

**UNIVERSITY OF GHANA
DEPARTMENT OF INFORMATION STUDIES**

**INFORMATION SEEKING BEHAVIOUR OF GRADUATE STUDENTS
OF THE UNIVERSITY OF PROFESSIONAL STUDIES, ACCRA (UPSA)**

BY

**KWESI GYESI
(10280127)**

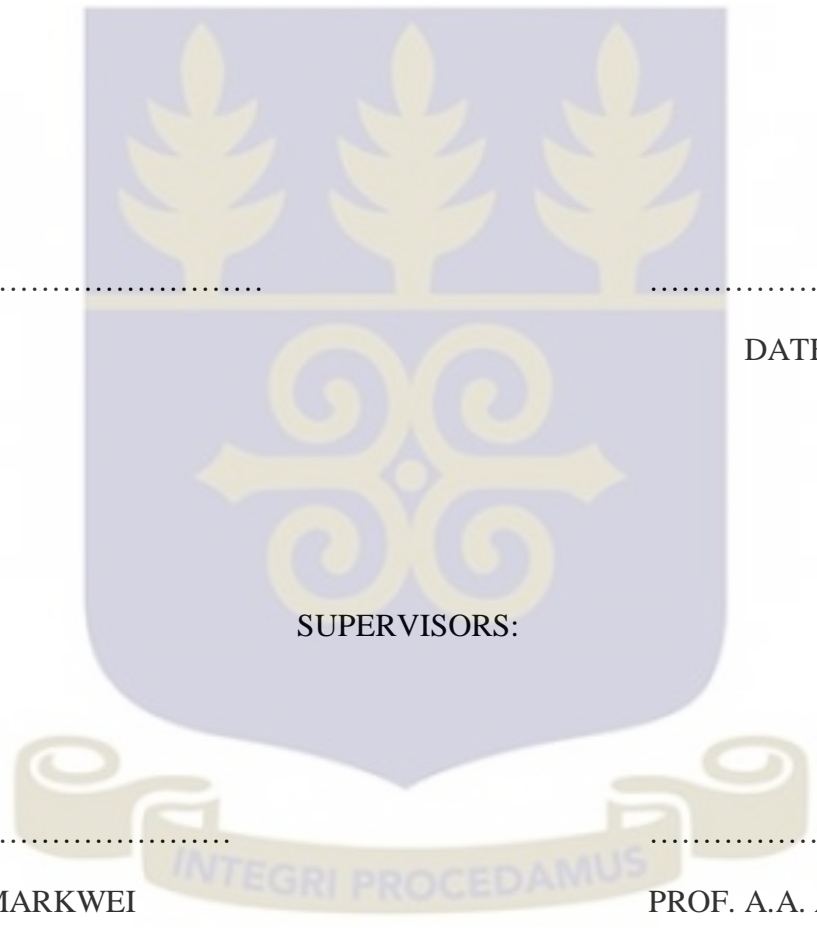
**THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA,
LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR
THE AWARD OF MPhil INFORMATION STUDIES DEGREE**



JULY, 2016

DECLARATION

I, hereby declare that except for references to other people’s work, which has been duly acknowledged, this thesis is my own work, submitted for the award of Masters of Philosophy in Information Studies, University of Ghana, Legon.



.....
KWESI GYESI
(STUDENT)

.....
DATE

SUPERVISORS:

.....
DR. EVELYN MARKWEI
(PRINCIPAL SUPERVISOR)

.....
PROF. A.A. ALEMNA
(CO-SUPERVISOR)

.....
DATE

.....
DATE

DEDICATION

This work is dedicated to the Almighty God, for his immeasurable help throughout this work.

May his name be praised forever.



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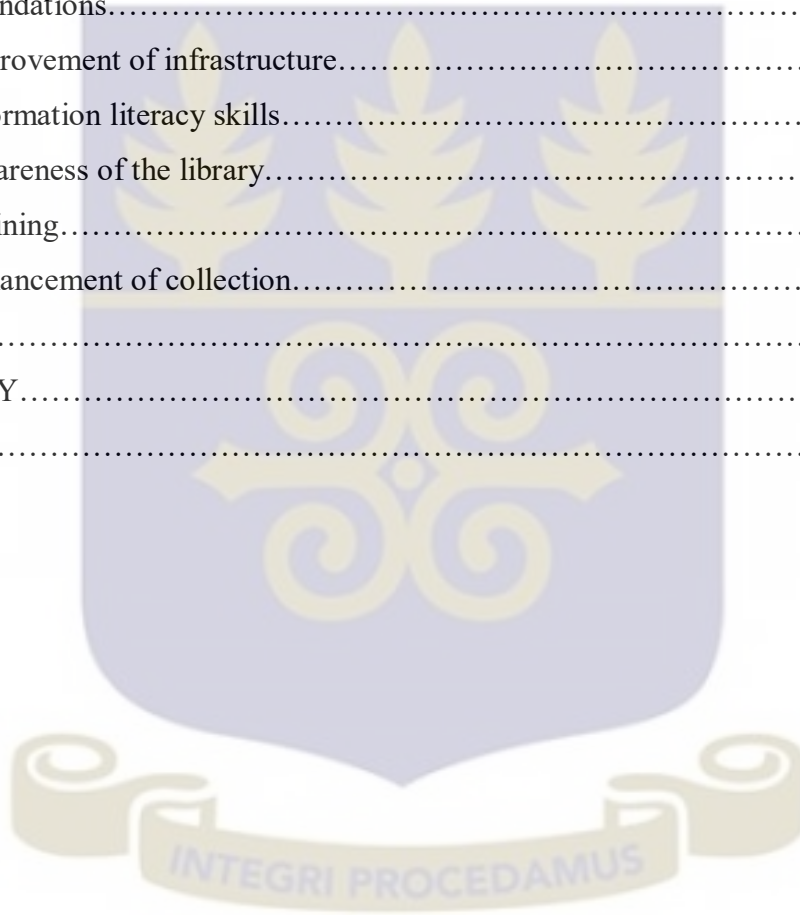
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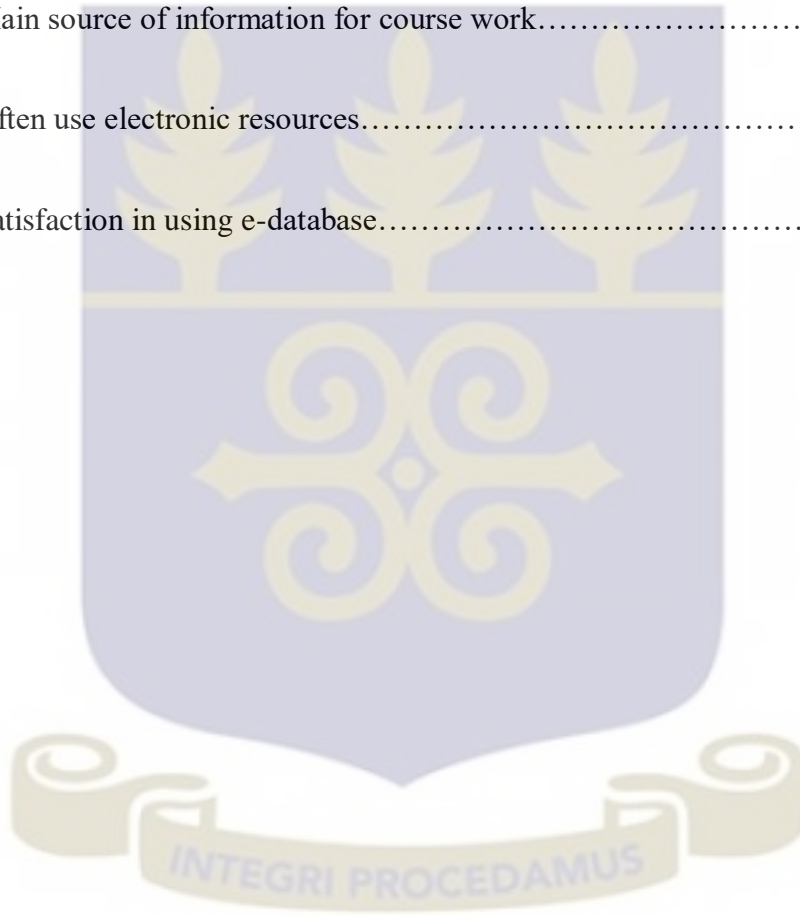


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LIST OF ABBREVIATIONS AND ACRONYMS

ACCA	-	Association of Certified Chartered Accountants
CD-ROMs	-	Compact Disc Read-Only Memory
CDs	-	Compact Disc
CIM	-	Chartered Institute Of Marketing
E	-	Electronic
ICAG	-	Institute of Chartered Accountants, Ghana
ICSA	-	Institute of Chartered Secretaries and Administrators
ICT	-	Information and Communication Technology
MBA	-	Master of Business Administration
MPhil	-	Master of Philosophy
OPAC	-	Online Public Access Catalogue
SPSS	-	Statistical Package for the Social Sciences
T.V.	-	Television
UGLS	-	University of Ghana Library Systems
UPSA	-	University of Professional Studies, Accra
WIFI	-	Wireless Fidelity

ABSTRACT

A study of the information seeking behaviour of students is an important pre-requisite for a library to provide efficient information resources and services to meet their information needs. The purpose of the study is to investigate the information needs, information sources, information seeking behaviours, library use, and challenges to information seeking behaviour of graduate students of the University of Professional Studies, Accra (UPSA).

The study employed the survey methodology. Stratified random sampling was used to select 121 graduate students from a population of 804 to participate in the study. The main data collection instrument was the questionnaire. The data was analysed descriptively by using the Statistical Package for the Social Sciences (SPSS) software.

The main information needs of students identified in the study include career information, self-development, employment, course information, health, entertainment, sports, and religion. They use five main categories of information sources: interpersonal, internet, mass media, electronic and print. The internet was the main source of information even though they also indicate the use of the library. Their information seeking behaviours include active search, passive search, and ongoing search. The challenges they encountered in seeking information are mostly technical, which are, unstable internet connection, low internet speed, issues regarding accessibility using password, and inadequate computers.

The study concluded that it is important for the university authorities to work together with the library to address these problems so that the information needs of students are fully met to enhance their academic work.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The 21st century has been described as the Information Age where data, information and knowledge are integral to the existence of the human race. The ability to retrieve, select, evaluate, process and use information is central to the survival and success of individuals, groups, organizations and communities (Rowley and Hartley, 2008).

Popoola (cited in Madukoma and Opeke, 2013) defined information as “facts, opinions, messages, symbols, and processed data that are capable of improving the knowledge state of a user on a random phenomenon” (p. 1). He is also defined as data which have been processed into meaningful intelligence for the purpose of communication and imparting of knowledge (Akussah, n.d.). This information has certain imperative ingredients that make it effective for organizational or institutional efficiency. Information helps in effective decision making; it reduces uncertainties, serves as an administrative tool, as corporate or organizational memory, for accountability, for monitoring and controlling, and source of empowerment (Akussah, n.d.).

Libraries and information centres are equipped with both the traditional and electronic information resources offering users a variety of information sources to meet their information needs. Jubb and Green (2007) indicate that academic libraries have for many years played very crucial role in supporting research within universities and colleges. Agyen-Gyasi, Lamptey and Frempong (2010) also mention that academic libraries serve as contributors of knowledge in this generation, and for that matter are seen as the “heart” of the university since they provide a place for students and faculty to do their research and advance in their various fields of knowledge.

Information seeking refers to the way persons seek, evaluate, select and use information by interacting with people and all kinds of information systems. It is also the process whereby a person increases or changes his state of knowledge by using the mind to learn and solve problems (Fatima and Ahamed, 2008).

Wilson (2000) also defines information seeking behaviour as “the purposive seeking for information as a consequence of a need to satisfy some goal” (p. 49). He further mentions that people use both manual and computer-based information systems to satisfy their information needs. Wilson (2000) stated that:

“The origins of human information seeking behavior are found in work on the users of libraries and in readership studies in general. The post-war increase in the amount of scientific literature which was either newly published or recently released from war-time restrictions led, in 1948, to the Royal Society Scientific Information Conference (1948), which marks the beginning of the modern study of human information seeking behaviour” (p. 50).

Okonoko, Ojukwu, and Deborah (2015) defined information seeking behaviour “as the ways and means an individual use to collect and locate information for knowledge, his/her own use, updating and improvement” (p. 77).

The advent of the internet and world-wide web have changed the way students look for information. This change is caused by factors such as information resources that are current, up-to-date, and reliable and multiple search tools and techniques that provide quick access to information than the manual systems. This has been reflected in the research findings of

students' information seeking behaviour. For example a number of authors have reported that, students have a preference for and use the internet and other e-resources more than print-based information resources (George et al., 2006; Okello-Obura and Ikoja-Odongo, 2010). ICT has changed how libraries acquire, conserve and disseminate information. Modern libraries have both traditional and e-resources (Khalid, 2000).

There are several types of users of an information system. Within the context of an organization or institution there could be the actual users, potential users, expected users and beneficiary users. Actual users refer to users who are using the information service or system at any given time. Potential users refer to those who are not yet using the information service but will use it at a later date. Expected users are those who do not only have the privilege of using the information service, but have the intention of doing so, and beneficiary users refer to those who have derived some benefit from the information service. User categories may also be identified by the type and nature of a library. For example in an academic library, the primary users are students, teachers, researchers, administrators etc. The primary users in a special or research libraries can be researchers, planners, policymakers, and scientists. In the public library environment, anyone can be user. Thus they can be children, students, housewives, literates etc (Onwuchekwa and Jegede, 2011).

Every user needs information to undertake decisions. According to Thompson (2003) needs are what one is seeking in order to back his or her work (Taylor, 2008 cited in Yusuf, 2012) identified four types of needs as: formalized, compromised, visceral and conscious needs. When librarians understand the information needs of users they are able to provide relevant resources to meet users' expectations. There is the need for both librarians and information system designers

to comprehend the information seeking behaviour of users, so that they can adjust their services to effectively meet their needs (Agosto and Hughes-Hassell, 2005). According to Nicholas (cited in Safahieh (2007), there are five broad functions why users may need information. These are:

- I. “The fact- finding function, which provides answer to specific question,
- II. The current awareness function, which keeps information up to date;
- III. The research function, which investigates a new field in-depth;
- IV. The briefing function, which obtains a back ground understanding of an issue; and
- V. The stimulus function, which provides ideas to obtain stimulus (p. 21-22)”.

These needs according to Wilson (2000) are influenced by factors such as information sources which encourage use of the information and the users’ characteristics. The individual consult various sources to meet those needs. According to Taylor (2000), the information sources that an individual may need may not be totally linked with what practically exists and this may be due to the limitations such as scarce resources available in the library or the inability of the user to access those resources. For instance, Kakai, Ikoja-Odongo and Kigongo-Bukenya (2004) in their study reported that most students do not search for information themselves but use documents suggested by either their friends or lecturers who have used those sources.

According to Veloutsou, Paton and Lewis (2005), there are three major categories of information sources, namely: controllable information sources such as brochures, booklets CDs and institutional websites; non-controllable information sources provided by external sources such as colleagues, family members and media; and partly controllable and partly non-controllable

information sources which include magazines, web-based sources and newspaper publications. The library is one major information sources for the graduate. The availability of information is important but its use by students is the most important since that is the only way that the information will transform to knowledge (Olajide and Otunla, 2015). The library must be aware of the information that is needed by its patrons and how it can be acquired. This will help the library to provide efficient services and project itself as the main information provider for students' research and course work (Pareek and Rana, 2013).

Currently, the internet has been one of the major sources of information irrespective of the time and location. Most of the information on the internet is current since they are published every day, and is quite faster and easier to publish online than using the printed format. This has helped to solve the challenges of accessibility of these information resources. What one needs is a computer connected to a modem or WIFI to enable access to the vast information resources on the Internet (Echezona, Okafor and Ukwoma, 2011).

It is important for the librarian to understand and know the information needs of graduate students, the sources they consult in order to meet those needs, the factors that affect their information needs to facilitate efficient information service to the students and to promote library use.

1.1.1 University of Professional Studies, Accra (UPSA)

The University of Professional Studies, Accra (UPSA) is a public university that provides access to both academic and business professional education in Ghana. The university, which has over ten thousand (10,000) students, has “gained the status as being the oldest professional

accountancy and management tuition provider having majority of its products in key leadership positions in Ghana” for over forty years.

The University was established in 1965 as a private professional business education provider. The government took over in 1978 by the Institute of Professional Studies Decree, 1978 (SMCD 200) (UPSA, 2016). It was afterward established as a tertiary institution with a power to provide professional education and degrees in Accountancy, Management and other related areas of study by the Institute of Professional Studies Act in 1999.

In order to support the University’s mission of producing scholars, the UPSA library has a unique collection of both academic and professional information resources. The library has two main sections, an undergraduate section, and a section for graduates and lecturers.

1.1.1.1 Mission Statement

The library has a mandate to provide support for teaching, research and service functions. Its main mission is as follows:

- I. “Selecting, acquiring, processing and providing access to bibliographic, print and electronic information, knowledge, and data needed by the University’s community for teaching, research, intellectual and creative activities.
- II. Providing the instruction and expert assistance needed to use the Library’s resources efficiently.
- III. Preserving recorded history and knowledge in areas unique to the University’s role and mission.

- IV. Providing the appropriate structural facilities to support learning and research.” (UPSA, 2016, para. 2).

1.1.1.2 Library Resources

The library has rich and diverse collection of materials to support teaching and research needs of its patrons. The collection of the library includes print materials (books and periodicals). Currently, the library has in stock books relating to marketing, accounting, law, business administration, information technology, banking and finance and management. They also have in stock books relating to professional courses such as ACCA, CIM, ICAG, ICSA, and CIMA.

