electronic databases revealed low usage among the faculty members and only Google scholar (which is not a subscription database) showed fair usage.

5.2.3.4 Challenges encountered while seeking information

Factors influencing use of the Internet

The results from the study indicated that faculty members attributed factors influencing non-use of the Internet by respondents to: slow Internet speed due to the low bandwidth, unreliable Internet connection, constant power outages, lack of computers with an Internet connection, and lack of information literacy training. Factors that have a low influence on the non-use of the Internet by faculty members are: lack of time, lack of information skills to search, information overload and lack of supportive library staff.

Services not currently provided by the University Library

The results from the open ended question revealed the dissatisfaction of the faculty on the services provided by Gulu University Library. Some of the gaps noted were: slow Internet access, no library website, inadequate current textbooks, inadequate e-resources, poor current awareness services, lack of computer laboratories for staff, limited information literacy training, unsupportive library staff, old print journals and reports and power outages. The respondents did not suggest new services to be provided but criticised what was offered at the time of the study 23rd -27th Sept 2013 and how these need to be improved. Respondents seemingly interpreted factors beyond their control as reasons for causing non-use and did not relate it to their own information seeking (in)abilities.

5.3 RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made on improving facilitation of faculty's information seeking and use of the Internet at Gulu University Library:

5.3.1 Promoting e-resource usage

It is recommended that the promotion of e-resources available through Gulu University library should be embraced by the University authority. The e-resources should be made more visible to the faculty members by the librarians in charge through advocating for many Internet access points or location in places such as faculty offices and a step to step interactive session on how to access the electronic resources and this will enable the faculty members to use them more for their academic work. Curtis, Weller and Hard (1997) in their study found the increase in Internet connections was a reason for increased use of electronic resources by faculty members. The library could also develop an information literacy training program for faculty members in accessing and searching subscribed databases such as Emerald, HINARI, AGORA, EBSCOhost and Blackwell. Currently at Gulu University Library the availability of subscribed databases is not sufficient for all existing subject disciplines like law and computer science and the existing infrastructure to access the electronic resources is inadequate.

5.3.2 Library website

In promoting the use of e-resources in an academic environment a library website plays a very vital role in making the e-resources visible and open for use at anytime by the faculty members. Abbasi (2011) asserts that launching a library website can help in uploading books and journals hence helping faculty members find their desired information. Curtis, Weller and Hard (1997) also noted that a library website is one of the most effective ways of reaching the faculty members and introducing them to new available library resources. The library website would help in exposing information about the library, methods of access, online databases, its activities, collection and online catalogue.

5.3.3 Increase bandwidth

It is recommended to increase Internet speed through bandwidth enhancement in order to enable the faculty members to download information resources timely. Lack of access to the Internet based on obstacles such as: slow Internet due to low bandwidth, unreliable Internet connection, constant power outages, and lack of computers with Internet connection should be

addressed. This finding suggests that Gulu University authority together with the Government should solicit for donor funds to increase bandwidth, provide computer laboratories with full Internet connection in the various faculties and library, and purchase a standby generator and solar panels as alternative power source to prevent the issues of power outage. According to Kaur (2006) electronic resources in an academic environment can be a good substitute for conventional resources if the speed to access them is fast.

5.3.4 Collection development policy

It is recommended to reduce the issue of inadequate current textbooks and old print journals;, the library should design a workable collection development policy given the dynamic academic environment in course units and the curriculum. Librarians should identify online links to quality electronic resources available through open access and also create partnership with other university libraries through interlibrary loan services whereby the users and librarians can freely borrow from other libraries. The faculty members should be encouraged to attend the special sessions such as group discussion like ASK the librarian provided by the library to enable the faculty members to know about the library activities, online databases and other library services and also for the librarians to understand their information needs.

5.3.5 Train faculty members

It is recommended that Gulu University embraces ICT skills training which should be organised from time to time to influence the perceptions of the faculty members on the use of the Internet and electronic resources. More training and re-training on ICT skills may reduce the uncertainties which may exist among the faculty members thus using the Internet for efficient retrieval of information and meeting their information needs. Liu (2009) notes that training induces positive attitudes toward ICT usage. Faculty members should not avoid technology such as ICT with the view that it does not fit well with their educational struggle. Instead they should take bold steps in confronting the technology, neutralise the disadvantages and turn it in opportunities which can enhance their teaching and research. Sharma (2009) asserts that lack of training is perceived as a major de-motivator in the use of electronic resources.

