UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

ASSESSING THE USE OF JOURNALS AND FORMATS PREFERRED BY POSTGRADUATE STUDENTS OF MAKERERE UNIVERSITY

Mini-dissertation

By

RACHEAL NABBOSA

Student Number: **U13344341**

Submitted in partial fulfilment of the requirements for the degree of

MASTER OF INFORMATION TECHNOLOGY
(STREAM B: CARNEGIE)

in the
School of Information Technology
of the
Faculty of Engineering, Built Environment & Information Technology

UNIVERSITY OF PRETORIA

Supervisor: Peter G. Underwood
November 2015

DECLARATION

I, Racheal Nabbosa declare that this mini dissertation, submitted by me, is my own work, I have referenced all sources used and that no part was previously submitted at any tertiary institution.

DEDICATION

This dissertation is dedicated to my mother Catherine Nayiga Kamya

ACKNOWLEDGEMENT

I'm grateful to the almighty God for his goodness and giving me this opportunity and helping me to successfully pursue and complete the Maters in Information Technology. I specially thank my study leader Peter G. Underwood for the continual guidance and direction that led to successful completion of this mini dissertation.

I thank the Carnegie Corporation of New York and the University of Pretoria for selecting me to be part of this programme and for the scholarship that enabled me to pursue the program. I'm also grateful to Makerere University Library management for recommending me and providing the necessary time to full completion of the Masters programme.

Thanks to all my colleagues with whom we pursued the same course of study for all the support and collaboration.

Thanks to my family members and friends especially Caroline Ilako, Lydia Namugera, Patience Atim and former M.IT students that I work with for all the support you've given me through out this programme.

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

Maklib: Makerere University Library

TABLE OF CONTENTS

ABSTRACT

Academic libraries are focused towards effective information provision that is necessary for teaching, learning and research. Makerere University Library (Maklib) is no exception as it has strategies towards effective provision of information resources. Journals are some of the resources that are provided by the library to support teaching, learning and research and they are provided in two formats: namely, the electronic format and the print format. This research attempted to investigate whether postgraduate students use these journals and the formats they prefer to access.

Research was conducted involving 114 postgraduate students using questionnaires as the data collection tool. Qualitative data was collected, analysed using Google Forms and presented in graphs, tables and text.

Findings revealed that most postgraduate students are aware of the existence of journals provided by the library although some expressed a lack of awareness. Further still they use the journals provided and most of them have preference for the electronic format of journals. However it was also revealed that access was hindered by several factors such as long procedures to access the library.

Recommendations that need to be adopted by Maklib are also discussed such as increasing on awareness campaigns, continuous training of students and staff and providing the necessary infrastructure to enhance access to the journals.

Key words: Journals; Journal formats; Print journals; Electronic journal

CHAPTER ONE

INTRODUCTION AND OVERVIEW

1.1 Introduction

Information materials are very important for research because one is able to identify gaps created which leads to new research; libraries usually budget for different kinds of information materials one of which are journals. Journals are very important whilst conducting research because they provide current information therefore informing researchers of new developments in a particular field (Reitz 2013). Provision of journals by academic libraries is becoming a prerequisite as universities are in the pursuit of being the leading research institutions; therefore libraries prioritise journals when making their budgets. However the question is: do researchers use those journals?

Eason, Richardson and Yu (2000, p. 478) stated that journal use was hard to monitor by libraries therefore scholarly communication relied greatly on citation analysis, questionnaires, interviews and observation to study journal use; however logging software has also greatly improved monitoring of journal use. According to the survey carried out by Monopoli et al. (2002), they found out that the frequency of daily use of journals was 36.8%, 41.9% weekly, and 10.6% monthly. Results also showed one of the groups with highest proportion of use was postgraduate students.

There are several reasons for journal use as found out by Monopoli et al. (2002) some of which are: writing papers for projects and theses, writing research publication papers, keeping up progress in the field and supporting lecturers. Eason, Richardson and Yu (2000) suggested eight categories of journal users namely: searcher, enthusiastic, focused, occasional, restricted, lost,

exploratory and tourist. However students searching behaviour is greatly influenced by internet search engines: Griffiths and Brophy (2005, p. 550) concluded from their research that:

- Students prefer to use search engines of which Google is the favourite
- Use of academic resources is low
- Students find it difficult to locate information resources yet they may exchange quality for quick results
- Search engines influences their perception of search databases.