The library has electronic resources comprising electronic journals, academic databases and e-books for students and faculty to carry out their academic work. The academic databases include J-Stor, Emerald, Wiley, EBSCOHost, Annual reviews, Taylor and Francis, Beech tree publication and Policy press; others are Mary Ann Liebert, National Academic Press and Directory of open access journal which are accessible to students on the library’s website. There is also a sizeable collection of information on CD-ROMs. Students can also access the e-resources remotely by logging-into the site using their student identification numbers.

Reference materials in the library include: Past Question Papers, CDs, Encyclopedias and World Books, General and subject based dictionaries, Revision kits for professional books, and Newsletters. Others are local publications and dissertations.

The library provides the following services:

- I. Charging and Discharging Services
- II. Reference and Research Services

- III. Photocopy Services
- IV. Binding Services
- V. Library use orientation services
- VI. Electronic Search Services (UPSA, Library resources)

1.2 Statement of the Problem

Universities across the world, including Ghana, are investing more in electronic databases, but studies have shown that such investments are often not cost effective because students in some universities, especially in Africa, under-utilize these resources (Kwadzo, 2015).

Some of the reasons for under-utilization of electronic databases are basically technology-related challenges including:

- I. inadequate computers
- II. unstable internet connection
- III. need for passwords to access information
- IV. low internet speed
- V. lack of training of library staff (Al-Saleh, 2002 cited in Al-Saleh, 2004; Fasola and Olabode 2014; Rice, 2003).

These factors hinder their information seeking. An informal chat with the UPSA librarian revealed that students have difficulties accessing the library resources, especially the e-resources.

Rice (2003) also mentions that finding and evaluating the reliability of the level of graduate students' skills in an electronic environment, and how many students are able to retrieve the right information is difficult. Some students often get confused in the course of their information seeking. This is confirmed by Kuhlthau (1999), who states that in the early stages of seeking

information, students mostly have challenges. In the beginning many of the students are sure of finding the required information but then get confused or uncertain during the process. Other challenges faced by students in their information seeking include unstable Internet or network infrastructure, lack of search skills, information scattered in many sources, non-supportive staff, lack of awareness, unavailability of materials, out-dated information and lack of time to access information (Fasola and Olabode, 2014; Okonoko, Ojukwu and Deborah, 2015).

A review of the literature revealed that students information seeking behaviour studies have been conducted at the University of Ghana (Badu, 1991), Methodist University College (Opere-Ababio, 2011) but not at UPSA. It is important for librarians and information professionals to have knowledge about the information seeking behaviours of students and to be able to design effective information services and information literacy programs to meet their information needs (Fidzani, 1998).

“For libraries to be able to meet the information needs of their users, they need to conduct user studies. This involves determining the profile of the users in terms of demographic and personal information. User studies help in determining their information needs, their information seeking behaviours and sources of information used in meeting their information needs” (Aina, 2004, p.5). “Various methods have been employed in user studies over the past decades, for example Wilson (1994) and Gorman and Clayton (1997) have discussed

- I. Questionnaires, interviews, case studies etc.
- II. Observation of events, reviews of diaries etc and
- III. Study of internal processes.

Users' studies are very essential for prescription, improvement and efficiency of information services." (Cited by Onwuchekwa and Jegede, 2011, p. 117).

1.3 Purpose of the Study

The purpose of the study is to investigate the information seeking behaviour of graduate students of UPSA and make recommendations based on the findings for effective information provision for them.

This research seeks to study information seeking behaviour of graduate students of the University of Professional Studies, Accra (UPSA) in order to understand how graduate students search, access, retrieve and use the required information, as well as factors that affect their information seeking behaviour.

1.4 Objectives of the Study

The specific objectives of the study are to:

1. Investigate the information needs of graduate students.
2. Find out the extent of library use among graduate students.
3. Ascertain their sources of information.
4. Determine their information seeking behaviours.
5. Find out the challenges they encounter in seeking information.
6. Make recommendations based on the findings for effective information provision to meet their information needs.

1.5 Research questions

The study was conducted by the following research questions:

1. What are the information needs of graduate students?
2. To what extent do they use the library?
3. What are their sources of information?
4. What are their information seeking behaviours?
5. What challenges do they encounter in seeking information?
6. How can their information-needs be effectively met?

1.6 Scope and limitation of the Study

A study of this nature should ideally include all the students of UPSA but it was limited to the full time graduate students, their information needs, sources of information, library use, information seeking behaviours, and challenges encountered in their information seeking. Graduate students who attend school in the evenings and weekends were excluded from the study because of the difficulty in reaching them as a result of their irregular class schedules. Their exclusion is not expected to affect the results of the study since they all do the same courses and use the same library resources. Thus, their information seeking behaviours are not expected to be different from their counterparts with regular time schedules, that is, those who attend classes during the day.

1.7 Conceptual and Theoretical Framework

A model according to Wilson (1999) is “a framework for thinking about a problem and may evolve into a statement of the relationships among theoretical propositions” (p. 250). In the field of information behaviour, the models are mostly in the form of diagrams that “describe an information-seeking activity, the causes and consequences of that activity, or the relationships among stages in information-seeking behaviour” (Wilson, 1999, p. 250).

According to Wilson (1997), a general model of information behaviour needs to include at least the following elements: “an information need and its drivers, i.e. the factors that give rise to an individual’s perception of need, and the process of actions involved in that response” (p. 39).

There are several models for studying information seeking behaviour in the Library and Information Science literature. Wilson (1999) gave an overview of some of these models discussed as follows. They include Wilson’s (1981) and (1996) model of information behavior (in Wilson, 1999), Dervin’s (1983) sense-making theory, Kuhlthau’s (1991) information search process model, and Ellis’s (1989) and (1993) behavioural model of information-seeking strategies.

Wilson’s 1981 model proposes that information need is not a primary need but a secondary need that arises from basic needs such as affective, physiological, or cognitive. Individuals who seek to satisfy these needs by information seeking encounter different kinds of barriers based on their roles in society and the environment in which they play these roles.

Dervin’s (1983, 1996) model is a sense-making process implemented within four constituents; a situation defined as the context in which information gap or need arises, an outcome as a result of sense-making, and a bridge representing the method used to close the gap between the situation and the outcome.

Ellis’s (1989) model, which is based on empirical research, identifies different kinds of seeking or searching behaviours that an individual may adopt in discovering information to satisfy a need. They include; starting a search, browsing, differentiating, extracting, chaining or monitoring different sources of information and ending the search process. He emphasized that

the different stages or behaviours do not follow one after another but each of them are adopted by the information seeker depending on his/her circumstance.

Kuhlthau's (1991) model of information search process is similar to Ellis's model, in that it is made up of six stages, namely: initiation, selection, exploration, formulation, collection and presentation. The difference is that Kuhlthau's model accounts for the initial feelings of uncertainty, confusion, frustration and doubts when one has to look for information. These feelings progressively change to that of confidence, relief, and satisfaction as the search process gradually becomes successful.

According to Imenda (2014) the conceptual model or theoretical framework is the soul of every research project and must be used appropriately because it determines how a researcher formulates his/her research problem, investigates the research problem and the meaning he or she attaches to the data accumulating from the investigation. This study will be guided by the Wilson's Model of Information Seeking Behaviour.

1.7.1 Wilson's 1996 model

Wilson's 1996 model is a revision of his 1981 model and was informed by research from different fields including health communication, decision-making, psychology, innovation, consumer research and Information science. This concept has been used by many authors such as Al-Muomen (2009); Ansari and Zuberi (2010); Dzansi (2008); Laplante (2010).

The components/elements of Wilson's 1996 model are:

- I. Context of information need
- II. Activating mechanism
- III. Intervening variables

- IV. Information seeking behaviour
- V. Information processing and use

1.7.1.1 Context of information need

- I. Wilson proposes that information seeking behaviour starts with a need that has to be satisfied. These needs are basic human needs such as physiological (i.e., need for food, water, and shelter), affective (i.e. feeling or emotions) and cognitive needs (needs to learn or acquire skills).

1.7.1.2 Activating mechanisms

Wilson (1996) identified three activating mechanisms:

- I. Stress/coping theory to explain why some needs will not evoke information seeking. In other words, if an individual is able to cope with a situation at hand he/she may not look for information to resolve it. It means his knowledge is sufficient to deal with the situation. Such a person will be aroused to look for information if the stress levels as a consequence of the situation increases.
- II. A risk/reward theory that explains why some information sources are used more than others by some individuals. For example people will avoid using sources of information that is too expensive or time consuming.
- III. Social learning theory which embodies the concept of self-efficacy, that is the confidence that one can successfully undertake the behaviour necessary to produce the outcome desired (Niedzwiedzka, 2003).

1.7.1.3 Intervening variables

Wilson indicated that in the course of information seeking, a person may encounter barriers he called intervening variables. These are

- I. Psychological including knowledge, preferences, emotional variables, interest, etc.
- II. Demographic variables including age, gender, level of education, job experience, etc.
- III. Role related or interpersonal what, including job requirement, character, limitations, regulations; standards and patterns of behaviour established the place a person occupies in an organization, and the level of responsibility.
- IV. Environmental variables including legislation, structure of an organization, type of organization, economic situation, IT technology, etc.
- V. Characteristics of the sources including accessibility and credibility (Niedzwiedzka, 2003, para. 12, 13).

1.7.1.4 Information seeking behaviour

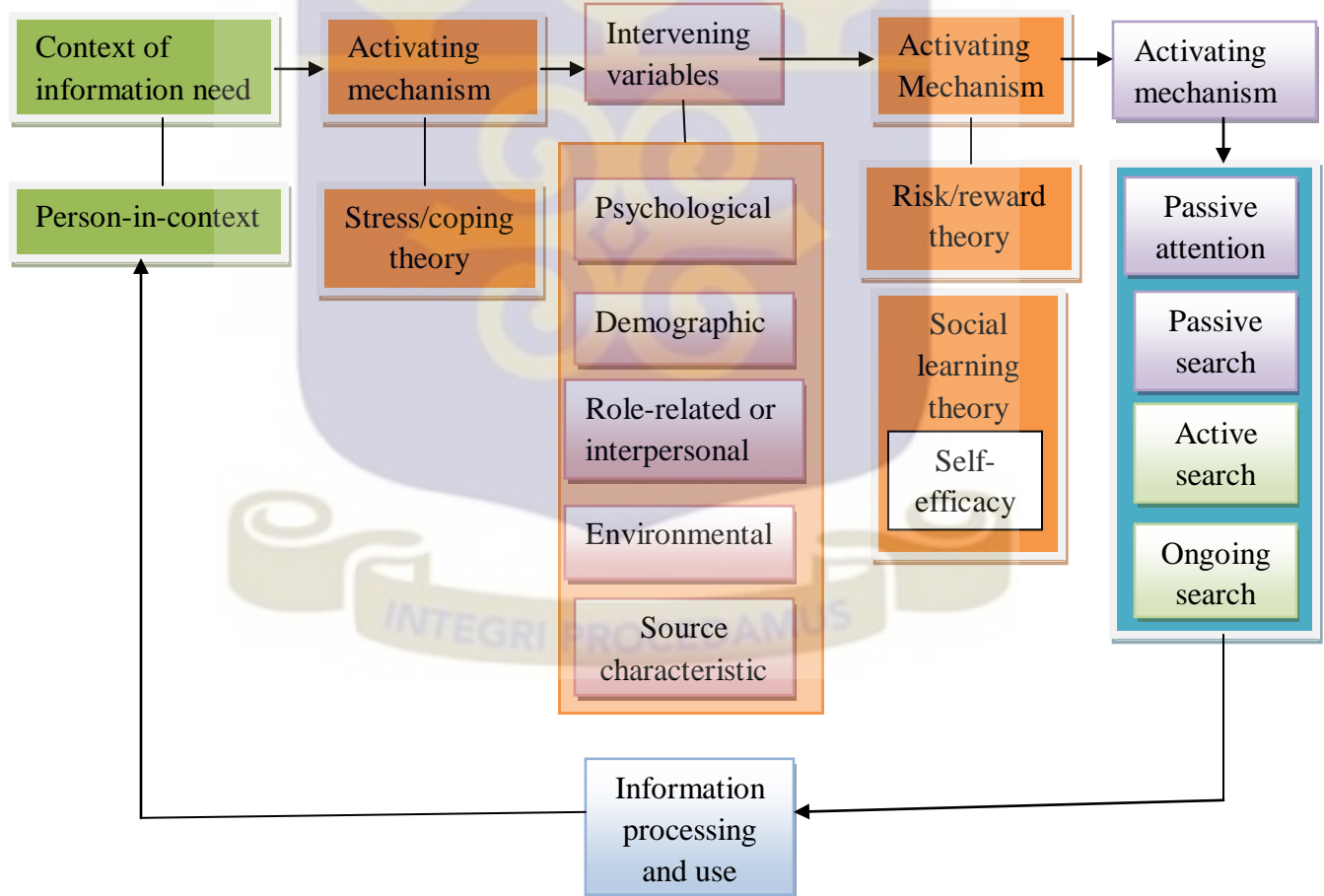
Information searching and acquisition process have several components, such as passive attention, passive search, active search and ongoing search (Aaker, Batra, and Myors, 1992). Active search and the ongoing search are very important in the educational sector, as active information handling is required for the acquisition of knowledge. Ongoing search is highly required in the teaching, learning, and research, and as this type of search involves a basic framework of ideas, beliefs, values, or any other requisites to update or expand one's knowledge. According to Niedzwiedzka (2003), passive attention is an un-purposive seeking for information from the environment such as watching the television or listening to the radio. Passive search is a

type of behaviour that results in the acquisition of information that happens to be relevant to the user. Active search is when a person is actively involved in seeking information. Lastly, ongoing means persistent search undertaken in order to develop or update an area of interest.

1.7.1.5 Information processing and use

Information by the individual can then be processed and becomes part of a person’s knowledge, and is used directly or indirectly to impact the environment or, consequently, may be used to create new information needs (Niedzwiedzka, 2003).

Figure 1.1: Wilson’s 1996 Model of Information Seeking Behaviour



Source: Wilson (1999, p. 257)

The model is relevant to the study because it accounts for the role of the study participants as students, the information needs they might have as students, the nature of the problems they will encounter in looking for information to satisfy those needs, that is, intervening variables, the types of information seeking behaviours they will adopt to access the required information, and how they will use the information. It will also explain why some sources are used more than others.

1.8 Significance of the study

The study is significant in many ways. It highlights the information needs of graduate students and the challenges they face when seeking information so that the library can provide efficient information services and resources to meet their information needs. It also highlights the sources of information which are not used so that librarians will create awareness about the relevance of these sources of information among the students. The findings of the study contribute to the body of knowledge on information seeking behaviour in general and Ghana in particular. It revealed the challenges faced by graduate students when seeking information, which may be resolved for improved access to information to meet their academic and research needs.

In the literature search, it was found out that there are many studies conducted in the area of information seeking behaviour. There have been many researches conducted in advanced countries but few on African countries, particularly Ghana. Some of the studies identified in Ghana during the literature search are Alemna and Skouby (2000); Badu (1991); Tackie and Adams (2007); Nikoi (2008); Dzandu and Boateng (2013). All the above studies were on the information needs and seeking behaviour and not on the searching strategies except Dzandu and

Boateng (2013). This research went further to look at the activating mechanism such as active attention, passive search, active search and ongoing search to fill the knowledge gap in this area.

1.9 Organization of the Study

The study is made of six chapters:

Chapter One is the introductory chapter. It includes the background to the study; problem statement; purpose of the study; the research objectives; scope and limitations of the study; theoretical framework and the significance of the study.

Chapter Two is the literature review. This contains related works on the topic under study and has been discussed under the following headings: Definition of concepts including information seeking behaviour, information needs and information sources; empirical research on information seeking behaviour of students; and summary of the literature.

Chapter Three is the methodology used for the study. It discusses the research design, study population, sample size, sampling technique, data collection instruments, and the data analysis techniques used. The ethical issues relevant to the study were also discussed.

Chapter Four provides analysis and interpretation of data.

Chapter Five is the discussion of the findings.

Chapter Six is the summary of findings, conclusion and recommendations of the study.

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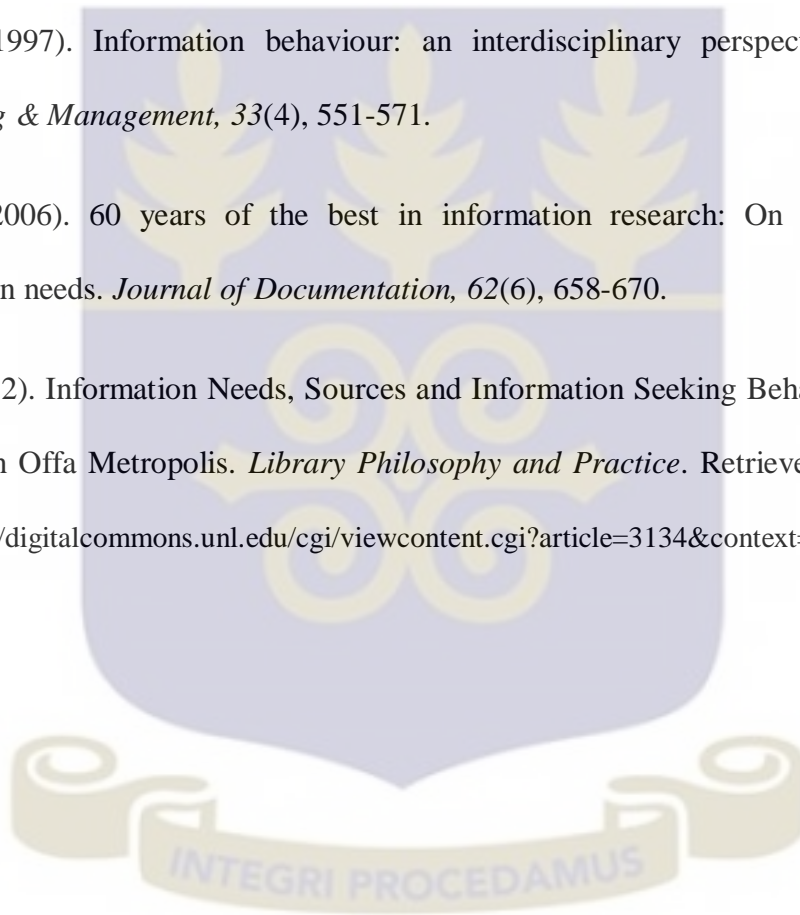
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CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews relevant literature relating to the study. According to Babbie (2005), a literature review is a summary of what is currently known about some issue or field, and/or what lines of argument there are in relation to that issue or field. Webster and Watson (2002) indicate that “effective literature review must create a firm foundation for increasing knowledge.” “It should facilitate theory development, close areas where [overabundance] of research exists, and [discover] new areas of research.” (p. xiii). It must also show gaps in the research to pinpoint areas worthy of additional study. Consequently, this section reviews relevant literature on the current study. It includes the following sections: Definition of concepts, including information seeking behaviour; information needs and information sources; empirical research on information seeking behaviour of students; and summary of the literature.