5.4 SUGGESTIONS FOR FURTHER STUDIES

Based on the findings of this study, the following are suggested as further studies that might deepen understanding of the information seeking behaviour and use of the Internet at Gulu University Library.

Further studies should also encourage the planning and design of suitable interventions to promote Internet usage for academic and research purposes and especially the use of electronic resources available via the Internet to which the Library subscribes.

This study covers only Gulu University faculty members, leaving very little room for comparison with research from other universities. Further studies should consider using a comparative study to cover all the public universities in Uganda.

This study is descriptive in nature and can only describe the problem under study. Further studies should consider using correlation studies which will examine a relationship between two sets of data from similar studies in order to determine a general trend. The study is more quantitative; further studies should consider applying qualitative methods in studying the relationship between information seeking behaviour and the Internet use among faculty members.

In order to gain a deeper understanding of information seeking behavior, further research can adopt the use of a more qualitative approach in order to get the respondents opinions and views through focus group interviews sessions where the respondents share their experiences of using the electronic resources freely and this can help the librarians to understand their information seeking behaviour.

5.5 CONCLUSION

This study investigated the information seeking behaviour of faculty and use of the Internet at Gulu University Library. It can be concluded that as much as faculty members at Gulu University are aware of the advantages of e-resources and uses of the Internet to retrieve information for teaching, research and general work, their information seeking skills proved not to be highly satisfactory especially in the use of electronic resources. This calls for the University Library to integrate information literacy training in its instructional programme with emphasis on training

faculty members and other library users on issues concerning information access, retrieval and management, and especially regarding electronic resources.

In order to improve information seeking and Internet usage, the University Library with support from Gulu University management and government should increase bandwidth for faster Internet access, improve on the maintenance of computers and Internet services, invest in alternative power backup such as solar energy and generators, increase the number of networked computers. Further, the University Library should develop a collection development policy to guide and regulate the acquisition of information resources such textbooks, most importantly, the University library should develop its website to facilitate information dissemination and access.

This study can be seen to contribute to knowledge in ways such as: it describes the demographic characteristics of the respondents, computer skills, factors driving information seeking, the information seeking preferences, use of the Internet and challenges encountered while seeking information online. This study also shows that there is need for more efforts to improve on the Internet bandwidth and infrastructure in order to increase the access to electronic resources. Improvement in training of the faculty members, designing interactive promotional programmes and the Library making available to the faculty members quality e-journals available through open source access and improvement in the collection development policy to enable acquisition of relevant current textbooks in the various subject fields studied in Gulu University.

The results from this study can therefore conclude that the Internet has to some extent influenced the information seeking behaviour of faculty members at Gulu University and this is evident in the use of e-resources to get desired and relevant information, and in the frequent use of the Internet.

References

Abbasi, R. 2011. Information seeking behaviour of the members of faculty and role of libraries of the universities on meeting their needs. *American Journal of Scientific Research,* 26: 80-87.

Adams, J., Khan, H.T.A., Raeside, R. & White, D. 2007. *Research methods for graduate business and social science students*. Los Angeles: Sage Publications.

Gifty, A. 2003. Internet use among faculty members of universities in Ghana, *Library Review*, 52(1): 29 - 37

Ajiboye, D.O. & Tella, A. 2007. University undergraduate students' information seeking behaviour: implications for quality in higher education in Africa. *The Turkish Online Journal of Educational Technology,* 6(1): 1303-6521.

Al-Ansari, H. 2006. Internet use by the faculty members of Kuwait University. *The Electronic Library*, 24(6): 791-803.

Al-Suqri, N.M. 2011. Information seeking of social science scholars in developing countries: A proposed model. *The International Information and Library Review*, 43, 1-14.

Ansari, M.N. & Zuberi, B.A. 2010. Use of electronic resources among academics at the University of Karachi. *Library Philosophy and Practice*, June. [Online]. Available :< http://0-search.proquest.com.innopac.up.ac.za/lisa/docview/734301130/fulltextPDF/13C6174F810299409C4/47?accountid=14717> [Accessed 21 February 2013].

Bankole, M.O. & Oludayo, S. 2012. Internet use among undergraduate students of Olabisi Onabanjo University, Ago Iwoye, Nigeria. *Library Philosophy and Practice,* January. [Online]. Available: <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1550&context=libphilprac> [Accessed on 5 January 2013].