Therefore libraries must seek how to efficiently provide information to users that complements the internet search engines.

Academic libraries are faced with a dilemma of choosing which journal format best satisfies their users due to budget cuts. There is an assumption that electronic versions are better than print versions though in some cases the print is preferred. When Monopoli et al. (2002) carried out their research it was found that 69.5 % preferred the electronic version of the journals to the print version, the reasons being ease of use, quick to access, easily searched, information can be saved and manipulated, while 17.5% preferred print because of familiarity and easy to read version; yet, users do not always have literacy and time to search the internet. The reasons given by users show that both versions are important as preferences depend on who is using the journals.

As Makerere University aims at being the leading research university in Africa, Makerere University Library (Maklib) has a mandate to provide students, researchers and staff materials that will boost research and therefore intellectual life of the University (Makerere University, 1970). These information materials should be provided in the format that is needed which boosts the use and therefore the utilisation. This therefore boosts Uganda's innovation as Makerere University aims at providing teaching, learning and research services in response to national and global needs (Makerere University 2007). This research will contribute greatly to the vast knowledge out there concerning the use of journals and the preferred formats and how libraries should best provide those journals for their users.

1.2 Background

Academic libraries spend a big part of their budgets on providing information materials of which journals are a part; this is the case with Makerere University Library (Maklib). However librarians are faced with a challenge of what to buy on behalf of the institution due to the changing information environment (Pullinger 1999, p. 164). This also concerns the journal formats subscribed to by the Library. The purpose of providing journals is to help students, staff and researchers in enriching their literature review and finding new development in their fields; however some resources provided by Maklib are not fully utilised as found out by Kakai (2003). Postgraduate students at Makerere University are more in need of journals than undergraduate students who usually depend on their lectures. Therefore the researcher seeks to find out through this research whether journals are used by postgraduate students of Makerere University and their preferred format of access.

Journals in Maklib are under the management of the periodicals section of the Main Library. Print journals are housed in the periodicals section of the main library as well as college libraries. Electronic journals are hosted on the library website and can be accessed anywhere across the University. According to the Periodicals section report subscriptions to print titles have been reduced from 56 titles in 2014 to 27 titles in 2015 (Maklib 2014; 2015). Money spent on print titles subsequently reduced from $16,810 to $5,885 in 2015 (Maklib 2014; 2015). The selection criteria in this case are those journals that are not available in electronic format. Electronic database subscriptions are done by the Consortium of Uganda University Libraries (CUUL) and the subscription for 2015 cost $68,646 (Maklib 2015). This shows that the library is slowly reducing money spent on print in favour of electronic journals.

1.3 Aim of the research

Provision of access to information resources is a prerequisite for libraries. According to Maklib Strategic Plan (2007), Maklib is tasked to support the University community through efficient provision of information resources which constitute a percentage of the Library's budget. The library subscribes to print and electronic journals simultaneously which leads to spending double for a title that could be accessed in one format. Therefore, there is need to find out which format best serves users.

While working in the periodicals section of Maklib the researcher observed that print journals were purchased by the library but not fully used by students: one would think that the reason was that students preferred electronic journals. However working with the postgraduate students in the Research Commons also revealed that many of them were not fully utilising the electronic journals that were made available by the library as affirmed by Kinengyere (2007). The researcher therefore decided to investigate the use of journals and preferred format by postgraduate students of Makerere University. This research was intended to identify the different journal formats that postgraduate students accessed.

1.4 Research question

The question the researcher seeks to answer through this research is whether journals are used by postgraduate students of Makerere University and what is their preferred format of access?

This was addressed using the sub-questions below:

1.4.1 Sub questions

     1. Are postgraduate students aware of journal availability in the library?

     2. In what ways do they use the journals?

     3. Which format of journals do they seek in the Library?

     4. How do they use the different formats in different contexts?

     5. Why do they use the specific formats?

     6. How does the Library support access to the specific formats?

1.5 Objectives of the research

In order to achieve the aim of the research, the following objectives were identified:

- To assess awareness of journals among postgraduate students
- To assess use of journals among postgraduate students
- To identify the journal formats preferred by postgraduate students

4

1.6 Rationale/ Justification of the research

The research findings could be useful to;

a) Librarians who work with postgraduate students by gaining an understanding of students preferred journal formats they will be able to enhance access and guide students better

b) Periodicals section and Book bank sections that are involved in acquisition of print and electronic materials: will have a better selection criteria of the journal formats

c) Library management that makes the final decision in spending money of print and electronic materials: will know where to spend more funds

1.7 Methodology

The research study was qualitative in nature since it was aimed at getting an understanding of journal usage and preferences of journal formats. The research followed the interpretive paradigm as it emphasises perception to the social world but also allows respondents to express themselves through data collection instruments (Oliver 2010).