The literature is divided into four broad parts. The first part talks about information seeking behaviour, including the concepts of information need and sources of information, and discusses research relevant to the area. The second part talks about information seeking behaviour of students including graduate students in other parts of the world such as International, African and Ghanaian studies. Finally, it gives a summary of the literature and conclusions based on the literature being discussed.

2.2 Definition of concepts

This section defines and discusses key concepts relating to the study, that is information seeking, information need, and sources of information.

2.2.1 Information seeking

Information seeking behaviour according to Case (2002) is a common everyday activity which becomes prominent when one has to make a major life decision or complete a task within a specified time. In such circumstances the individual keeps looking for information from various sources till his need is met or his goal accomplished. On other occasions information seeking is triggered when one accidentally becomes interested in a topic and decides to look for more information on it to educate him or herself. Such information seeking is not inspired by a specific goal. Case (2002) describes such information seeking as a “common aspect of human life” (p.5). Information seeking has often been defined as a search for information as a result of a need or a gap in one’s knowledge. For example, Wilson (1999) defines information seeking behaviour as a “consequence of a need perceived by an information user, who, in order to satisfy that need, makes demands upon formal or informal information sources or services, which result in success or failure to find relevant information” (p. 251).

- I. Wilson (2000) again defines information seeking behaviour as “the purposive seeking for information as a consequence of a need to satisfy some goal. In the course of seeking, the individual may interact with manual information systems (such as a newspaper or a library), or with computer-based systems (such as the World Wide Web)” (p. 49).
- II. Case (2002) defines information seeking as “a conscious effort to acquire information in response to a need or gap in your knowledge” (p.5).

- III. Some authors have provided more general definitions. For example Uhegbu (2007) describes information seeking behaviour as the way the users behave in terms of searching for information.
- IV. Ajiboye and Tella (2007) describe information-seeking behaviour as “the way and manner people gather and seek for information for their personal use, knowledge updating and development.” (p. 42)
- V. Majid and Kassim (2000) define information seeking behaviour as “a broad term, which involves a set of actions that an individual takes to express information needs, seeks information, evaluates and selects information, and finally uses this information to satisfy his/her information needs” (p. 2). The process of seeking information and the degree to which the seeker satisfies the need depends on the level of information seeking, searching and use, that is, the knowledge and skills an individual possesses (Kaniki, 2001).

In order for the individual to satisfy those needs, he or she undergoes an information seeking process. The processes that take place in information seeking behaviour are:

- I. “Identifying objective
- II. Defining need
- III. Accessing information systems
- IV. Establishing sources of information
- V. Information acquisition
- VI. Use of information
- VII. Satisfaction/dissatisfaction” (Prasad, 1992, p.9).

According to Prasad (1992) information seeking behaviour refers “to the strategies and actions undertaken to locate discrete knowledge elements. It can be said the behaviour which yields the highest information satisfaction is the best (p.9)”

This study adopts Wilson’s (1999) definition of information seeking behaviour and therefore investigates the information needs, sources of information, and challenges of information seeking by students of University of Professional Studies, Accra (UPSA).

2.2.2 Information need

According to Wilson (1997) the concept of information need has been difficult to define mainly because need is a subjective experience that occurs in the minds of individuals and thus only the person experiencing the need can articulate it; a researcher can only deduce people’s need from their behaviours and what they themselves report.

Chowdhury (1999) has also explained that information needs are not static but change with time and “vary from person to person, job to job, subject to subject and from organization to organization.” In other words, “people’s information needs are largely dependent on the environment, that is, the information needs for those in academic environment are different from those in an industrial, business or administrative environment.” “Information need is a relative concept.” “It can be social, economic, political, cultural or educational. (p. 181)”

In spite of the difficulty in identifying information need a number of authors have proposed various definitions of information needs as gap in knowledge, and uncertainty as follows;

- I. “Information need is a recognition that your knowledge is inadequate to satisfy a goal you have” (Case, 2002, p. 5)

- II. Information need is “a consciously identified gap in the knowledge available to an actor”(Ingwersen and Jarvelin, 2005, p. 20),
- III. Kuhlthau (2004) explains;

“an information need as an actual, but unexpressed need for information, or an ill-defined area of indecision which may be expressed in an ambiguous, rambling statement. Information need may start as a vague sort of dissatisfaction which is characterized by confusion and perplexing reaction to a vague new idea. This confusion increases and mounts until the person may be threatened by his/her lack of understanding” (p. 26).
- IV. According to Dervin (1983) a need implies a state that arises within a person, suggesting some kind of gap that requires filling. When applied to information as in information need, what is suggested is a gap that can be filled by something that the needing person calls information. She further explains that information need is making sense of a problematic or worrisome situation, or a need to make a choice or understand. In such situations many questions arise in the person’s mind that needs to be answered. She refers to such questions as information needs.
- V. Wilson (1981) explains that information need is not a primary need but arises from secondary or basic needs defined as physiological, affective or cognitive needs which must be satisfied by looking for information. He further explained that these needs are contextual and are based on the person himself/herself, his or her role in society such as his work, and the environment in which this role occurs, for example a political, economic or technological environment.

These definitions have shown that information needs are unsatisfactory situations, circumstances, occurrences, uncertainties, or gaps in peoples' lives which require a search for information for their resolutions or restoration to normalcy. Rath (1996) stated that the information requirements for the satisfaction of needs are often current information, exhaustive information, everyday information, and catching-up information.

2.2.2.1 Factors affecting information need

Information needs are affected by the following:

- I. “The range of information services available
- II. The uses to which information will be put to use
- III. The background, motivation and professional orientation and other individual characteristics of the user
- IV. The social, political and economic systems surrounding the user
- V. The consequences of information use” (Prasad, 1992, p. 9).

2.2.3 Sources of Information

An information source is described by Huvila (2013) as any carrier of information or anything a user perceives as capable of informing. Information refers to processed data that is meaningful to the user. Information serves as a source of power and aid in decision making. In order to obtain quality, quantity, relevant and timely information for academic work, you need to know the various sources available so as to use them appropriately. These sources can be documentary or non-documentary sources. Documentary sources include: primary sources, which are first-hand information and original sources of information, examples, journal articles, research reports, dissertations, etc.; the secondary sources are information compiled or that explains information

available in the primary sources; examples are indexes, textbooks, dictionaries, reviews, etc.; and the tertiary sources which are information distilled and collected from primary and secondary sources, examples are directories, bibliography of bibliographies. On the other hand, non-documentary sources provide information which other sources do not and are part of communication. It can be formal sources including consultants, government department, and research organizations. Informal sources include people sources such as conversation with colleagues, superiors, friends, and visitors, etc. (Dadzie, 2010).

2.3 Information seeking behaviour studies

This section will review the literature on information seeking behaviour of students, including graduate students, with a focus on their information needs, sources of information, challenges of their information seeking, information use and their information behaviours. Several studies have been conducted to investigate the information seeking behaviour of students in different parts of the world.

2.3.1 Information seeking behaviour outside Africa

In Asia, Al-Muomen (2009) examined information seeking behaviour at Kuwait University. The study explores the information seeking behaviour of graduate students at Kuwait University, and investigates the factors that influence that behaviour. The study used mixed methods comprising a questionnaire, focus groups, and semi-structured interviews. 370 respondents participated in the study, made up of more females (67.0%) than males (33.0%). From the study, the majority searched for information to complete their course work (69.2%). This was followed by term papers (42.4%), comprehensive assignments (20%), and the rest was for other reasons such as writing research papers, looking for information related to their thesis, and browsing for general

information. In addition, the study also sought for the sources of helps when they faced difficulties in terms of searching; most of them said they receive help from their friends/colleagues (62.2%) and tutor/lecturers (37.3%). The study used the seven-point Likert scale. It was found that the challenges of seeking information were access to the internet, computers, and printers (Likert scores 5.55-5.30) with interlibrary loans being the least at 3.82. Likert scale was used to represent people's attitude of the study.

In South Eastern Asia, Safahieh (2007) investigated information needs and information seeking behaviour of international students in Malaysia. The study was a survey method and a questionnaire was used. The researcher sampled 204 randomly selected international students. He found out that most of the respondents used information related to their program of study (77.5%), information related to research (73.5%), courses of study (70.1%), information related to university or faculty (62.3%) and finding a job after graduation (46.6%). In addition, most of the respondents used the internet (50.0%) as their main source of information, which was also chosen as the preferred information sources. The study also saw that the majority go to the library once/twice a week (30.7%). The findings also indicated that most of the respondents were satisfied with the library in meeting their information needs. The study came out with various challenges that the students encounter, namely: language barrier, hesitant to approach professional librarians, unfamiliarity with the mission of the library, inadequate knowledge about the library system, inability to seek, to obtain, and evaluate information and inadequate knowledge about using the computer. This study indicated that Malaysia is moving international and they are providing quality education to attract international students.

In Pakistan, Khan, Khan, and Bhatti (2011) investigated internet access, use and gratification among university students: a case study of the Islamia University of Bahawalpur, Pakistan. Data

collection was through the use of questionnaire, also the study adopted survey methodology. A purposive sample was used to sample 100 students. The study revealed that most of the students prefer to use Google search engine (83%). In addition, the preferred database use was ScienceDirect (25%). Most of the students encounter certain difficulties, namely: difficulty in finding relevant information, lack of knowledge about advance searching, inadequate computers, and overload of information.

In India, Natarajan (2012) studied information seeking behaviour of students of management institutions in NCR of Delhi. A questionnaire was prepared for 250 respondents. It was found that majority visit the library daily (66.5%) and that the internet (55%) was the source consulted by students. Most of the students seek information to keep up with current developments (92.3%). The problems they encounter when seeking information, in descending order are: they don't know the sources available in the library (49.7%), don't know how to use the information retrieval tools (40.6%), information materials are old (36%), materials are not available (34%), lack of time (26.9%), information sources are located so far away (20.8%), and the library staff is unwilling to serve (15.2%).

In the northern part of India, Bhatia (2011) reported on the use of electronic resources in degree College libraries in Chandigarh. A structured questionnaire was designed and given to 770 respondents who were randomly selected. The result revealed that most of the respondents use electronic books (47.27%), electronic journals (39.22%), bibliographic databases (31.56%) and CD-ROM databases (29.35%). It was also realized that few users frequently used the electronic resources/databases. This is because of the following challenges they encounter, namely: lack of IT knowledge and skills, limited access to computers, it distracts their work and too much information is retrieved.

2.3.2 African studies of information seeking behaviour

Owolabi, Jimoh and Okpeh (2010) investigated information seeking behaviour of polytechnic students: the case of Akanu Ibiam Federal Polytechnic, Unwana Nigeria. A survey research design was adopted and a structured questionnaire was used for the data collection. The study sampled 100 respondents using simple random techniques. They found out that a majority of the Polytechnic students sought information primarily for academic purposes. The other information needs of students were health information, current affairs, industrial attachment and employment. The result revealed that most of the participants were very satisfied (42.3%), followed by partially satisfied (39.4%), and not satisfied (18.3%) about the sources of information. Their findings stipulated that the majority of the information sources used by students were textbooks. There were other sources that were mentioned. These are the internet, followed by newspapers, lecture notes, dictionaries/encyclopedias, theses, journals, and government publications.

Fasola and Olabode (2013) also reported on a study about information seeking behaviour of students of Ajayi Crowther University, Oyo, Oyo State, Nigeria. The study sampled 200 participants using a well-structured questionnaire. The study revealed that most of the students seek information for academic purposes (66%). In addition, are current affairs (15.6%), industrial attachment (7.6%), recreational (6%) and social information (4.8%). The study revealed that most of the students use the library (62.8%) as their main source of acquiring information materials. This is followed by the internet sources (20.8%), personal collection (10.4%), and colleagues (6.0%). The majority were also very satisfied (53.2%) with sources of information. Their findings revealed that a majority of the students faced lack of internet connectivity in seeking information. Challenges such as information scattered in too many sources, non-

supportive library staff, lack of awareness of what, unavailability of materials, as well as outdated information materials are the other challenges identified.

Yusuf and Iwu (2010) investigated use of an academic library: a case study of Covenant University, Nigeria. The study employed survey methodology, and 300 students and 100 faculties were sampled using stratified sampling techniques. A questionnaire was the main data collection instrument. The findings show that most respondents, that is the students, visit the library 2-3 times a week (53.3%), followed by daily (35.7%), once a week (7.1%) and 2-3 times a month (3.9%). In addition, most of the respondents visit the library to make photocopies (92.8%). The most consulted materials or library resources of the students were newspapers (59.5%) and the means of locating information was by the use of OPAC (61.9%), followed by browsing the shelves (20.4%), seeking assistance from library staff (12.0%) and seeking assistance from colleagues (5.7%). Lastly, the participants were very satisfied (79.5%), satisfied (15.7%) and not very satisfied (4.8%).

2.3.3 Ghanaian studies of information seeking behaviour

Dzandu and Boateng (2013) published their research on unraveling the dilemma of the information search process: The application of Wilson's model in a Ghanaian University setting. They sampled 190 graduate students by using a questionnaire and an adapted survey approach. They found that most of the graduate students use academic information (76.1%) with the least information need being entertainment (1.6%). It was also revealed that graduate students need information most when writing theses/dissertation (34.9%) rather than when preparing for a lecture. In addition, it was also found that the most used source of obtaining information was by the use of internet (68.4%). They also found out that the majority of students were satisfied

(68.3%) with the effort of completing their information search process. Lastly, there was also a finding on the barriers of seeking information. The majority had difficulties with technology, including lack of access to the internet and online resources.

Opare-Ababio (2011) investigated information needs and information seeking behaviour of undergraduate students of the Methodist University College Ghana, Tema Campus. The aim of the study was to identify information needs, sources consulted, and factors that influence their search for information, so the study sampled 200 students and used a questionnaire in the collection of data. It was realized that students visit the library on a daily basis (57%), weekly (15%), monthly (5.5%), and as often as required (22.5%). The study also found that students were partly satisfied (60.5%), fully satisfied (25.5%), not satisfied (10.0%) and satisfied (4.5%) with the sources of information. They needed information for course work and assignment (49.5%), preparing for examinations and tests (34%). The sources of information needed were lecture notes and handouts (52%), textbooks (24.5%), university library (14%), internet sources (7%), consulting whom the librarian and photocopying from colleagues (3.5%). Inadequate materials, computers, etc., lack of time, and lacks of awareness of the availability of materials are some of the factors that affect and prevent students from seeking information.

2.4 Summary of the literature

The literature reviewed shows that there have been a number of studies on information seeking behaviour of students both locally and globally. These studies revealed that information seeking begins with a need that has to be satisfied (Wilson, 1999; Majid and Kassim, 2000; Kaniki, 2001). Wilson stated that these needs are basic and can be physiological, affective and cognitive

(Wilson, 1999). So for the individual to satisfy the need, he looks for several sources to satisfy those needs (Wilson, 2000).

The information needs of the students were academically related, including academic information for courses of study, assignments, writing theses/dissertations, lectures and programmes of study (Dzandu and Boateng, 2013 ; Fasola and Olabode, 2013). They sought the sources using the library (Fasola and Olabode, 2013). Google was the dominant internet source used (Pakistan, Khan, Khan, and Bhatti, 2011) and also e-books resources were the electronic resource used (Bhatia, 2011). In addition, Science Direct database was mostly used by the students (Khan, Khan, and Bhatti, 2011). This was for science students, not students in general. From the literature, it was also revealed that many students visit the library daily (Natarajan, 2012; Opere-Ababio, 2011). In order to ascertain the information seeking behaviour, the literature also revealed that people were satisfied and highly satisfied in using the sources of information (Safahieh, 2007; Owolabi, Jimoh and Okpeh, 2010; Fasola and Olabode, 2013). Finally, the literature revealed some of the challenges including lack of access to the internet, online resources, unavailability of information sources, lack of time to use the resources, lack of awareness of the availability of materials, language barrier, hesitant to approach professional librarians, and unfamiliarity with the mission of the library (Al-Muomen, 2009; Dzandu and Boateng, 2013; Fasola and Olabode, 2013).

2.5 Conclusion

What emerged from the literature review is that there are few articles written on information seeking behaviour, specifically concerning methods employed in seeking information. It shows that there is little that has been published in this respect. Therefore, this research contributes to

knowledge and adds to the literature of information seeking behaviour in Ghana. The literature also revealed that information seeking behaviour starts with information needs and using various sources of seeking the information. It also highlights the preference of library use and the challenges of seeking information from library sources especially for students. The study focused on the information seeking behaviour of graduate students, the challenges the students face, towards providing recommendations to improve upon information seeking by the students.



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CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

Leedy and Ormrod (2001) define research as “a viable approach to a problem only when there are data to support it” (p. 195). This chapter will give a detailed description of all the procedures I followed in order to achieve the research objectives. Research methodology is defined by Leedy and Ormrod (2001) as “the general approach the researcher takes in carrying out the research project” (p. 14). This section describes the methods and procedures used in the collection and analysis of data relevant to the study.