Bhatti, R. 2010. Internet use among faculty members in the changing higher education environment at the Islamia University of Bahawalpur, Pakistan. *Library Philosophy and Practice* May. [Online]. Available:< http://0-unllib.unl.edu.innopac.up.ac.za/LPP/bhatti3.htm> [Accessed on 10 February 2013].

Blumberg, B., Cooper, R.D. & Schindler, S.P. 2008. *Business research methods.*2nd ed. London: McGraw-Hill Higher Education.

Brown, M.C. 1999. Information seeking behaviour of scientists in the electronic age: astronomers, chemists, mathematicians, and physicists. *Journal of the American Society for Information Science*, 50(10): 929-942.

Bruce, H. 2005. User satisfaction with information seeking on the Internet. *Journal of the American Society for Information Science*, 49(6): 541- 556.

Busha, C.H. & Harper, S.P. 2004. *Research methods for Librarianship; techniques and interpretation.* San Diego: Academic Press.

Cahalan, W.M. & William, W.J. 2001. National Center for Education Statistics: Academic libraries 1998. [Online]. Available: < http://0-www.ala.org.sapl.sat.lib.tx.us/research/sites/ala.org.research/files/content/librarystats/academic/nces/1998_ED_Tbs.PDF> [Accessed 2 February 2013].

Case, D.O. 2006. Information behavior. *Annual Review of Information Science and Technology*, 40: 293-328.

Case, D.O. 2007*. Looking for information: a survey of research on information seeking, needs & behavior.* 2nd ed. San Diego: Academic Press*.*

Case, D.O. 2012*. Looking for information: a survey of research on information seeking, needs & behavior.* 3rd ed. Bingley, UK: Emerald Publishing Group.

Collis, J. & Hussey, R. 2003. *Business research: a practical guide for undergraduate and postgraduate students.* New York: Palgrave Macmillan.

Creswell, J.W. 2009. *Research design: qualitative, quantitative and mixed method approaches.* 3rd ed. Los Angeles: Sage Publications.

Curtis, L.K., Weller, C.A. & Hurd, M.J. 1997. Information seeking behaviour of health science faculty: the impact of new information technologies. *Bulletin of the Medical Library Association*, 85(4): 402-410. [Online]. Available :< .http://0-

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www.ala.org.sapl.sat.lib.tx.us/research/sites/ala.org.research/files/content/librarystats/academic/nces/1998_ED_Tbs.PDF> [Accessed 4 February 2013].

Engel, D., Robbins, S. & Kulp, C. 2011. The information seeking habits of engineering faculty. *College and Research Libraries*, 72(6): 548-567.

Flaxbart, D. 2001. Conversations with chemists: information seeking behaviour of chemistry faculty in the electronic age. *Science and Technology Libraries*, 21(3-4): 5-26. [Online]. Available: <http://0-www.tandfonline.com.innopac.up.ac.za/doi/pdf/10.1300/J122v21n03_02> [Accessed 2nd March 2013].

Francis, H. 2005. The information seeking behaviour of Social science faculty at the University of West Indies, St. Augustine Campus. *The Journal of Academic Librarianship*, 31(1): 67-72.

Fisher, E. K., & Julien, H. 2009. Information behavior. *Annual Review of Information Science & Technology*, 43: 317-358.

Ge, X. 2010. Information seeking behaviour in the digital age: a multidisciplinary study of academic researchers. *College and Research Libraries*, 71(5): 435-455.

George, A.C., Bright, A., Linke, C.E.; & Clair, St. G. 2006. Scholarly use of information: graduate students' information seeking behaviour. *University Libraries Research*. Paper 21. [Online]. Available: < http://repository.cmu.edu/lib_science> [Accessed 4 February 2013].

Golafshani, N. 2003. Understanding reliability and validity in qualitative research. *The Qualitative Report*, 8(4): 597-607. [Online]. Available :<http://peoplelearn.homestead.com/medhome/qualitative/reliab.validity.pdf> [accessed on 13 February 2013].

Gulu University. 2005. Gulu University Tenure, Terms and conditions of service. *Gulu*: Directorate of Planning and Development Gulu University.

Gulu University. 2009. Gulu University Strategic Plan 2009-2019. Gulu: Directorate of Planning and Development Gulu University.