1.7.1 Scope of the research

The research was conducted in Kampala, Uganda, at Makerere University Main Library and the ten college libraries across the University. Eight of the college libraries are situated on the main campus and two off campus. The reason for choosing these libraries was:

- Postgraduates usually visit the libraries while accessing resources because libraries offer quiet space therefore it was easy to contact them

- In Maklib, the libraries have adequate infrastructure such as computers and internet which is a requisite for accessing online resources.

5
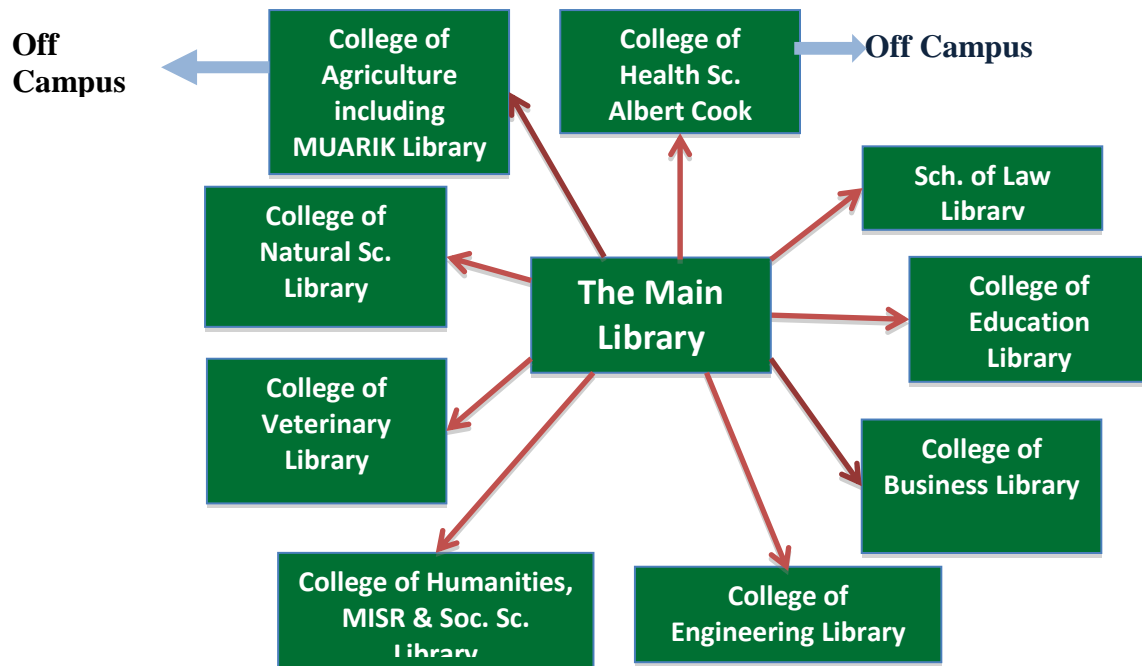
Figure 1.1: Structure of Makerere University Library service (Namaganda & Sekikome 2011)

1.7.2 Population and sampling

The population of this research study was postgraduate students of Makerere University. Quota sampling strategy was followed by the researcher through approaching respondents from the main library and the ten college libraries. This sampling strategy was used so as to involve postgraduate students from all colleges of the University as it helps include diverse elements of the population (Hoyle, Harris, and Judd 2002, p. 186).

1.7.3 Data Collection Methods

A questionnaire was used to get feedback from postgraduate students. Questionnaires were distributed to postgraduate students in the Main Library and ten college libraries on the University. Questions were both closed ended and open ended. Closed ended questions gave respondents a chance to choose from the list while open ended questions gave them liberty to express their views about journals.

6

1.7.4 Data Analysis and Presentation

Data collected was coded, analysed and interpreted by the researcher with the help of Google Forms so as to make sense and meaning out of it.