3.1 Research Design

Burns and Grove (2003) define research design as a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings. This study employed a survey research methodology. Nesbary (2000) defines survey research as the process of collecting representative sample data from a larger population and using the sample to infer attributes of the population.

Survey research was chosen because it is a faster mode of data collection than other methods, relatively inexpensive data collection method, access to a wide range of participants; and it uses the methods, materials and setting of the study of the real-life situation which is under investigation to ensure validity (Mathiyazhagan and Nandan, 2010). Surveys also gather information by asking respondents about their experiences, attitudes, or knowledge (Graziano and Raulin, 2007). Utilizing the survey method, this study used the graduate students of UPSA

by sampling some of the students and provided detailed information on their information need and information seeking behaviour.

3.2 Selection of subjects

3.2.1 Population

Burns and Grove (2003) describe population as all the elements that meet the criteria for inclusion in a study. This study used the graduate students of University of Professional Studies, Accra (UPSA). The graduates were chosen because they are expected to use the different library resources in their academic work, such as accessing information for their presentations, assignments, term papers, dissertations, and theses (Dzandu and Boateng, 2013). As Kibirige (2000) points out, graduate students understand and use the internet better than undergraduate, and also electronic databases are used by the majority of the graduate students for their dissertation or research work. Also, at their level it is expected that they use such resources provided by the library.

There were a total of eight hundred and four (804) regular graduate students pursuing eight different programmes at UPSA for the 2015/2016 (Table 3.1).



Table 3.1: Programme and population of regular graduate students

Programme	Number
MBA Accounting and Finance	449
MBA Marketing	36
MBA Total Quality Management	106
MPhil Leadership	48
MBA Petroleum	67
MBA Corporate Governance	40
MBA Internal Auditing	30
MBA Auditing	28
TOTAL	804

Source: UPSA (2015)

3.2.2 Sample Size

Sampling is a procedure. That sample refers to any group from which information is obtained (Fraenkel and Wallen, 2000). The study sampled all regular graduate students admitted at the UPSA for the period 2015/2016 academic year which was obtained from UPSA registry. The researcher used a sample size of 15%. The 15% sample size was based on Alreck and Settle's (2004) proposition that if the population is less than about 1000 and larger than the minimum of 100, then a sample of more than 10% can be used. The sample size was calculated by taking 15% of the total regular graduate school students (804). This gave a total of one hundred and twenty-one (121).

3.2.3 Sampling techniques

A stratified sampling method was used to select the participants for the study. Stratified sampling is a probability sampling, where the population is divided into strata and then simple random

sampling is used to select subjects from each stratum. There are two types of stratified sampling methods, namely, proportionate and non-proportionate stratified sampling. The researcher used specifically the proportionate stratified sampling method to ensure that the study sample was an accurate representation of the population, that is, the different programmes of study are well represented in the study sample (Ross, 2005). The fundamental of the stratified sampling is simple random sampling which is applied to each stratum. The simple random sampling was used to select respondents from the population of each programme or course group. According to Patten (2004), using simple random sampling helps to get an unbiased sample; this is because it gives each respondent an equal chance of being selected and the selection of one does not affect the selection of the others.

The proportionate stratified sampling was implemented as follows:

- I. The researcher obtained a list of all graduate students and their programmes from the Academic Affairs Department of UPSA as shown in Table 3.1.
- II. Based on the number of programmes the researcher identified 8 different strata
- III. Using the sample size of 121, the number of respondents per strata was calculated as follows:

It is calculated as the total of students in each stratum times the sample size divided by the total number of students.

Example for MBA Accounting and Finance it was calculated as

$(449 * 121) \text{ divided by } 804 = 67$, that is, population of group divided by population of stratum multiply by the sample size. The results are shown in Table 3.2

Table 3.2: Sample size for each programme of study

Programme of study	Number
MBA Accounting and Finance	67
MBA Marketing	6
MBA Total Quality Management	16
MPhil Leadership	7
MBA Petroleum	10
MBA Corporate Governance	6
MBA Internal Auditing	5
MBA Auditing	4
TOTAL	121

The researcher randomly selected study participants from each strata or programme by using the lottery or fishbowl technique as follows:

- a. The researcher took the list of students for each programme and assigned numbers to each student. For example, MBA Finance and Accounting students were assigned numbers 01 to 0449 on their list. The numbers were then written on pieces of papers which were then folded and placed in a bowl.
- b. The researcher picked out 67 papers one at a time which was the sample for that stratum.
- c. The researcher then ticked the students with those numbers on the list.
- d. This process was repeated for each programme till all the 121 students were randomly selected from each stratum.

3.3 Research instrument

A research instrument is the device (such as a pencil-and-paper test, a questionnaire, or a rating scale) the researcher uses to collect data. Generally, the whole process of collecting data is called instrumentation.

According to Aina (2004), data collection instruments are items that are used to collect data in all types of research. Their function is mainly to enable the researcher collect reliable data for analysis. Some common data collection instruments are questionnaire, interview, observation and documentary sources.

3.3.1 Questionnaire Method

The questionnaire, which Powell (1997) cited Webster's New Collegiate Dictionary defines as "a set of questions for submission to a number of persons to get data," (p. 90) offers several important advantages over other instruments for collecting survey data. Among them are the following;

- I. "Questionnaires can facilitate the collection of large amount of data in a relatively short period of time. Questionnaire-based surveys of several thousand people are not unusual, and responses typically are expected within one to two weeks."
- II. "The characteristics of the questionnaire that help to produce frank answers also eliminate interviewer's bias. This is not to say the questions could not be worded in a biased manner, but that the style of verbal presentation cannot influence the response."
- III. "Questionnaires may be a "cost effective way" of obtaining data from a large audience; for example, from large numbers of population. Questionnaires need to be properly planned in order to get data of high quality that can be used for analysis."

- IV. “Participants may not like to be identified for having taken part in research; therefore, questionnaires can be an effective tool to gather information from respondents, who do not like to be identified. Participants may be honest when giving answers if they know that they would not be identified. Most respondents who take part in questionnaires would know what information is being asked about them.”
- V. “Can be carried out by the researcher or by any number of people with limited effect to its validity and reliability.”
- VI. “The results of the questionnaires can usually be quickly and easily quantified by either a researcher or through the use of a software package.”
- VII. “Can be analyzed more 'scientifically' and objectively than other forms of research. This entire section was plagiarized from other people’s work.” (Powell, 1997 cited Webster’s New Collegiate Dictionary, p. 90-92).

The questionnaire was the main data collection instrument for the study. The study participants completed structured questionnaires comprising mainly closed-ended questions and a few open-ended questions. The questionnaire included the following sections:

Section A – Background information

Section B – Information needs

Section C – Library use

Section D – Sources of information

Section E – Information seeking behaviour

Section F – Challenges of seeking information

Section G – Recommendations for enhancing information-seeking behaviour.

3.4 Mode of data collection

Both primary and secondary sources were used in the data collection. The data from primary sources was collected from the field through the use of a questionnaire on information seeking behaviour whilst the data from secondary sources was collected from journal articles, books, and other related works.

3.4.1 Pilot study

The questionnaire was pre-tested using ten (10) graduate students from the University of Ghana Business School, as majority of the students at UPSA study business courses. According to Kvale (2007), a pilot test helps the researcher to find out if there are flaws, limitations, or other weaknesses within the questionnaire and allows the researcher to make necessary revisions before going to the field to gather the data. After the pilot testing, it was realized that the ten graduate students were okay with the questions. As a result of that no major changes were made in the questionnaire making it more reliable.

3.5 Ethical Considerations

All responses from subjects, according to Fraenkel and Wallen (2000) from or about whom data is collected should be held in confidence. The research adhered to the ethical principles of the University of Ghana. The researcher sought the respondents' consent and all information given was treated confidentially. The participants were assured that the data would be used for academic purposes only. The researcher also acknowledged all scholarly works and information consulted from journal articles, books, dissertation, theses, and data from the field.

3.6 Data Administration

Prior to the administration of the questionnaire, the researcher obtained an introductory letter from the Department of Information Studies and approached a few of the lecturers who taught those business courses after consultations with some of the students pursuing those programs. He introduced himself and sought permission to administer the questionnaires about 15 minutes prior to the end of their lectures.

On the appointed days and times, the researcher went to the lecture halls, introduced himself, the purpose of the study, the data administration process, sought the students' consent, and assured them of the confidentiality of their responses. He then called out the specific names that he had ticked and gave out the questionnaires for completion.

Some of the students were absent so he left those questionnaires to their class representatives to be given to those specific students. By phone communication and WhatsApp messaging, he went to collect the rest of the completed questionnaires.

The questionnaires were administered from April 10 to April 30, 2016. Out of the one hundred and twenty-one (121) questionnaires distributed, one hundred and fifteen (115) were completed, giving a response rate of 92.7%.

3.7 Analysis of data

The data was analyzed using the Statistical Package for the Social Sciences (SPSS) version 16. The researcher used descriptive statistics such as frequency tables and pie and bar charts for the analysis of the data. He also used Likert scale to calculate the responses relating to the challenges of seeking information which were 5 level Likert item to statements about information seeking challenges, that is agree, strongly agree, neutral, disagree, and strongly

disagree. The Likert scale was calculated on the percentage of each response, for example unstable internet connection was calculated as:

$$(6.1\% * 1 + 34.8\% * 2 + 16.5\% * 3 + 29.6\% * 4 + 13\% * 5) = 3.09$$

Where strongly disagree = 1, Disagree = 2, Neutral = 3, Agree = 4 and strongly agree = 5.

The results are presented and discussed in the next chapter.



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CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This chapter is the presentation and analysis of findings of the survey of information seeking behaviour of graduate students of UPSA. The objectives of the study are:

- I. To identify the information needs of graduate students.
- II. To determine the use of library among graduate students.
- III. To discover their sources of information.
- IV. To determine their information seeking behaviour.
- V. To determine the challenges that graduate students encounter in seeking information.
- VI. To make recommendations for enhancing their information-seeking behaviour.

Out of the one hundred and twenty-four (124) questionnaires administered, 115 were completed and returned, giving a response rate of 92.7%. The consensus in survey research is that a response rate of 50% is adequate for analysis, 60% is good, and 70% is considered as very good (Babbie and Mouton, 2001). Thus the response rate of 92.7% for this study can be said to be excellent based on Babbie and Mouton's (2001) assertion.

This chapter organized into the following broad headings including:

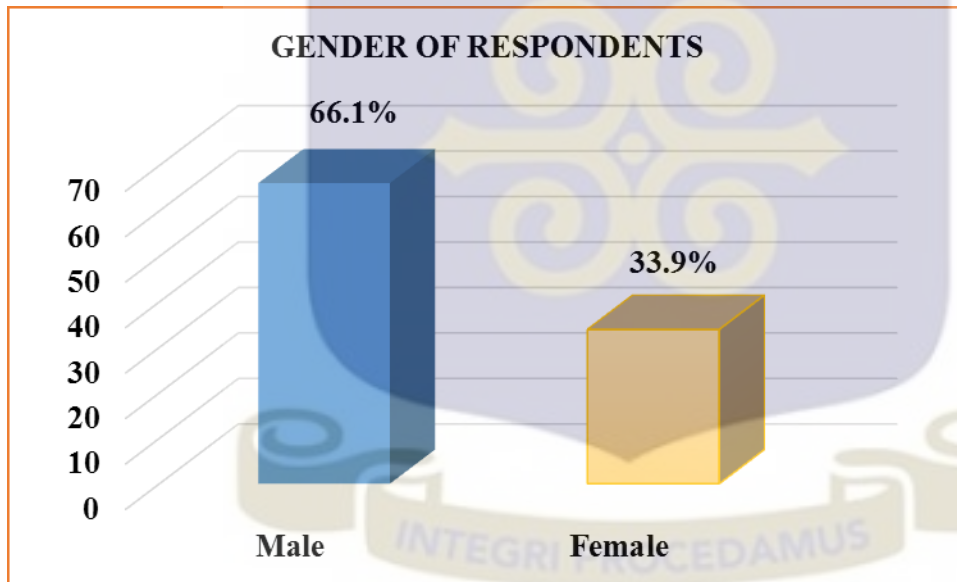
- I. Background information of respondents
- II. Information need
- III. Library use

- IV. Sources of information
- V. Information seeking behaviour
- VI. Challenges of seeking information

4.2 BACKGROUND INFORMATION

4.2.1 Gender of respondents

The findings (Figure 4.1) show that a total of 115 graduate students comprising 76 (66.1%) males and 39 (33.9%) females participated in the study. This means majority of the participants were males.

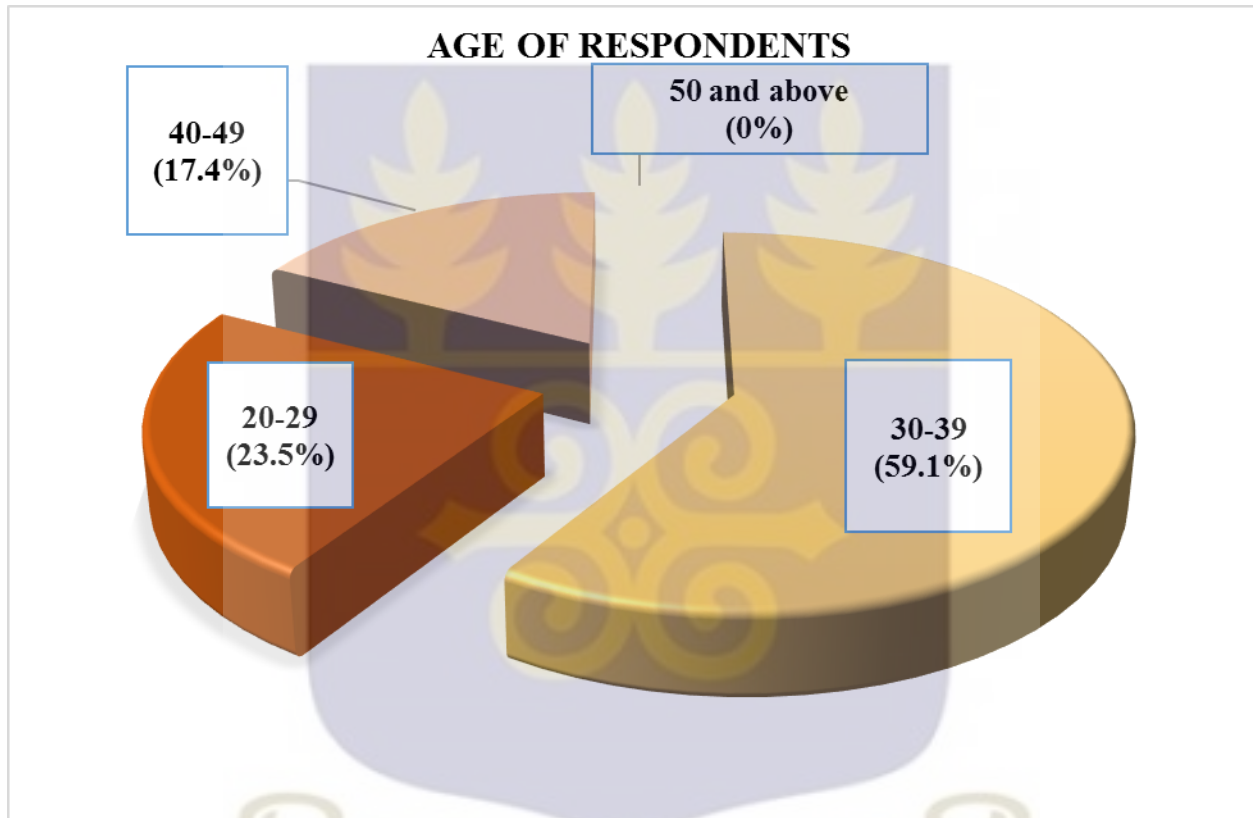


Source: Field survey, 2016

Figure 4.1- Gender of respondents

4.2.2 Age of respondents

Figure 4.2 shows the age distribution of the respondents. Majority of the respondents were between the ages of 30-39 representing fifty-nine point one percent (59.1%) and minority of them (17.4%) were between the ages of 40-49.



Source: Field survey, 2016

Figure 4.2- Age of respondents

4.2.3 Programme of study

Table 4.1 is the frequency distribution of the various programs pursued by the respondents. Majority, 64 (55.7%) are in the MBA Accounting and Finance program. The rest in descending

order are MBA in Total Quality Management, 13 (11.3%), MBA in Petroleum, 10(8.7%), MPhil in Leadership, 7 (6.1%), MBA in Corporate Governance, 6 (5.2%), and MBA in Marketing, 6 (5.2%), MBA Internal Auditing, 5(4.3%) and MBA Auditing, 4(3.5%).

Table 4.1 – Programme of study

N = 115		
Programme of study	Frequency	Percentage
MBA Accounting and Finance	64	55.7
MBA Total Quality Management	13	11.3
MBA Petroleum	10	8.7
MPhil Leadership	7	6.1
MBA Marketing	6	5.2
MBA Corporate Governance	6	5.2
MBA Internal Auditing	5	4.3
MBA Auditing	4	3.5

Source: Field data, 2016

4.3 INFORMATION NEED

One of the objectives of the study is to identify the information needs of respondents. This was done by asking them to indicate the purposes for which they look for information.

4.3.1 Purposes of looking for information

The findings (Table 4.2) show that the respondents look for information for several purposes. The majority of the respondents 92(80.0%) look for information for the purpose of career development. Others are self-development 76(66.1%), current affairs and employment 71(61.7%), research 66(57.4%), course work 43(37.4%), entertainment and politics 40(34.8%), global information 39(33.9%), health, and football 38(33.0%), higher education 32(27.8%), recreational activities 27(23.5%), sports 23(20.0%) and religion 16(13.9%) in descending order.