Gulu University. 2011. Gulu University Annual Report 2011/2012. Gulu: Directorate of Planning and Development Gulu University.

Gulu University. 2012. *Gulu* University Library and Information User Guide. Gulu: Gulu University.

Hemminger, M.B., Lu, D., Vaughan, L.T.K. & Adams, J.S. 2007. Information seeking behaviour of academic scientists. *Journal of the American Society for Information Science and Technology*, 58(14): 2205-2225.

IFLA. 2010. *IFLA world report 2010*. [Online]. Available :< http://www.ifla-world-report.org/cgi-bin/static.ifla_wr.cgi> [Accessed 1 February 2013].

Johnson, R.B. & Onwuegbuzie, A.J. 2004. Mixed methods research: a research whose time has come. *Education Research*, 33(7): 14-26. [Online]. Available :
<http://www.wou.edu/~mcgladm/Quantitative%20Methods/optional%20stuff/mixed%20methods.pdf> [Accessed 22 February 2013].

Kadli. J. & Kumbar, D.B. 2011. Faculty information seeking behaviour in the changing ICT environment: A study of Commerce Colleges in Mumbai. *Library Philosophy and Practice*, June. [Online]. Available: <http://0-unllib.unl.edu.innopac.up.ac.za/LPP/kadli-kumbar.pdf> [Accessed on 5 January 2013].

Kakai, M., Ikoja-Odongo, R. & Kigongo-Bukenya, N.M.I. 2004. A study of the information seeking behaviour of undergraduate students of Makerere University, Uganda. *World Libraries*, 14(1). [Online]. Available :< http://www.worlib.org/vol14no1/print/kakai_print.html> [Accessed 19 February 2013].

Kaur, A. 2006. Use of electronic resources by teachers and researchers of Science and Engineering and Technology faculties in Guru Nanak Dev University, Proceedings of the 6th International Caliber 2008, from Automaton to Transformation, University of Allahabad, Allahabad, February 28-29.

Khan, G. & Bhatti, R. 2012. Information needs and seeking behaviour of law faculty members. A survey of the University of Peshawar and its affiliated law colleges. *Library Philosophy and Practice*, 1-16. August. [Online]. Available:
<http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1899&context=libphilprac>
[Accessed on 5 January 2013].

Kombo, D.K. & Tromp, D.L.A. 2006. *Proposal and thesis writing: an introduction*. Nairobi: Paulines Publications Africa.

Kothari, C.R. 2004. *Research methodology methods and techniques*. New Delhi: New Age International Publishers.

Krejcie, V.R. & Morgan, W.D. 1970. Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607-610. [Online]. Available: <http://sunburst.usd.edu/~mbaron/edad810/Krejcie.pdf> [Accessed on 13 February 2013].No Number?

Kulthau, C.C. & Tama, S.L. 2001. Information search process of lawyers: A call for 'Just for me' information services. *Journal of Documentation*, 57(1): 25-43.

Kumar, R. 2011. *Research methodology: a step by step guide for beginners*. Los Angeles: Sage Publications.

Lewis, R.J. 1999. Reliability and validity: Meaning and measurement. *Presented at the Annual 1999 Meeting of the Society for Academic Emergency Medicine (SAEM)* in Boston, Massachusetts, 17 May 1999. [Online]. Available: <http://www.learningace.com/doc/999549/27e32545cd4512a17a7e4775c8e3f1aa/reliabilityandvalidity> [Accessed 25 February 2013].

Liu, J. 2009. A survey of EFL learners' attitudes toward Information and Communication Technologies. *English Language Teaching Journal*, 1(3): 101-106.

Majid, S & Kassim, G.M. 2000. Information seeking behaviour of international Islamic University Malaysia law faculty members. *Malaysian Journal of Library and Information Science*, 5(2): 1-17.

Marchionini, G.1995. *Information seeking in electronic environments*.[Online]. Available: <http://comminfo.rutgers.edu/~muhchyun/courses/520/readings/10th/Marchionini1995-Ch3.pdf> [Accessed 9 January 2013].

Marouf, L. & Anwar, M.A. 2010. Information seeking behaviour of the social sciences faculty at Kuwait University. *Library Review*, 59(7): 532-547.

Marton, C & Choo, W.C. 2011. A review of theoretical models of health information seeking on the web. *Journal of Documentation*, 63(3): 330-352.