1.8 Value of the research

The significance of this research includes:

- Results of this research will help guide information professionals on how to customize trainings on journal access and usage so as to suit the needs of the students. This will ensure that postgraduate students fully utilize journals depending on their needs and therefore improve the quality of research output on the University
- The research study could furthermore be used as a guide for selecting different journal formats
- Findings from this research could also be used for continuous education of librarians working with journals
- Findings from the research will be used by the library management for efficient budgeting

1.9 Definition of key terms

Journal: refers to a periodical devoted to disseminating original research and commentary on current developments in a specific discipline, sub discipline, or field of study (Reitz 2013). Journals also refer to continuing resources issued in a succession of discrete parts, usually bearing numbering, that has no predetermined conclusion (American Library Association 2002: Appendix D-7).

Print journals: refers to journals issued in paper format.

Electronic journals: refers to journals that are issued in electronic format.

Journal format: in this mini-dissertation journal format will refer to the method of access of the journal either print or electronic.

Postgraduate students: these refer to university students who are pursuing their postgraduate diploma, masters or doctoral studies.

1.10 Division of chapters

Chapter one: is an introduction to the research, it includes the research question and sub-questions. It also gives the scope and, limitations of the study, justification and value of the study plus clarification of key terms used in the study.

Chapter two: covers review of the existing literature on the following aspects; use of journals, relationship between libraries and journals, the transition from print to electronic journals, student searching behaviour of journals, students' preferred journal formats, use of journals and journal formats in academic institutions in Uganda and finally in Makerere University.

Chapter three: discusses the research methods used in the research, this consists of the research paradigm, research design, population and sampling methods; data collection instruments and processes.

Chapter four: is a presentation of research findings and discussion of the findings from the data collected.

Chapter five: covers researcher's conclusions and recommendations from the research basing on the findings discussed in chapter four.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature reviewed in relation to this study. Topics covered in this chapter include: Definition of journals, use of journals, libraries and journals where the researcher discusses how libraries view journals, how journals transitioned from print to electronic journals, student searching behaviour, student journal preferred formats and use of journals in academic institutions.

2.2 Definition of Journals

According to Reitz (2013) "journals refer to periodicals devoted to disseminating original research and commentary on current developments in a specific discipline, sub discipline, or field of study". The disciplines could be academic or non academic, depending on the purpose. Journals usually have articles from several contributors and put together by editors. They are published in several sequences such as monthly, bimonthly, annually, weekly and so on. According to the Anglo American Cataloguing Rules (AACR2) these are issued in "succession of discrete parts, usually bearing numbering, that has no predetermined conclusion" (American Library Association 2002: Appendix D-7 2002). Examples of journals include magazines, yearbooks, and scholarly journals, to mention but a few. Journals are published in two formats: namely, print format -- that is, paper format -- and electronic format on different platforms such as online through journal databases, CD-ROMs and other platforms.

2.3 Use of journals

Use of journals by library patrons depends on many factors, such as what kind of information is being sought, if it is available in the library and how easy it is to access. Sathe, Grady and Giuse (2002, p. 235) did a month-long study about the use of print and electronic journals where they found that students mostly used electronic journals whereas faculty mostly used print journals. They further discovered that with print journals articles were read directly or scanned but electronic journals articles and references were printed.

Journal use is by all categories of people carrying out research, such as postgraduate students, lecturers and any other researchers. Some researchers have found that doctoral students are the most persistent users of journals among students: Kumar and Dora (2011, p. 32), in their study of citation of doctoral dissertations submitted at Indian Institute of Management during the period 2004 to 2009, show that journals are the most cited sources according to the pattern of use.

However faculty members are also users of journals: Tenopir et al., (2009, p. 5) found out through their study that the average number of journals read by faculty members increased each year. This was assumed to be attributed to the emergence of electronic journals. Also Ollé and Borrego (2010, p. 221), state that researchers are reading more and need to learn how to decide what to read. However, access of electronic journals is increasing and they are making fewer library visits. This study will focus on the use of journals by postgraduate students of Makerere University.

The use of journals has always been associated with awareness. A survey by Khan and Ahmad on the use of e-journals at the Aligarh Muslim University and Banaras Hindu University revealed that most scholars are aware of journals and use them as reference for their research and that this improves the quality of research (Khan & Ahmad 2009, p. 708).