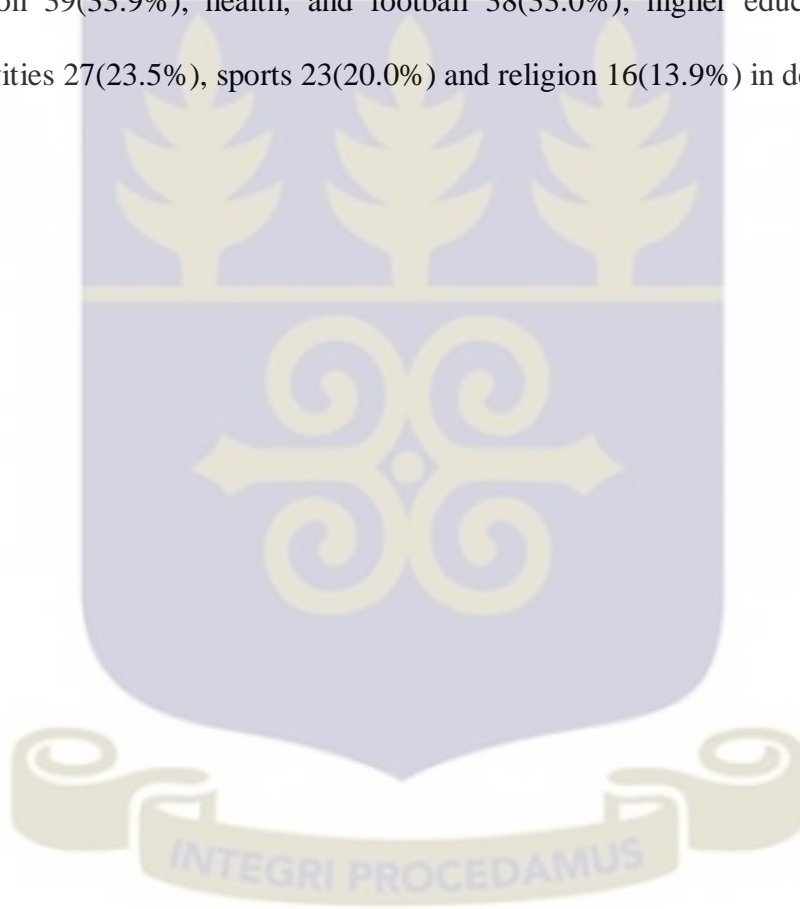


Table 4.2- Purposes of looking for Information

N=115		
Purposes of looking for information	Frequency	Percentage
Career development	92	80.0
Self-development	76	66.1
Current affairs	71	61.7
Employment	71	61.7
Research	66	57.4
Course work	43	37.4
Entertainment	40	34.8
Politics	40	34.8
Global information	39	33.9
Health, and football	38	33.0
Higher education	32	27.8
Recreational activities	27	23.5
Sports	23	20.0
Religion	16	13.9

Source: Field survey, 2016

4.3.2 Information seeking behaviours

The respondents were asked to indicate all the methods they used to look for information defined in this study as information seeking behaviours. The findings (Table 4.3) reveal that 73.9% of respondents look for the information themselves. 67.0% ask their colleagues, 60.0% use review

articles, 51.3% consult their supervisors, 34.8% use the library catalogue, 31.3% consult the reference librarian and 1.1% consult knowledgeable person in the field. This findings show that majority of the respondents prefer to look for information by themselves rather than asking others.

Table 4.3- Methods used to locate information

N = 115		
Methods used	Frequency	Percentage
Look for information myself	85	73.9
Ask a colleague	77	67.0
Review articles	69	60.0
Consult my supervisor	59	51.3
Use library catalogue	40	34.8
Consult the reference librarian	36	31.3
Consult knowledgeable person in the field	4	3.5

Source: Field survey, 2016

4.3.3 Sources of information

The respondents were asked to indicate the different sources they use in their information seeking. The findings (Table 4.4) show that majority of the respondents use the Internet (93 or 80.9%) and the library (86 or 74.8%) as their sources of information. Others are newspapers (58 or 50.4%), radio (55 or 47.8%), television (48 or 41.7%), lecture notes (47 or 40.9%), Colleagues/friends (37 or 32.2%), academic databases (30 or 26.1%), family members (16 or

13.9%) and lecturers (9 or 7.8%). The researcher was surprised to note that only 48 or 41.7% indicated they use lecture notes.

Table 4.4 - Sources used to obtain information

N = 115		
Sources used to obtain information	Frequency	Percentage
The internet	93	80.9
The library	86	74.8
Newspapers	58	50.4
Radio	55	47.8
Television	48	41.7
Lecture notes	47	40.9
Colleagues/friends	37	32.2
Academic databases	30	26.1
Family members	16	13.9
Lecturers	9	7.8

Source: Field survey, 2016

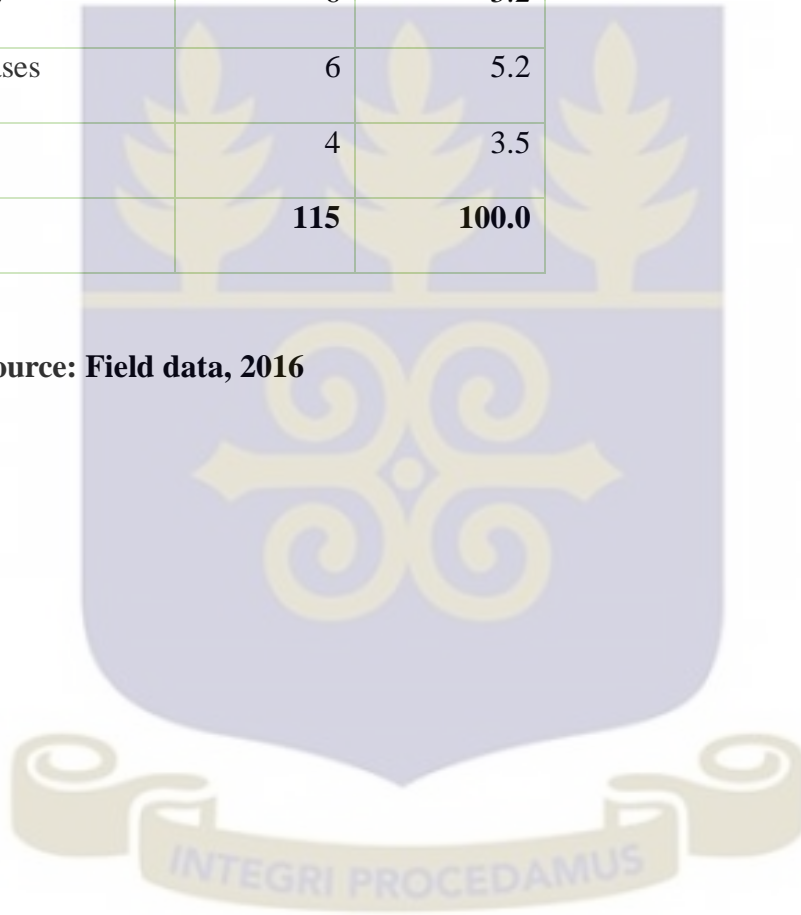
4.3.4 Main source of information for course work

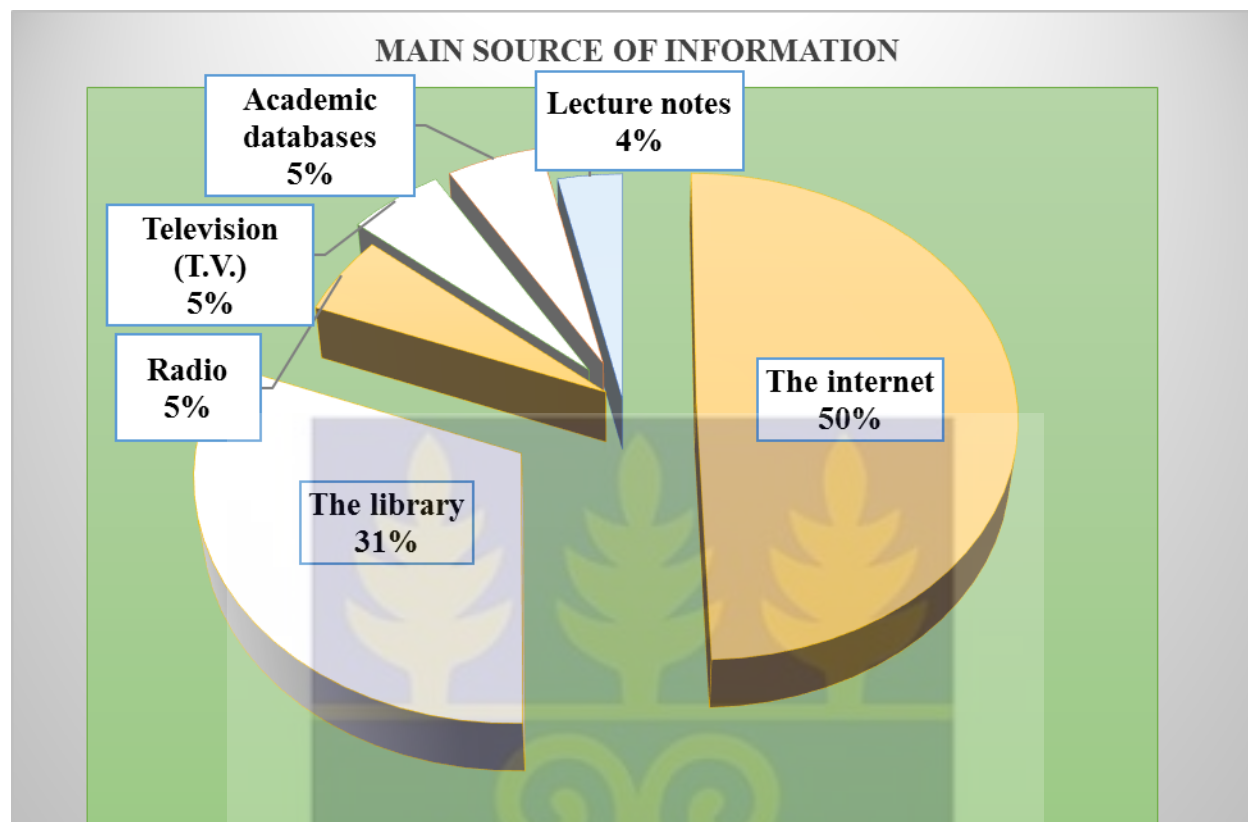
The findings showed that the respondents used various sources of information for their research work. More precisely, 49.6% use the internet source, 31.3% use the library, 5.2% use the radio, television, and academic databases respectively and 3.5% use the lecture notes as their source of information for their course work. This is shown in Table 4.5 and figure 4.3 below:

Table 4.5 - Main source of information for course work

Main source of information	Frequency	Percentage
The internet	57	49.6
The library	36	31.3
Radio	6	5.2
Television (T.V.)	6	5.2
Academic databases	6	5.2
Lecture notes	4	3.5
Total	115	100.0

Source: Field data, 2016





Source: Field survey, 2016

Figure 4.3 - Main source of information for course work

4.4 LIBRARY USE

This objective was to help the researcher know how often they visit the library and the purpose of their visit. This informs the researcher to know certain patterns of seeking information.

4.4.1 Frequency of library visit

The findings revealed that the respondents to a large extent visit the library three times a week being 41(35.7%), 22(19.1%) visit the library twice a week, 21(18.3%) visit the library daily, 13(11.3%) visit the library occasionally, 10(8.7%) visit the library four times a week and 8(7.0%) visit the library once a week. This is shown in Table 4.6 below:

Table 4.6 - Frequency of library visit

Frequency of library visit	Frequency	Percentage
Three times a week+	41	35.7
Twice a week	22	19.1
Daily	21	18.3
Occasionally	13	11.3
Four times a week+	10	8.7
Once a week	8	7.0
Total	115	100.0

Source: Field data, 2016

4.4.2 Purposes of library visit

The findings indicate that most of the respondents' visit the library purposely to study for examination (69.6%) and for general study (68.7%) as shown in Table 4.7. The next largest purposes are to look for information for home work/assignment (58.3%) and to do independent learning/reading (56.5%). This is followed by work on class presentation/seminars (45.2%), update lecture notes (43.5%), access information for project work/thesis (38.3%), use computers (32.2%), use the internet (20.9%), personal information (16.5%), borrow books (14.8%), to read journals, newspapers or magazines (7.0%), interest-based information and make photocopy (5.2%) respectively and any other constitute 0.2%.

Table 4.7- Purposes of library visit

N = 115		
Purposes of library visit	Frequency	Percentage
Study for examination	80	69.6
To study	79	68.7
Look for information for home work/assignment	67	58.3
Independent learning/reading	65	56.5
Work on class presentation/seminars	52	45.2
Update lecture notes	50	43.5
Access information for project work/ thesis	44	38.3
Use computers	37	32.2
Use the internet	24	20.9
Personal information	19	16.5
Borrow books	17	14.8
Check on new arrivals	8	7.0
To read journals, newspapers or magazines	8	7.0
Interest-based information	6	5.2
Make photocopy	6	5.2
Any other	1	0.9

Source: Field survey, 2016

4.5 SOURCES OF INFORMATION

There are many sources being used by graduate students, some are manual, others are electronic.

This objective is to solicit the views of respondent on the kind of source including library,

internet, electronic source and academic databases used to locate information for their research work.

4.5.1 Library resources for academic work

The result revealed that majority of the respondents uses the printed textbooks (58.3%) as against lecture notes and handout (51.3%). Many of the respondents were in the range of forties including dictionary/encyclopedia (40.9%), newspapers (38.3%), reference materials (37.4%), printed pamphlets (37.4%), printed journals (35.7%) and handbooks (34.8%). The least ones were academic databases (27.0%) and research reports (21.7%)

Table 4.8 - Library resources for academic work

N = 115		
Library resources for academic work	Frequency	Percentage
Printed textbooks	67	58.3
Lecture notes and handout	59	51.3
Dictionary/encyclopedia	47	40.9
Newspapers	44	38.3
Reference materials	43	37.4
Printed pamphlets	43	37.4
Printed journals	41	35.7
Printed thesis/dissertation	40	34.8
Handbooks	40	34.8
Academic databases	31	27.0
Research reports	25	21.7

Source: Field data, 2016

4.5.2 Internet sites used for academic work

The findings indicated that majority of the respondents use Google search engine representing 87.0%, Yahoo search engine representing 80.9%, Ask.com representing 40.9%, YouTube representing 39.1%, Google Scholar representing 36.5% and Bing representing 8.7%.

Table 4.9 - Internet sites used for academic work

N = 115		
Internet sites used for academic work	Frequency	Percentage
Google	100	87.0
Yahoo	93	80.9
Ask.com	47	40.9
YouTube	45	39.1
Google scholar	42	36.5
Bing	10	8.7

Source: Field survey, 2016

4.5.3 Electronic sources used for academic work

The findings indicate that the majority of the respondents use e-books being 77.4%, e-journals being 60.0%, CD-ROMs being 45.2%, e-newspapers being 40.9%, e-magazines being 33.0% and e-images being 17.4%. No respondent used the e-audio as an electronic source for academic work. This is depicted in the Table 4.10 below:

Table 4.10 - Electronic sources used for academic work

N = 115		
Electronic sources used for academic work	Frequency	Percentage
E-books	89	77.4
E-journals	69	60.0
CD-ROMs	52	45.2
E-newspapers	47	40.9
E-magazines	38	33.0
E-images	20	17.4
E-audio	0	0.0

Source: Field survey, 2016

4.5.4 Summary of the sources of information

Analysis of the findings show that the students in the study use several and varied sources of information to satisfy their information needs. They are summary of Table 4.3, 4.5, 4.8, 4.9 and 4.10 comprise five main categories, namely interpersonal, Internet, media, electronic and print sources. The findings show that the students do not just rely on their lecture notes but



Table 4.11 Summary of Information Sources

Categories of information sources				
Interpersonal sources	Internet sources (search engines)	Electronic sources	Media sources	Print sources
Self (74%)	Google (86.9%)	E-books (77.4%)	Radio (5.2%)	Textbooks (58.3%)
Colleagues (67%)	Yahoo (80.9%)	E-journals (60%)	T.V. (5.2%)	Lecture notes/handouts (51.3%)
Supervisors (51%)	Ask.com (40.9%)	CD-ROMs (45.2%)		Dictionaries/encyclopaedias (40.9%)
Reference librarian (31%)	YouTube (39.1%)	E-newspapers (40.9%)		Pamphlets (37.4%)
Family members (14%)	Google Scholar (36.5%)	E-magazines (33%)		Journals (35.7%)
Lecturers (7.8%)	Bing (8.7%)	Academic databases (27%)		Handbooks (34.8%)
Expert in the field (3.5%)		E-images (17.4%)		Theses/dissertations (34.8%)

consult multiple sources of information to meet their academic and other needs. They do not rely on print sources alone but use Internet sources like Google and Yahoo, all kinds of e-resources including e-books, e-journals, CDROM, newspapers/magazines and academic

databases. Apart from themselves, the most interpersonal sources they use are their colleagues/friends, followed by their supervisors and reference librarians. A few of the students also use media sources including newspapers (both print and electronic), radio and TV. It is noteworthy that these students are not myopic in their use of information sources but exploit all kinds of information resources available to them including the resources available in their libraries.

4.5.5 Academic databases used for academic work

This question was asked in order to ascertain the academic databases used for research work. The findings revealed that 86 or 74.8% mostly used Emerald database, 67 or 58.3% use J-Stor database, 59 or 51.3% use the Wiley database, 47 or 40.9% use EBSCOHost, 27 or 23.5% use Annual reviews, 25 or 21.7% use Beech Tree database, 18 or 15.7% use Taylor and Francis database, 15 or 13% use Policy Press, 14 or 12.2% use Mary Ann Liebert and National Academic Press, and 11 or 9.6% use the Directory database for academic work. There were two respondents who use the other databases such as Leadership Quarterly. This signifies that the majority are doing Business courses so Emerald database is suitable for the respondents, that is why majority chose that database for their academic work.