Matveev, V.A. 2002. The advantages of employing quantitative and qualitative methods in intercultural research: practical implications from the study of the perceptions of intercultural

communication competence by American and Russian managers. *Russian Journal of Communication*, [Online]. Available:
<http:// www.russcomm.ru/eng/rca_biblio/m/matveev01_eng.shtml> [Accessed 15 February 2013].

Meho, I.L & Tibbo, R.H. 2003. Modeling the information seeking behaviour of social scientists: Ellis's study revisited. *Journal of American Society or Information Science and Technology*, 54(6): 570-587.

Moule, P. & Goodman, M. 2009. *Nursing research: an introduction*. Los Angeles: Sage Publications.

National Council for Higher Education, Recognised Institutions: list and contacts of recognized education institutions in Uganda.[Online]. Available:
< http://www.unche.or.ug/index.php/institutions> [Accessed 20th February 2013].

O'Leary, Z. 2006. *The essential guide to doing research*. Los Angeles: Sage Publications.

Ochieng, F. 2009. *Gateway to research methods: a simplified approach to research methods with model past paper questions*. Kampala: Basic Business Books.

Onuoba, D.U. & Awoniyi, A.A. 2011. Comparative analysis of students' information seeking behaviour in Adventist universities: a survey of Babcock and Solusi Universities. *Library Philosophy and Practice*, January-November.   [Online]. Available: <http://unllib.unl.edu/LPP/> [Accessed 12 January 2013].

Patitungkho, K. & Desphande, N.J. 2005. Information seeking behaviour of faculty members of Rajabhat Universities in Bangkok. *Webology*, 2(4): 1-14. [Online]. Available:
<file:///C:/Users/Omara/Desktop/info%20seeking/info%20seeking%20bangkok.html> [Accessed 25 January 2013].

Punch, K.F. 2006. *Developing effective research proposals*. 2nd ed. Los Angeles: Sage Publications.

Reitz, M.J. n.d. Online dictionary for library and information science. [Online]. Available :
<http://www.abc-clio.com/ODLIS/odlis_h.aspx> [Accessed 1 February 2013].

Rupp-Serrano, K. & Robbins, S. 2013. Information seeking habits of education faculty. *College & Research Libraries,* 74(2): 131-141*.*

Sharma,C. 2009. Use and impact of e-resources at Guru Gobind Singh Indraprastha University India. *Electronic Journal of Academic and Special Librarianship*, 10(1): 1-10.

Singh, Y.K. 2006. *Fundamental of research methodology and statistics*. New Delhi: New Age International Publishers.

Sulemani, B.S. & Katsekpor, A,S. 2007. Information seeking behaviour of health science faculty at the College of Health Science, University of Ghana. *Information Development*, 23(1): 63-70. [Online]. Available: <http://0-idv.sagepub.com.innopac.up.ac.za/content/23/1/63.full.pdf+html> [Accessed 22 February 2013].

Thanuskodi, S. 2009. Information seeking behaviour of law faculty at Central Law College, Salem. *Library Philosophy and Practice*, 1-7, June. [Online]. Available :
< http://digitalcommons.unl.edu/libphilprac/282> [Accessed 21 February 2013].

Uganda National Council for Science and Technology. 2007. National guidelines for research involving humans as research participants. Kampala – Uganda: UNCST.

Wang, P. 1999. Methodologies and methods for user behavioral research. *Annual Review of Information Science and Technology*, 34: 53-84.

Wilson, T.D. 1999. Models in information behaviour research*. Journal of Documentation*, 55(3): 249-270.

Wilson, T.D. 2000. Human information behaviour. *Informing Science*, 3(2): 49-55.

Yagos, O.W. 2012. Adoption and use of Information and Communication Technology in higher education: Case of Gulu University academic staff. Kampala: Gulu University. (Unpublished thesis).

Yi, S. 2007. Information seeking in academic research: a study of the sociology faculty of the university of Wisconsin-Madison. *Information Technology and Libraries*, 26(1): 4-13.

APPENDIX 1: QUESTIONNAIRE

FOR FACULTY AT GULU UNIVERSITY, UGANDA: INFORMATION   SEEKING AND INTERNET USAGE

Dear Respondent,

The questionnaire is designed to gather data on the information seeking behaviour of faculty and their use of the Internet at Gulu University Library. This study could be a useful tool for decision-making by the university regarding support for Internet access and use. More specifically it can help the Library in making decisions on how to best support information access and information literacy training. The study is part of the requirements for my masters' degree (M.IT – Masters in Information Technology) in the Department of Information Science (University of Pretoria).