2.4 Libraries and journals

Libraries build collections of information sources and therefore gather this information for users through collection development. Journals have become a major part of research and, therefore, most libraries subscribe to them. Choosing which journals to subscribe to by the library is not easy: therefore librarians are faced with the challenge of choosing journals on behalf of the academic environment (Pullinger 1999, p. 164). However they can only subscribe to those that are relevant to the community they serve.

Due to financial pressures, libraries are forced to have priorities in journal collections: several methods, such as studying usage of journals in relation to research output, are used to make decisions (Kumar & Dora 2011, p. 32). Further still, the price comparison between individual journal subscriptions and the equivalent title in an electronic format predicates the development of a management strategy to determine whether both formats should be acquired or whether one format should be preferred (Gyeszly 2001, p.5). Libraries would gladly subscribe to both journal formats but, due to budget cuts and increasing financial challenges, there is increasing pressure to evaluate journal collections (Kumar & Dora 2011, p. 32). Moreover Frazer and Morgan (1999, p. 1) reasoned that even if library funding increases it cannot catch up with the increasing periodical subscription prices.

In this case libraries need to assess the use of journals in their collection to ascertain their relevance. There are several methods used in carrying out usage studies which include; reviewing usage statistics of online journals, tagging journals, questionnaires, circulation statistics of bound journals and citation analysis helps identify core journals in the library collection (Kumar & Dora 2011, p. 32; Nisonger 2007, p. 51)

Librarians are interested in maximum use of journals since they comprise a large proportion of the library budget. Pullinger (1999) discovered several promotion methods used by librarians, including training, mugs with web address, newsletters, subject librarians, user guides, online tutorials, posters, integration of journal links into the OPAC, among others (Pullinger 1999, p. 165); email alerts are also widely used to inform users about the availability of journals (Ollé & Borrego 2010, p. 227). All these are methods aimed at increasing the use of journals and

therefore realising their value. With the increase in electronic journal availability, services have been put up by libraries to guide users to electronic journals: for example, current awareness services, abstracting and indexing (Pullinger 1999, p. 164).

The current dilemma for most libraries is whether it is necessary to keep the same information in different formats: that is, subscribing to the same journal titles in both print and electronic formats. For many years, libraries have acquired the same information in different formats (for example, newspapers in print and microfilm) as they assessed the advantages or disadvantages of several formats and decided to keep both (Mapel, Wright & Seeds 2003, p. 425). Duplication of formats is a complicated issue in academic libraries due to static budgets, rise in user expectations and unstable publisher and vendor prices (Mapel, Wright & Seeds 2003, p. 425). It was discovered by librarians that print journal use varies according to subject disciplines: Pullinger (1999) stated that "there is a widespread variation in use of print between subject disciplines and it is likely that such variation would drive different requirements for, and use of e-journals" (Pullinger 1999, p. 165). However the cost of maintaining print collections is high: for example the cost of binding journals is more than shrink wrapping (an experimental technique of journal preservation tried by a few academic libraries in the United States of America) or other preservation methods; the same high cost is apparent when shelving space is considered (Mapel, Wright & Seeds 2003). Therefore, some cancellations are frequently made through the collection after evaluation (Mapel, Wright & Seeds 2003, p. 438). Makerere University Library is one of the libraries with dual format subscriptions amidst the financial pressures and there is need to know which format is most preferred by students.

In the end libraries are asking themselves the following questions: "If we substitute electronic for print, how can we guarantee long-term access to the content? How can we make any reasonable decisions without good usage statistics for electronic resources? Would we really be saving money? What are the actual costs of print versus electronic content? How would we manage archival decisions for our print content?" (Mapel, Wright & Seeds 2003, p. 428).

2.4.1 Transition from print to electronic

Journals are important in academic research, because they show the background of the topic and future research opportunities in that topic; however, use of these journals varies depending on several factors. According to Pullinger (1999, p. 164) the use of academic journals depends on many factors like subject discipline, local environment of print, awareness of the journals and information needs. The use of electronic journals is affected by users' awareness. According to Condic (2004, p. 9) most students who participated in the survey were satisfied with the library collections, including electronic journals, but most of those that had not gone through library instruction had never used the library resources.

Journal use has improved as Tenopir et al., (2009, p. 5) found that the average number of articles read per faculty member has increased per year but the time occupied in locating journal materials has lessened. Electronic journals seemed to account for this difference; however, scientists still indicate that they make use of the library print collections (Tenopir et al., 2009). Online searching has increased and electronic publishing has changed information seeking (Tenopir et al., 2009, p. 28). In this case researchers are tending to use electronic journals more than print.