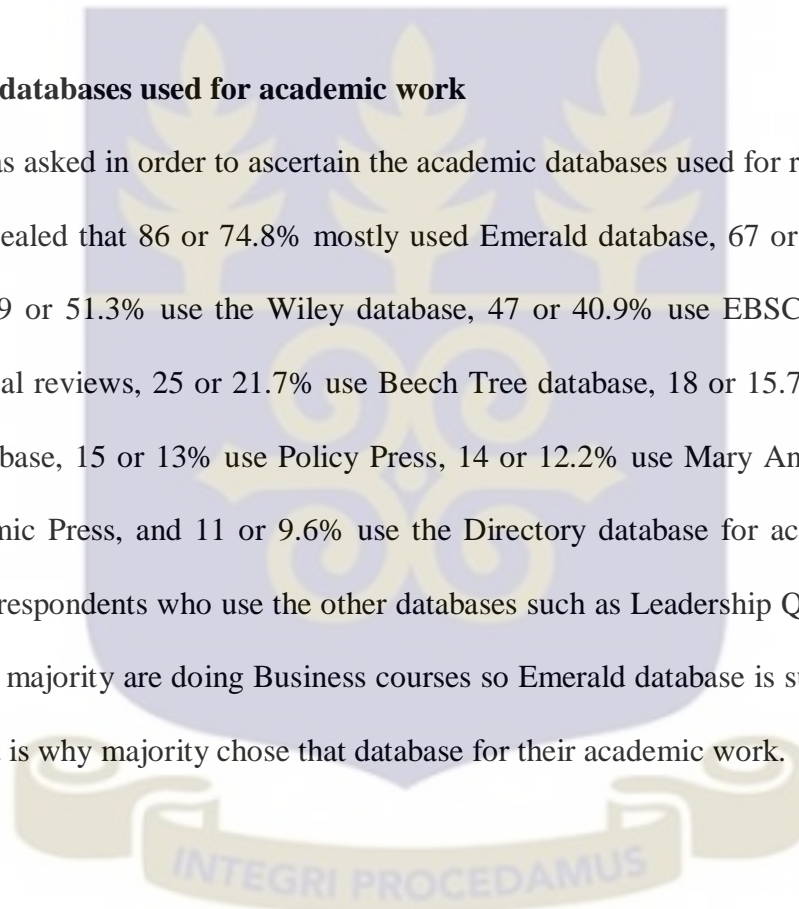


Table 4.12 - Academic databases used for academic work

N = 115		
Academic databases used	Frequency	Percentage
Emerald	86	74.8
J-Stor	67	58.3
Wiley	59	51.3
EBSCOHost	47	40.9
Annual reviews	27	23.5
Beech Tree Publication	25	21.7
Taylor and Francis	18	15.7
Policy press	15	13.0
Mary Ann Liebert	14	12.2
National Academic Press	14	12.2
Directory	11	9.6
Any other	2	1.7

Source: Field survey, 2016

4.6 INFORMATION SEEKING BEHAVIOUR

The researcher is aware that the respondents seek information one way or the other. But this objective is to help the researcher know the methods mostly used by the respondents, frequency use of the electronic resources and the satisfaction in using the electronic databases.

4.6.1 Methods for seeking information

Methods mostly used to seek for information indicated that Google and Google Scholar s rated highly among graduate students of UPSA. It was ranked 72.2%. Browse books on the shelf followed with 55.7%. Browse the internet at 40.9% and search electronic databases then followed at 40.0%. Inquire from fellow students at 28.7%, use OPAC, inquire from lecturers and ask the reference librarian ranked the same 27.8%. This is followed by reading required textbook at 22.6% and lastly going through and accessing references at the end of journal articles which scored 7.0%. This is shown in Table 4.12 below:

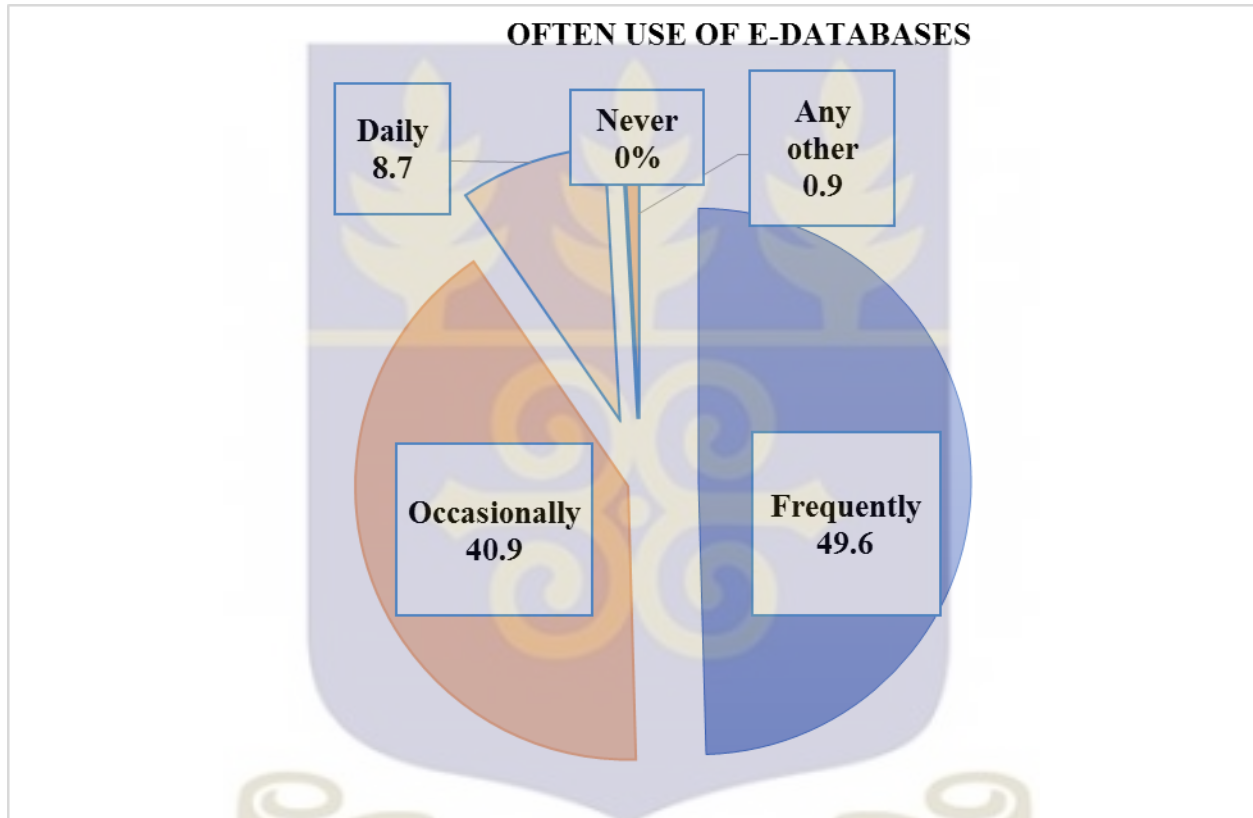
Table 4.13 - Methods for seeking information

N = 115		
Methods for seeking information	Frequency	Percentage
Use Google and Google Scholar	83	72.2
Browse books on the shelf	64	55.7
Browse the internet	47	40.9
Search electronic databases	46	40.0
Search the manual catalogue	36	31.3
Inquire from fellow students	33	28.7
Use OPAC	32	27.8
Inquire from lecturers	32	27.8
Ask the reference librarian	32	27.8
Reading required textbook	26	22.6
Going through and accessing references at the end of journal articles	8	7.0

Source: Field survey, 2016

4.6.2 Often use of electronic database

All the respondents earlier indicated that they use e-database for their academic work. Most of the respondents use e-resources frequently (49.6%); some also use it occasionally (40.9%). The daily users were 8.7% whilst 0.9% responded any other and nobody responded that he/she has never use the database. This means one way or the other, they have all use the electronic databases for their academic work.

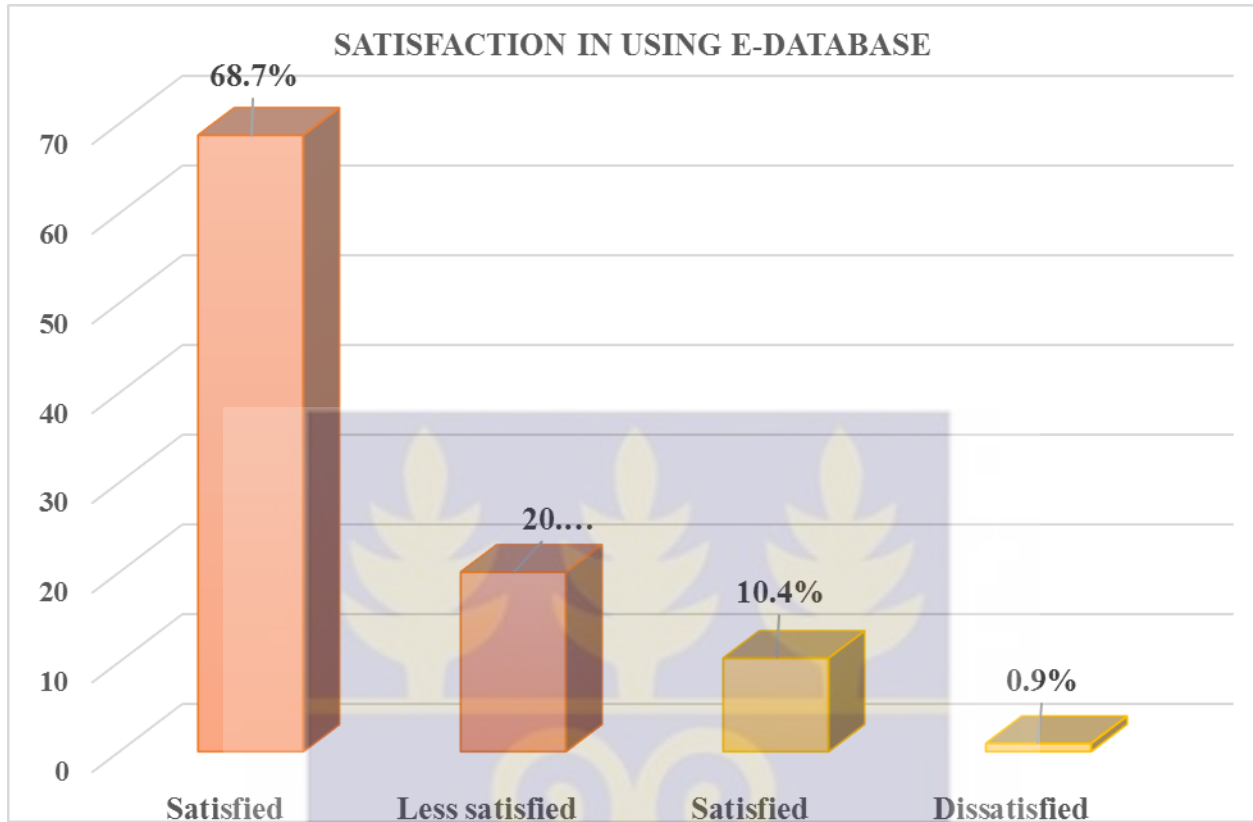


Source: Field survey, 2016

Figure 4.4 - Often use electronic resources

4.6.3 Satisfaction in using e-database

Students were asked to describe their satisfaction with the e-database searches. Most of the respondents were satisfied with the searches (68.7%). This was followed by 20.0% being less satisfied, 10.4% responded very satisfied and 0.9% was dissatisfied.



Source: Field survey, 2016

Figure 4.5 – Satisfaction in using e-database

4.7 CHALLENGES OF SEEKING INFORMATION

This question was asked to solicit information from respondents of a list of challenges related to their search, retrieval and use of the information resources. They were given the option to choose from a five-point Likert scale, ranging from “strongly disagree” to “strongly agree”. Reviewing the Likert scores of each challenges in order in which the answers were presented, the most influential challenges was inadequate computers (Likert score 3.54). There were other dominant challenges, namely: unstable internet connection, the need for passwords to access information

and low internet speed (3.09 – 3.06). The less prominent challenges were inadequate library staff to consult and unavailability of library staff (2.32 – 2.24). This is illustrated in Table 4.13 below:

Challenges

Table 4.14 - Challenges encountered in seeking information

	No.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Likert Scores
Inadequate computers	115	2.6	13.9	17.4	59.1	7.0	3.54
Unstable internet connection	115	6.1	34.8	16.5	29.6	13.0	3.09
The need for passwords to access information	114	6.1	17.4	41.7	29.6	4.3	3.09
Low internet speed	115	2.6	31.3	27.8	33.9	4.3	3.06
Lack of time	115	4.3	32.2	33.9	24.3	5.2	2.94
Computer viruses	115	5.2	27.0	42.6	20.0	5.2	2.93
Too much information	112	3.5	34.8	28.7	28.7	1.7	2.90
Don't know how to use the e-resources	115	5.2	36.5	27.0	27.0	4.3	2.89
Frequent power cuts	115	1.7	45.2	27.8	21.7	3.5	2.80
Inadequate search skills	115	6.1	43.5	27.8	15.7	7.0	2.74
Outdated library materials	115	7.0	49.6	13.9	26.1	3.5	2.70
Restrictive opening hours	114	5.2	50.4	21.7	15.7	6.1	2.67
Inadequate information materials	115	9.6	55.7	11.3	18.3	5.2	2.54
Negative attitude of library staff (eg. Rude, unfriendly, not helpful)	113	13.0	52.2	9.6	17.4	6.1	2.50
Inadequate library staff to consult	115	27.8	41.7	6.1	19.1	5.2	2.32
Unavailability of library staff	115	33.0	36.5	7.8	18.3	4.3	2.24

Source: Field survey, 2016

4.8 Recommendation for improving access to information

The summaries of recommendations were as follows:

- I. Improvement of internet bandwidth
- II. More computers needed in the library
- III. Providing of training for users using the library, that is, information literacy programme included in the orientation.
- IV. Increase users' awareness of the e-resources
- V. Increase internet speed
- VI. Accessibility of most of the databases
- VII. Library must provide up-to-date information
- VIII. Lecture notes and handout must be made available at the school library
- IX. Sometimes staff attitude is very bad and needs to be talked to
- X. Provide training on search skills and availability of staff

4.9 Other information

The researcher gave the respondents the opportunity to provide any other information that will be helpful. Very few of the respondents responded as follows:

- I. The level of noise must be controlled in the library
- II. Library books must be kept very neat

- III. All outmoded books must be removed from the shelf leaving only the relevant and current ones.
- IV. Also, there must be 24 – hour opening of the library.



Reference

Babbie, E., & Mouton, J. (2001). *The Practice of Social Research* (South African ed.). Cape Town: Oxford University Press.



CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

The study set out to investigate the information seeking behaviour of graduate students of the University of Professional Studies, Accra (UPSA). This chapter discusses the major findings in relation to the objectives of the study and the existing literature. It is presented under the following headings: information needs (purposes of looking for information, information seeking behaviours, sources used to obtain information and main source of information for course work), library use (frequency of library visit and purposes of library visit), sources of information (library resources, internet sites, electronic sources and academic databases used for academic work), information seeking behaviour (methods for seeking information, frequency of use of electronic database and satisfaction in using e-database), challenges of seeking information and measures graduate students use to overcome the challenges of information seeking.

5.2 INFORMATION NEED

The analysis of the purposes for which respondents look for information (Table 4.2) and the purposes for which they visit the library (Table 4.2) their information needs are mostly cognitive or course related. They include looking for information for assignment, class presentation/seminars, updating of lecture notes, project work/thesis and new arrivals (new library resources). Majority of the respondents indicated that they look for information on career development (80.0%), followed by self-development (66.1%), current affairs (61.7%), and employment (61.7%). Other needs are entertainment and politics (34.8%), global information

(33.9%), health, and football (33.0%), higher education (27.8%), recreational activities (23.5%), sports (20.0%), and religion (13.9%). The findings suggest that apart from their academic work, the students are also concerned about their future. This is clearly shown by the high percentage of students (80%) looking for information on career development, self-development (66.1%), and employment (62%). In other words, they aspire to join the work force immediately after graduation. A few of the students (27.8%) also aspire to continue their education after graduation hence looking for information on higher education. The findings also suggest that the students look for interest based information such as current affairs, politics, entertainment, sports, religion and health information.

The findings on looking for information on self-development, career development, employment, current affairs, and course work reported in the current study are consistent with those of Natarajan (2012) which reported that students in Dehli, India also look for information to keep abreast with current developments, to develop competence, and for career development and course work purposes such as workshop, seminar presentations and research. This finding is inconsistent with Al-Muomen (2009). They reported that majority of the postgraduate students look for information to complete their course work, term papers, comprehensive assignments, and the rest was for other reasons such as writing research papers, looking for information related to their thesis, and browsing for general information. It is evident from the findings that students in the current study are not just focused on academic work but are pursuing other needs concurrently.

5.2.1 Sources of information

5.2.1.1 Information seeking behaviours (Interpersonal sources)

The findings show that 73.9% of respondents look for information themselves. 67.0% ask their colleagues, 60.0% use review articles, 51.3% consult their supervisors, 34.8% use the library catalogue, 31.3% consult the reference librarian and 1.1% consult knowledgeable person in the field. This is dissimilar with the findings of Dzansi (2008) who found that majority used lecturers and lecture notes. This can be due to the fact that students hardly read outside what the lecturer has given them. They only depend on the easiest way of seeking information but in the study students are abreast with looking for information themselves.