No information about individual respondents will be disclosed or published. Your responses will be combined with that of others and reported as grouped data. This information is being gathered and analyzed as part of the requirements for completing my master's degree. As explained in the form for informed consent, your participation is highly appreciated; please ensure to sign the form of informed consent on the next page.

Thank you for taking time to fill out this questionnaire.

Sincerely,

Susan Ukech

Masters Candidate (MIT) B STREAM.

Department of Information Science, School of Information Technology, Faculty of Engineering,

Built Environment and Information Technology, University of Pretoria.

E- mail: suzanmim@gmail.com.

Mobile no.+256712124605

Supervisor: Prof Ina Fourie, Department of Information Science, University of Pretoria
ina.fourie@up.ac.za

APPENDIX 2: QUESTIONNAIRE

INFORMATION SEEKING BEHAVIOUR AND INTERNET USE OF FACULTY AT GULU UNIVERSITY LIBRARY

PART I: DEMOGRAPHIC CHARACTERISTICS

1. Academic rank in the faculty (Please tick the most appropriate option)

Teaching assistant ☐   Lecturer ☐   Senior Lecturer ☐   Associate professor ☐

Professor ☐

2. Employment type (Please tick the most appropriate option)

Part time ☐,   Contract ☐   Permanent ☐

3. Faculty/Institute (Please tick the most appropriate option)

(a) Faculty of Business and Development Studies ☐   (b) Faculty of Education and ☐

Humanities ☐   ☐

(b) Faculty of Science   (c) Faculty of Agriculture and Environment

(c) Faculty of Medicine ☐   (d) Institute of Peace and Strategic Studies ☐

4. Years spent lecturing at Gulu University (Please tick the most appropriate option)

(a) Less than 1 year ☐   (b) 1 – 2 years ☐   (c) 3 – 4 years ☐

(d) 5 – 6 years ☐   (e) 7 - 8 years ☐   (f) 9 – 10 years ☐

(j) Above 10 years ☐

5. Level of education (Please tick the most appropriate option)

(a) Bachelors degree ☐   (b) Masters degree ☐   (b) Doctoral degree ☐

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PART II: INFORMATION SEEKING AND USE OF THE INTERNET

6. How often do you use the Internet to get information?

(a) Never ☐   (b) Rarely ☐ (c) Occasionally ☐   (d) Frequently ☐

7. How would you rate your computer skills (Please tick the most applicable option)

Very Poor ☐   Poor ☐   Fair ☐   Good ☐   Very Good ☐

8. For which purposes do you use Internet information resources? (Please tick the most applicable option)

    a) Research information ☐

    b) Teaching information ☐

    c) Entertainment ☐

    d) Writing and presenting papers ☐

    e) Communication ☐

    f) General information ☐

    g) Other (please specify): ....

9. From where do you access the Internet while at Gulu University? (Please tick the most applicable option)

    a) University Main Library ☐

    b) University Medical Library ☐

    c) Internet cafe within the university ☐

    d) Computer labs in faculties ☐

    e) Wireless Internet access from within university compound ☐

    f) Other places (please specify): ....

10. How frequently do you search the Internet for the following information resources? (Please tick the most appropriate option for each information resource)

Frequency of use of Internet resources	Never	Almost never	Occasionally	Frequently
E-books				
E-journals				
Conference papers				
E-theses/dissertations				
Reference works (e.g. dictionaries, encyclopaedias)				

Newspapers and magazines				
Abstracts and indexes				

11. How frequently do you use the Internet tools below to search for information resources online?

Internet Tools	Never	Almost never	Occasionally	Frequently
Academic websites				
Blogs				
General search engines such as Google				
Specialised search engines such as Google Scholar				
Social media such as Facebook, LinkedIn				
Online databases				
Publishers catalogues				
E-mail				
LISTSERV list				

12. How often do you use the following electronic information resources/databases available through Gulu University Library? Rate your level of use in the table below by ticking the most appropriate option.

E- Resources/databases	Never	Almost never	Occasionally	Frequently
HINARI				
AGORA				
Emerald				
Cambridge University Press Journals Online				
Blackwell				
The Cochrane Library				
Walter de Gruyter electronic Journals				
Royal Society of London				
EBSCOHost				
Medline				
Google Scholar				

13. Please rate your information seeking skills on a scale of 1-6; 1=Very weak; 6= Excellent

Information seeking skills	1	2	3	4	5	6
Use of Internet browsers e.g. Explorer, Firefox, Google Chrome						
Use of simple/basic search interfaces						
Use of advanced search interfaces						
Searching electronic full-texts databases e.g. EBSCOHost, HINARI, AGORA						
Searching electronic journals						
Searching bibliographic databases such as Scopus						
WWW search engines such as Google						

14. Please indicate which options best describe your reasons for using e-resources available through Gulu University Library service.

Reasons for using e-resources	Strongly disagree	Disagree	Agree	Strongly Agree
Gaining access to full-text information sources				
Availability of computers connected to the Internet				
Saving time				
Ease of use				
Currency of e-resources (e.g. early cite articles)				
Ease of sharing information with colleagues				
Gaining access to a wide range of reputable information resources				
Having access to information sources with advanced search features e.g. EBSCOHost				
Opportunity to search several databases at once e.g. through EBSCOHost				
Convenience of access				
Getting research materials for teaching and research				

15. Regarding your preference for print material vs. electronic material, please indicate how often you use the following information resources by ticking the most applicable option for each.

Collection type	Never	Almost never	Occasionally	Frequently
Print books				
E-books				
Print journals				
E-journals				
Print reference materials				
Electronic reference materials				
Print statutes				
Electronic statutes				
Print reports				
Electronic reports				
Print theses/dissertations				
Electronic theses/dissertations				
Offline databases (TEAL)				
Bound newspapers				

16. To what extent are the following factors influencing your use of the Internet?

Please rate on a scale of 1-6; 1= No influence; 6=Strong influence

Factors causing non-use of the Internet	1	2	3	4	5	6
Lack of computers with Internet connection						
Sharing a computer laboratory with students						
Slow Internet speed due to the low bandwidth						
Problems in finding relevant articles/information						
Lack of information skills to search						
Information overload						
Constant power outage						
Unreliable Internet connection						
Lack of time						
Inadequate support of library staff in E-resource usage						
Factors promoting the use of the Internet						
Supportive library staff						
Good current awareness programmes						
Information literacy training						

17. Are there any services (not currently provided) that the university library can provide to support you with your research and teaching?
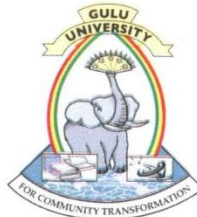
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THANK YOU VERY MUCH FOR DEVOTING YOUR TIME TO FILL IN THIS QUESTIONNAIRE!

APPENDIX 3: LETTER TO CONDUCT RESEARCH

GULU UNIVERSITY

P. O. Box 166
Gulu - Uganda

TEL +256 471 435691
FAX +256 471 432094
Email: irgs@gu.ac.ug
URL: www.gu.ac.ug

INSTITUTE OF RESEARCH AND POSTGRADUATE STUDIES

2nd October 2013

Ukech Susan
Lirarian II,
Gulu University

Dear Ms. Ukech,

REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN GULU UNIVERSITY

This serves to inform you that your request for permission to conduct research in Gulu University was forwarded to the University Secretary who subsequently approved it. You are however, requested to liaise with the University Librarian when planning to conduct the research.

Sincerely yours

Assoc. Prof. Elizabeth A. Opiyo
Director

Copy: Deputy Vice Chancellor
"   University Secretary
"   University Librarian

APPENDIX 4: INFORMED CONSENT FORM

(Form for research subject's permission)

(Must be signed by each research subject, and must be kept on record by the researcher)

1   Title of research project: **Information seeking behaviour of faculty and use of the Internet at Gulu university library, Uganda.**

2   I ……………………………………… hereby voluntarily grant my permission for participation in the project as explained to me by

Ms.Ukech Susan.

3   The nature, objective, possible safety and health implications have been explained to me and I understand them.

4   I understand my right to choose whether to participate in the project and that the information furnished will be handled confidentially. I am aware that the results of the investigation may be used for the purposes of publication.

6   Upon signature of this form, you will be provided with a copy.

Signed: _____ Date: _____

Witness: _____ Date: _____

Researcher: _____ Date: _____