This is also dissimilar to the findings of Patitungkho and Deshpande (2005) who indicated that majority refer to well-informed person in the field for the needed information (41%). This dissimilar may be due to how effective is the user sensitization and training in using methods in seeking information.

5.2.1.2 Library resources for academic work

The researcher wanted to know the most consulted library resources for the academic work. From the analysis it was realized that respondents use both print and electronic resources. Out of the 115 respondents, 58.3% use printed textbooks, lecture notes and handout (51.3%). Others are dictionary/encyclopedia (40.9%), newspapers (38.3%), reference materials (37.4%), printed pamphlets (37.4%), printed journals (35.7%) and handbooks (34.8%). The findings revealed that students use both print and electronic resources. This is consistent with Yusuf and Iwu (2010), who found that students use newspaper (59.5%), reference materials (42.8%), electronic

resources (33.3%), past students' project, textbooks (7.1%), and journal (3.9%). He also found out that students use both print and electronic resources.

5.2.1.3 Internet sites used for academic work (Internet sources)

The students used the internet as the main source of information for their course work. The researcher wanted to know the specific internet sites used by the graduate students for their academic work. It was realized that most of the respondents use Google search engine (87.0%), followed by Yahoo search engine (80.9%), Ask.com (40.9%), YouTube (39.1%), Google Scholar (36.5%) and Bing (8.7%).

The finding that Google is the most used search engine in their information seeking is consistent with Khan, Khan, and Bhatti (2011). They reported that Google was the most used search engine by students of Islamia University of Bahawalpur. Patitungkno and Deshpade (2005) explained that Google is the preferred search engine because it is regularly updated, provides links to multiple websites, and it is very fast. The researcher expected the students in the current study to use Google Scholar because it provides more scholarly information which is suitable for graduate work. The researcher agrees with Nadzir (2015) that the students are probably not aware that Google Scholar has more scholarly information relevant for their academic work. There is a need for the students to be educated about the scholarly contents of Google Scholar.

5.2.1.4 Electronic sources used for academic work

The UPSA library is also having access to electronic sources in relation to the printed materials. These electronic resources include electronic books, e-journal and databases. The findings reported that most of the respondents use e-books (77.4%), e-journals (60.0%), CD-ROMs (45.2%), e-newspapers (40.9%), e-magazines (33.0%) and e-images (17.4%). This implies that

there is higher acceptance of the library e-books. It is in agreement with Bhatia (2011) who found that most of the respondents found electronic book (25.84%) as the most used electronic source. Markwei (2001) also mentioned that even though most students are aware of electronic resources they are under-utilized.

5.2.1.5 Main source of information for course work

The study specifically wanted to find out the main source of information used for their course work. The findings revealed that most of the graduate students used the internet (49.6%) and library (31.3%) to obtain information for their academic work. It is obvious that the students prefer the Internet probably because it is more accessible. The finding of the Internet as the most preferred source for academic work is similar to the finding of Safahieh (2007) who reported that International students of three Public Universities in Malaysia also indicated the Internet as their most preferred source of information for their academic work. The findings are inconsistent with those of Fasola and Olabode (2013) which revealed that students of a University in Oyo State, Nigeria use the library (62.8%) as their main source of acquiring information materials compared to 20.8% who use the internet. The UPSA library must be proactive in publicizing their resources to ensure higher patronage.

5.2.1.6 Use of academic databases

A prior visit to the UPSA library revealed that the UPSA library has diverse collection of materials including academic databases to support teaching and research needs of faculty and students. However, an informal interview with the Electronic Resource Librarian revealed that graduate students underutilize the databases, therefore the study sought to investigate the extent of use of these academic databases by students. The findings revealed that 74.8% use Emerald

database, 58.3% use J-Stor database, 51.3% use the Wiley databases, 40.9% use EBSCOHost, 23.5% use annual reviews, 21.7% use Beech tree database, 15.7% use Taylor and Francis database, 13% use Policy press, 12.2% use Mary Ann Liebert and National Academic Press, and 9.6% use the Directory database for academic work. The most used database is Emerald, because it is a business database and most of the respondents are pursuing MBA. It is gratifying to note that the graduate students patronize the academic databases. This is because some studies, for example Al-Saleh (2002) cited in Al-Saleh (2004), reported that the postgraduate students who participated in his study were not using many of the electronic resources provided by their university, for their academic work.

This finding is inconsistent with findings carried out by Khan, Khan, and Bhatti (2011). They reported that students use ScienceDirect (25%), EBSCO (17%), Springerlink (13%), JSTOR (11%), Emerald (7%) and 5 Cambridge Journal (5%). The difference was that Khan, Khan, and Bhatti (2011) investigated Science Masters students, and not Arts students. This inconsistency between the two studies may therefore be ascribed to differences in subject areas. Most of the students in the current study are doing business courses, while students in Khan and Bhatti's study are mostly science students hence their choice of ScienceDirect.

5.2.1.6.1 Satisfaction in using e-database

The finding also showed that respondents were satisfied with the searches (68.7%), with 20.0% being less satisfied, 10.4% responded very satisfied and 0.9% was dissatisfied. Findings show high satisfaction with the use of e-resources. This is in line with those of Owolabi, Jimoh and Okpeh (2010). They reported that students are very satisfied (42.3%), partially satisfied (39.4%),

and not satisfied (18.3%). But there is the need for the library to enhance the provision of online electronic resources and databases.

5.3 LIBRARY USE

5.3.1 Frequency of library visit

The findings showed that most of the participants' visit the library three times a week (35.7%), (19.1%) visit the library twice a week, (18.3%) visit the library daily, (11.3%) visit the library occasionally, (8.7%) visit the library four times a week and (7.0%) visit the library once a week. This apparent few number of visits by students to the library must not be translated as underutilization of the library since the library has e-resources and e-databases that can be accessed from remote locations without being physically present in the library.

The findings are inconsistent with those of Natarajan (2012) who said that management students in a university in Dehli visited their library daily (66.5%), followed by 14.2% once in a week and least of 9.2% respondents visit very rarely.

5.3 INFORMATION SEEKING BEHAVIOUR

Wilson (2000) identified four (4) main types of information seeking behaviours as active search, passive attention, passive search, and ongoing search. Most of the information seeking behaviours revealed in the study is active searching. They include use of Google and Google Scholar (72.2%), browsing books on the shelf (55.7%), browsing the internet (40.9%) and searching electronic databases (40.0%). Others are inquiring from fellow students (28.7%), using OPAC, inquiring from lecturers and asking the reference librarian (27.8%), reading required textbook (22.6%) and accessing references at the end of journal articles (7.0%). The students

actively search for information because they need to complete assignments, prepare for presentations/seminars, update lecture notes etc. A few of the students (5.2%) also used passive attention by using the radio and TV as a source of information. The students who looked for information to complete projects, theses/dissertations can be said to be using ongoing search.

The researcher was surprised to note that only few graduate students (27.8%) consulted the Reference Librarian (27.8%). This may be due to the negative attitude of library staff, inadequate library staff to consult or unavailability of library staff as explained below.

5.5 CHALLENGES OF SEEKING INFORMATION

The challenges of information seeking revealed in the findings include unstable internet connection (Likert scale 3.09), the need for passwords to access information (likert scale 3.09) and low internet speed (likert scale 3.06). Others are inadequate computers (likert scale 3.54), information overload (likert scale 2.90) and lack of skills (2.89). They are mostly technological challenges described by Wilson (1999) as environmental factors. These findings are consistent with those of other studies such as Al-Muomen (2009) and Dzandu and Boateng (2013) who also reported environmental challenges such as lack of access to the Internet and online e-resources because of poor connectivity and inadequate computing/Internet access points, cumbersome password system, lack of off-campus access, lack of technical support and difficulty in following ICT procedures of the UGLS, and difficulty in locating print materials in the libraries, which are mostly out-dated.

These main challenges that affect graduate students information seeking are further explained below:

I. Inadequate computers

It seems inadequate computers is a major challenge of seeking information since the Likert scores was 3.54. This might explain the low level of patronage of the library since some students purposefully go to the library to use the computers. For example 32.2% of the respondents indicated they visit the library to use the computers. It is important for the library to be provided with adequate computers to meet the needs of graduate students.

II. Unstable internet connection

In this age of ICT the Internet is an indispensable tool for academic work since information resources are becoming electronic. Therefore, unstable Internet connectivity would mean lack of access to the needed e-resources. The researcher experienced this Internet instability in the course of his data collection. In one instance in the library he tried to connect to Internet several times but failed. Upon inquiries with the electronic resource head, he was informed that technicians were still working to fix it. The UPSA authorities must ensure stable Internet connectivity to limit students' frustrations and ensure continuous access to the required information and increased use of the library.

III. The need for passwords to access information

The graduate students also complained about need for a password before logging on to the wireless network. The basis of this complaint is not clear since the use of passwords will ensure un-authorized persons from gaining access to the system. Having said this,

the university authorities must ensure the password system runs smoothly to avoid any frustrations.

IV. Low internet speed

The graduate students complained that the internet is sometimes slow and attempts to use the WIFI via a laptop or mobile phones sometimes become a waste of precious time since it could take several minutes to an hour.

5.6 Measures graduate students proposed to overcome the challenges of seeking information

The graduate students were asked to propose some measures to overcome the challenges to their information seeking. Their proposed measures are as follows:

I. Improvement of internet bandwidth

Bandwidth is the rate at which data flow by transferring data from one source to another. The institution must increase the speed of the internet by increasing the bandwidth. The students complained that whenever there is low bandwidth they become frustrated in accessing information from the internet for their research work. Therefore, bandwidth must be improved for quick and easy access to information for their academic work.

II. More training in the use of library resources and inclusion of information literacy in library orientation programmes.

The students mentioned that they lacked the requisite skills to retrieve information resources available in the library. They therefore, recommended the inclusion of information literacy programmes in the University curricular. They suggested that there must be a course titled “information literacy” where students may be taught how to

select, evaluate and use the right information. Debowski (2003) believes “that they need to be well prepared in the basics of information seeking if they are to successfully integrate this competency into their teaching and their curriculum design (p.3)”

III. Increase user awareness of the e-resources

From the analysis, the students indicated that they do not know how to use the e-databases. This means some users know about the e-databases but do not know how to use them. Therefore, the library staff must create awareness of the e-databases using different methods such as posting messages about the e-databases on noticeboards in their lecture halls and the University website and sending information through their emails. Such measures will go a long way to ensure effective access and use of the e-resources.

IV. Increased accessibility to more e-databases

Accessibility of electronic databases is very important since the database can be available but you cannot access. Therefore, information resources that satisfy the need of the users must be made available so that students can access and utilize them.

V. Library must provide current books and up-to-date information

The students complained of outmoded books that need to be weeded out in order to make more room for new ones to be purchased. The students indicated these new books will motivate them to go to the library thereby using resources of the library. For the library to meet the information needs of the students there is the need to provide current and up-to-date information that will help them in their academic work.

VI. Lecture notes and hand-out must be made available at the school library

The students also indicated that sometimes it is very difficult to know where the hand-outs of the lecturers are. Therefore, they recommended that the library staff must consult

the lecturer and collect the hand-out so that copies will be made available at the library's photocopy unit. This will also increase library visits and ultimately use of its resources.

VII. Staff must be more approachable and friendly

The graduate students had challenges with the negative attitude of the library staff. They suggested that the staff must be trained to be helpful and welcoming to students.

VIII. Training on search skills

Many graduate students suggested that there is the need to improve upon their search skills through training. Majority of them lack the ability to search effectively from the library system to get the right information. There is the need for the library to equip students with the needed search competencies through training. This can be done by the help of the e-resources librarian at the computer laboratory of the library in batches.

IX. Recruitment of more staff to help students in the library

The graduate students suggested recruitment of more library staff to help the existing ones since those who are there are not able to adequately serve many of the students. Thus, whenever they are under pressure as a result of increased number of students in the library, they become rude and unfriendly to the students. There is the need for the institution to employ more qualified people who will help the students in their information seeking.

The researcher believes that implementation of these recommendations by the University authorities will go a long way to ensure that they have the needed information for their academic works.

5.7 Theoretical interpretations of the findings

5.7.1 Intervening variables (Challenges)

Wilson indicated that in the course of a person seeking information, he or she may encounter challenges he called intervening variables and this will prevent the person from seeking information. Wilson mentions five main barriers that a person may encounter. These are psychological, demographic, role related or interpersonal, environmental and characteristics of the sources. These factors can either reinforce or limit the use of information. The study revealed that the problems graduate students encountered in looking for information were mostly environmental. The main environmental factors were mostly technological such as inadequate computers, unstable internet connection, the need for passwords to access information and low internet speed. In addition, they faced certain source characteristics including unfriendly library staff, outmoded library materials and inadequate computers. Also, they faced certain personal characteristics such as lack of skills to search e-resources. These factors prevented the graduate students from seeking information in the library to satisfy their information needs confirming the intervening variables mentioned in Wilson's (1999) theory.

5.7.2 Information seeking behaviours (Activating mechanisms)

Information seeking takes place when one recognizes that his or her state of knowledge is inefficient to cope with the task on hand. The theory identified four types of information seeking behaviours as: passive attention, passive search, active search and ongoing search. Information-seeking is part of information behaviour (Wilson, 2000; Fourie, 2006). Passive information-seeking occurs when individuals decide not to seek information, or may be unaware of the fact that they need information. On the other hand, active information-seeking takes place when

people do everything in their power to seek information and ongoing search is continuously undertaken to develop an area of interest. This theory is linked to the findings as follows:

I. Active searching

Active searching identified in the study include: browsing books on library shelves, looking for information to update lecture notes, seminar presentations and completion of assignments, and use of the library catalogue.

II. Ongoing search

Ongoing research relate to looking for information for research. Some of the students indicated that they look for information for research purposes

III. Passive searching

Passive search can be referred to as unintended information acquisition that is when a person acquires information without actively looking for it (Wilson, 1997). The findings revealed that few of the graduate students engaged in passive search by watching television and listening to radio.



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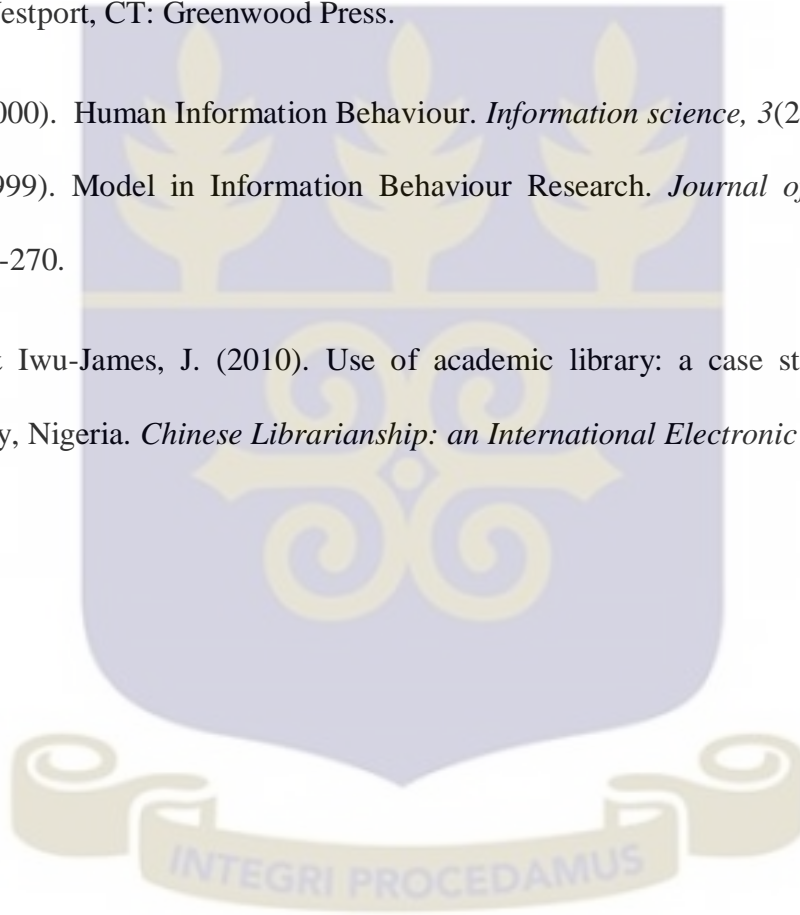
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CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter presents the summary of findings, draws conclusion from the key findings and offers a set of recommendations based on those findings.

6.2 Summary of findings

The study investigated the information needs, sources of information, information seeking behaviours and barriers to information-seeking of graduate students of UPSA and makes recommendations based on the findings for effective information provision for them. The objectives of the study was to identify the information needs of graduate students, the use of the library among graduate students, sources of information, information seeking behaviours, and challenges that graduate students encounter in seeking information. The findings include:

6.2.1 Information needs

The main information needs of graduate students of the University of Professional Studies revealed in the study relate to career development, self-development, employment, current affairs and course work such as completing assignments, updating lecture notes, working on their project and research. Other information needs are politics, recreation, health, religion and information on higher education and course work. These needs identified may help librarians to order materials that will meet the needs identified from the study so as to serve the users better.

6.2.2 Information seeking behaviours

The students used all the three types of information seeking behaviours identified by Wilson (1999) namely active, passive, and ongoing research. The findings revealed mostly active information seeking behaviours such as searching for information via OPAC electronic databases, using Google and Yahoo to browse the Internet, asking friends/colleagues and supervisors, reviewing articles, and making photocopies of relevant information. Passive information seeking includes watching TV and listening to the radio. Ongoing information seeking includes looking for information for research and projects.

6.2.3 Sources of information

The findings revealed 4 main categories of information sources, interpersonal, electronic, mass media and print sources.

- I. Interpersonal sources – They include colleagues, friends, library staff, experts in the field, lecturers, and supervisors.
- II. Electronic sources – They include Internet sources such as Google, Yahoo, Bing, YouTube; CD-ROMs; academic databases such as Emerald, Wiley, J-Stor, etc., other e-resources including e-books, e-magazines, e-newspapers and e-images.
- III. Print sources- They include textbooks, lecture notes and handouts, dissertations, journal articles, reference materials such as encyclopedias, handbooks and dictionaries, and research reports.
- IV. Media sources - These are TV, radio and newspapers.

These sources identified will help librarians to provide the accurate sources so as to meet the students' information needs. The students used both the print and electronic sources for their research.

6.2.4 Library use

The findings revealed low library patronage. Over 18.0% use it daily and 35.7% use it three times a week. They visit the library for different purposes, such as studying for examinations, independent learning/reading, completing assignments, updating lecture notes, working on projects/theses, accessing the Internet, and looking for personal information. This will help the librarian to make those facilities available so as to motivate students to go and use the library. Offering of these resources by the information professional ensure high patronage of the library.

6.2.5 Challenges of information seeking

The challenges encountered in their information seeking are mostly technological. They include unstable internet connection, need for password to access information, low Internet speed, information overload, lack of skills for accessing e-resources, and inadequate computers. Other challenges are frequent power cuts, outmoded library materials, and unfriendly and inadequate library staff. These challenges may pose difficulties to the librarian as well as the staff.

6.3 Conclusion

The study investigated the information seeking behaviour of graduate students at UPSA. The findings revealed that their information needs are largely cognitive as students. They use both electronic and print resources but not without challenges. It is obvious that the students have a preference for electronic resources, especially Internet sources, considering the fact that most of

the challenges they articulated are technologically related. It is important for the university authorities to address these challenges so that the information needs of students are fully met.

6.4 Recommendations

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

6.4.1 Improvement of infrastructure

The findings revealed that majority of the respondents use the Internet as their main source of information for their research and course work. Therefore, there is the need for the improvement of infrastructure in UPSA to facilitate easy access and retrieval of relevant information from the electronic databases. There is the need for authorities to provide the necessary infrastructure that will help the graduate students to access the Internet and the academic databases provided in the library. There is the need for continuous maintenance of system, library dedicated server must be installed and the speed of the server must be upgraded. There should be provisions for more computers and increased Internet bandwidth to alleviate the challenges of slow Internet speed. These will improve accessibility of e-resources thereby making graduate students more knowledgeable and to produce quality research work that will contribute to the development of the country, Ghana.

6.4.2 Information Literacy Skills

Information literacy programmes will help the graduate students in identifying and selecting the appropriate information resources. The graduate students must attend information literacy programmes in order to be aware of all the electronic resources that are important for their research work to be informed about different information resources, such as the print, electronic,

interpersonal and internet sources, techniques of using those sources, evaluation and the ethical principles in the use of these sources, and to acquire the requisite search skills needed to use the electronic resources, since most of the respondents indicated that they lacked the skills for searching electronic resources. This information literacy programme must be well-organized by the librarian in conjunction with the Graduate School for a wider and greater impact on the students

6.4.3 Awareness of the library

There is the need for the library to create awareness of the services and resources available. The findings revealed low library patronage. The library must aggressively promote its resources and services by adopting new marketing strategies such as use of social media (examples whatsapp, facebook, twitter, linkedIn, etc.), considering the fact that the students have a preference for using Internet in their information seeking. Also, the graduate students must be encouraged to attend the information literacy programme that will be organized by the library to increase their awareness of the electronic resources and how to use them for their research work.

6.4.4 Training

The findings revealed inadequate and unfriendly library staff. There is the need to train the library staff to acquire good interpersonal and customer service skills so that they are approachable, friendly, and helpful to students in their information seeking.

6.4.5 Enhancement of collection

The findings revealed that the library materials are outmoded. The university must therefore provide the library with more funds to update the collection with current materials to meet the

information needs of students and to increase patronage of the library. The library must invest in more print collection as well as electronic collection including electronic databases. This enhancement of collection can be done by consulting with students and lecturers for recommended materials needed to develop and update collection for greater benefit to all patrons.



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APPENDIX

**QUESTIONNAIRE FOR UNIVERSITY OF PROFESSIONAL STUDIES, ACCRA
(UPSA)**

I am Kwesi Gyesei, a student at the Department of Information Studies, University of Ghana, Legon conducting a study entitled: **INFORMATION SEEKING BEHAVIOUR OF GRADUATE STUDENTS OF UPSA** as part of the requirement for the award of a Master of Philosophy (MPhil) degree in Information Studies. I would be very grateful if you could spare some few minutes to answer the questions below to the best of your ability. Please be assured that your responses are completely anonymous and would be used solely for academic purposes. Your co-operation is fully appreciated. Thank you.



Please tick (✓) the appropriate answers or provide information where necessary.

SECTION A

Background Information

1. Gender

a. Male []

b. Female []

2. Age

a. 20 - 29 []

b. 30 - 39 []

c. 40 - 49 []

d. 50 and above []

3. What is your programme of study? (eg. MBA Marketing, etc)

.....



SECTION B

Information need

4. For which of these purposes do you look for information? (Please tick as many as applicable)

- | | | | |
|------------------------------------|--------------------------|----------------------------------------|--------------------------|
| a. Current affairs | <input type="checkbox"/> | b. Career development | <input type="checkbox"/> |
| c. Self-development | <input type="checkbox"/> | d. Employment | <input type="checkbox"/> |
| e. Entertainment | <input type="checkbox"/> | f. Recreational activities | <input type="checkbox"/> |
| g. Higher education | <input type="checkbox"/> | h. Global information (eg. World news) | <input type="checkbox"/> |
| i. Research | <input type="checkbox"/> | j. Politics | <input type="checkbox"/> |
| k. Health, and football | <input type="checkbox"/> | l. Course work | <input type="checkbox"/> |
| m. Sports. | <input type="checkbox"/> | n. Religion | <input type="checkbox"/> |
| o. Any other (please specify)..... | | | |

5. Which of these methods do you use to locate information? (Please tick as many as applicable)

- | | | | |
|-----------------------------------------------------------------------|--------------------------|------------------------------------|--------------------------|
| a. Look for information myself | <input type="checkbox"/> | b. Ask a colleague | <input type="checkbox"/> |
| c. Review articles | <input type="checkbox"/> | d. Consult my supervisor | <input type="checkbox"/> |
| e. Use library catalogue | <input type="checkbox"/> | f. Consult the reference librarian | <input type="checkbox"/> |
| g. Consult knowledgeable person in the field <input type="checkbox"/> | | | |
| h. Any other (please specify)..... | | | |

Library use

6. How often do you visit the library? (Please choose one)

- | | | | |
|------------------------|--------------------------|------------------------------------|--------------------------|
| a. Daily | <input type="checkbox"/> | b. Four times a week+ | <input type="checkbox"/> |
| c. Three times a week+ | <input type="checkbox"/> | d. Twice a week | <input type="checkbox"/> |
| e. Once a week | <input type="checkbox"/> | f. Occasionally | <input type="checkbox"/> |
| g. Never | <input type="checkbox"/> | h. Any other (please specify)..... | |

7. For what purposes do you visit the library? (Please tick as many as applicable)

Independent learning/reading	<input type="checkbox"/>	To study	<input type="checkbox"/>
Look for information for home work/assignment	<input type="checkbox"/>	Study for examination	<input type="checkbox"/>
Work on class presentation/seminars	<input type="checkbox"/>	Update lecture notes	<input type="checkbox"/>
Access information for project work/ thesis	<input type="checkbox"/>	Use computers	<input type="checkbox"/>
Personal information (eg. Health and wellness)	<input type="checkbox"/>	Use the internet	<input type="checkbox"/>
Interest-based information (eg. Play games, watch movies/videos/sport, etc)	<input type="checkbox"/>	Make photocopy/print	<input type="checkbox"/>
Check on new arrivals	<input type="checkbox"/>	Borrow books	<input type="checkbox"/>
To read journals, newspapers or magazines	<input type="checkbox"/>		<input type="checkbox"/>

Any other (please specify).....

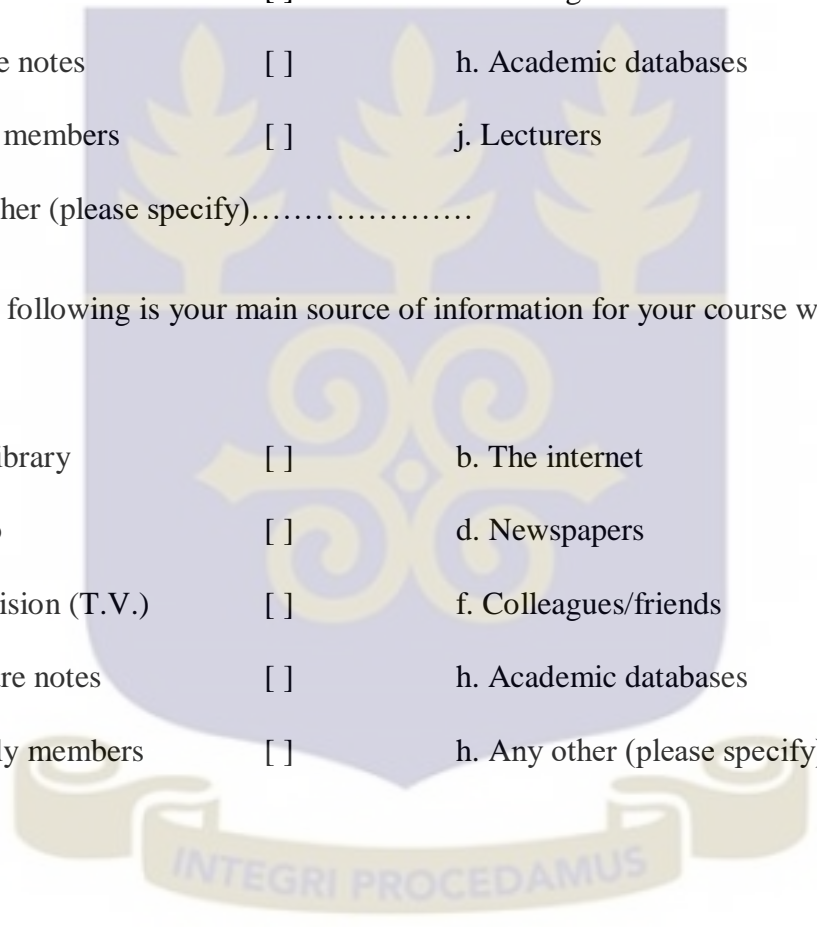
Sources of information

8. Which of the following sources do you normally use to obtain information? (Please tick as many as applicable)

- | | | | |
|------------------------------------|--------------------------|-----------------------|--------------------------|
| a. The library | <input type="checkbox"/> | b. The internet | <input type="checkbox"/> |
| c. Radio | <input type="checkbox"/> | d. Newspapers | <input type="checkbox"/> |
| e. Television | <input type="checkbox"/> | f. Colleagues/friends | <input type="checkbox"/> |
| g. Lecture notes | <input type="checkbox"/> | h. Academic databases | <input type="checkbox"/> |
| i. Family members | <input type="checkbox"/> | j. Lecturers | <input type="checkbox"/> |
| k. Any other (please specify)..... | | | |

9. Which of the following is your main source of information for your course work? (please choose one)

- | | | | |
|----------------------|--------------------------|------------------------------------|--------------------------|
| a. The library | <input type="checkbox"/> | b. The internet | <input type="checkbox"/> |
| c. Radio | <input type="checkbox"/> | d. Newspapers | <input type="checkbox"/> |
| e. Television (T.V.) | <input type="checkbox"/> | f. Colleagues/friends | <input type="checkbox"/> |
| g. Lecture notes | <input type="checkbox"/> | h. Academic databases | <input type="checkbox"/> |
| i. Family members | <input type="checkbox"/> | h. Any other (please specify)..... | |



10. Which of these library resources do you consult for your academic work? (Please tick as many as applicable)

- | | | | |
|----------------------------|--------------------------|------------------------------------|--------------------------|
| a. Printed textbooks | <input type="checkbox"/> | b. Lecture notes & handout | <input type="checkbox"/> |
| c. Dictionary/encyclopedia | <input type="checkbox"/> | d. Printed thesis/dissertation | <input type="checkbox"/> |
| e. Reference materials | <input type="checkbox"/> | f. Newspapers | <input type="checkbox"/> |
| g. Printed pamphlets | <input type="checkbox"/> | h. Printed journals | <input type="checkbox"/> |
| i. Handbooks | <input type="checkbox"/> | j. Academic databases | <input type="checkbox"/> |
| k. Research reports | <input type="checkbox"/> | l. Any other (please specify)..... | |

11. Which of these internet sites do you access information for your academic work? (Please tick as many as applicable)

- | | | | |
|------------------------------------|--------------------------|------------|--------------------------|
| a. Google | <input type="checkbox"/> | b. Yahoo | <input type="checkbox"/> |
| c. Google scholar | <input type="checkbox"/> | d. Ask.com | <input type="checkbox"/> |
| e. YouTube | <input type="checkbox"/> | f. Bing | <input type="checkbox"/> |
| g. Any other (please specify)..... | | | |

12. Which of these electronic sources do you use for your academic work? (Please tick as many as applicable)

- | | | | |
|----------------|--------------------------|------------------------------------|--------------------------|
| a. CD-ROMs | <input type="checkbox"/> | b. E-books | <input type="checkbox"/> |
| c. E-journals | <input type="checkbox"/> | d. E-newspapers | <input type="checkbox"/> |
| e. E-magazines | <input type="checkbox"/> | f. E-images | <input type="checkbox"/> |
| g. E-audio | <input type="checkbox"/> | h. Any other (please specify)..... | |

13. Which of these academic databases do you use as a source of information for your academic work? (Please tick as many as applicable)

J-Stor		Emerald	
Wiley		EBSCOHost	
Beech tree publication		Annual reviews	
Mary Ann Liebert		Taylor and Francis	
National Academic Press		Directory	
Policy press			

Any other (please specify).....

Information seeking behaviour

14. Which of these activities describe some of the methods you employ in looking information? (Please tick as many as applicable)

Browse books on the shelf		Use Google	
Search the manual catalogue		Use OPAC	
Search electronic databases		Browse the internet	
Inquire from fellow students		Inquire from lecturers	
Ask the reference librarian		Reading required textbook	
Going through and accessing references at the end of journal articles			

Any other (please specify).....

15. How often do you use the electronic databases? (Please choose one)

- a. Never b. Occasionally
c. Frequently d. Daily
e. Any other (please specify).....

16. How would you describe the satisfaction with your electronic database searches? (Please choose one)

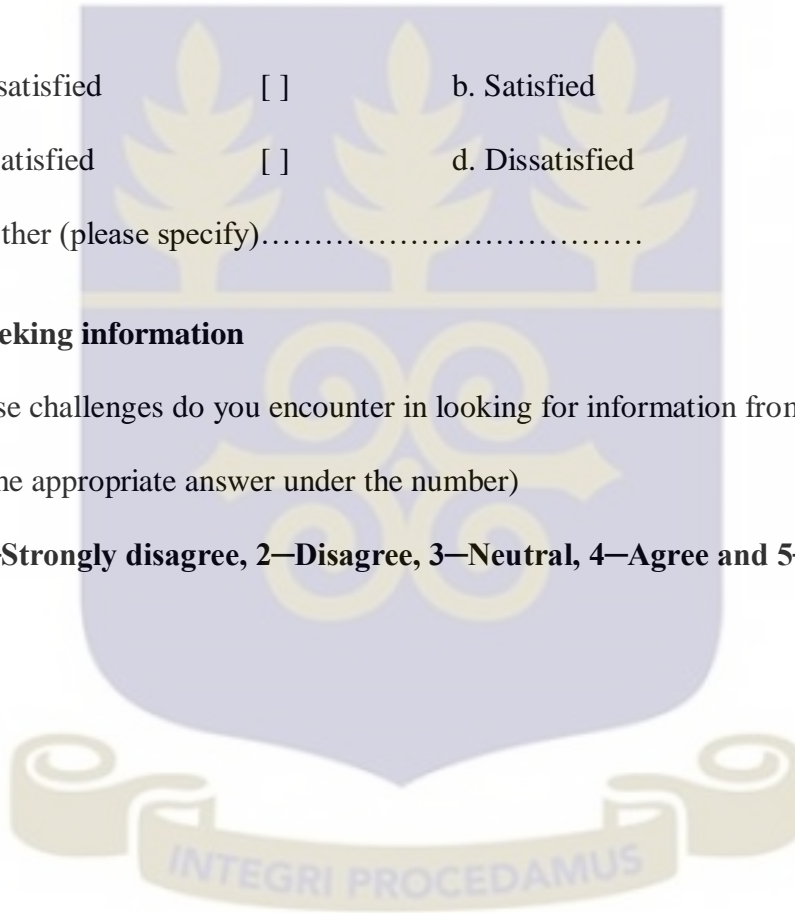
- a. Very satisfied b. Satisfied
c. Less satisfied d. Dissatisfied
e. Any other (please specify).....

Challenges of seeking information

17. Which of these challenges do you encounter in looking for information from your library?

(Please tick the appropriate answer under the number)

Using 1—Strongly disagree, 2—Disagree, 3—Neutral, 4—Agree and 5—Strongly agree.



Challenges of seeking information	Strongly disagree			Strongly agree	
	1	2	3	4	5
Unstable internet connection					
Inadequate search skills					
Restrictive opening hours					
Computer viruses					
Frequent power cuts					
Inadequate information materials					
Don't know how to use the e-resources					
Low internet speed					
Too much information					
Out-dated library materials					
Lack of time					
Inadequate computers					
The need for passwords to access information					
Negative attitude of library staff (eg. Rude, unfriendly, not helpful)					
Inadequate library staff to consult					
Unavailability of library staff					

Any other (please specify).....

Recommendations for improving access to information

18. What is your general recommendation(s) for improving access to information in your institution?

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19. Any other information to be provided.

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Thank you for taking the time to complete this questionnaire