One of the ways of assessing journal use is through usage statistics. Ollé & Borrego suggest that this is not necessarily easy: "However, at a time when print and electronic journals coexist in academic libraries, usage statistics are still difficult to interpret" (Ollé & Borrego 2010, p. 221). Therefore, it is hard to tell which format of journals is most used. However increased availability of electronic journals has led to an increase in articles read and the range of journals used. The increased reading, improved discrimination skills and time saved in library visits can be invested in more research (Ollé & Borrego 2010, p. 226). There are several reasons why some users are tending to prefer electronic to print sources. Virtual library and 24 hour access has made users rely more on electronic journals whereas print journals are checked out for a period of time (Gyeszly 2001, p. 5). This aim of this research is to find out which format is preferred by post graduate students of Makerere University.

According to findings by Gyeszly (2001, p. 10), there was insufficient evidence that electronic journals are more used than print. Furthermore, some databases such as Elsevier do not allow cancellation of print subscriptions. Therefore, libraries have to continue with both print and electronic subscriptions.

2.4.2 Reasons for use of e-journals

There are many factors affecting the use of e-journals: Pullinger (1999, p. 165) found out several reasons that account for the use of e-journals, including:

- Some journals are not available in print and therefore researchers have to access them electronically

- Library accessibility including opening hours that might not be flexible with researchers' needs and long distance to library to access journals makes accessing them electronically easier

- Promotion of the e-journals through training, posters, links on website, articles in the library newsletter, emails among others. Also as part of promotion librarians have ways of showing users, including but not limited to, integration of journal links in the OPAC and a note on the cover of current issue of print journal showing availability of the electronic

- Some universities support the use of e-journals through managing and maintaining the technical infrastructure centrally, such as computers and necessary software which makes it easier for researchers to access the journals (Pullinger 1999, p.165).

Scientists revealed that there were several reasons for reading articles including research, teaching, current awareness, writing reports, proposals, although reading articles (including those from electronic journals) for research purposes supersedes other reasons for reading (Tenopir et al. 2009, p. 27).

Also the university environment has an influence on reading patterns because there is provision of electronic and print journals collections with the necessary infrastructure so this makes it easy for researchers at a university to access e-journals (Tenopir et al. 2009, p. 27).

Increasing number of electronic articles and the many databases where they can be found makes it easy to locate and read (Tenopir et al. 2009, p.27).

2.5 Student information searching behaviour

Library users seeking information these days use search engines more than the library searching aidsresources as Griffiths and Brophy (2005) state that "Forty-five percent of students use Google as their first port of call when locating information, with the university library catalogue used by 10 percent of the sample" (Griffiths & Brophy 2005, p.539). Much as this study is quite dated, a more recent study conducted by Biddix, Chung and Park (2011) considered how college students evaluate the information from the internet that they choose for academic work. This study revealed that students were quite aware of need for quality but still started with search engines such as Google when locating information before they could use library resources (Biddix, Chung & Park 2011). Therefore if journal databases had simple interfaces like the search engines then students could access them directly without using search engines first during information seeking.

Tenopir et al., (2009) investigated the information seeking patterns of faculty members of science, medical, technology and social science from 1977 to 2008, which is 30 years of data collection. The studies assess how researchers transitioned from use of print to electronic journals while seeking information (Tenopir et al. 2009). They found out that websites are used for one third of the time in seeking information (Tenopir et al. 2009). However, growth of electronic journals and increase in articles published has led to changes in information seeking and reading patterns. Identification of articles has also changed to include online searching, citation links and browsing (Tenopir et al. 2009, p. 26). Interestingly when seeking information from articles, users make use of the library as access of articles is normally through library subscriptions (Tenopir et al. 2009, p. 11). Rarely do users subscribe to databases independently.

There are several views students had about locating information, such as 50% find it easy to locate information, 35% find it hard and 15% had no view (Griffiths & Brophy 2005, p.548). Those that claimed it was easy to locate information stated that it was easy enough to find using a search engine. Those that said it was hard gave comments about the need for someone to create a search engine devoted to articles (Griffiths & Brophy 2005). Biddix, Chung and Park (2011) also found out that search engines were the popular ways of searching for information on the

16

internet. There are reasons that led some people to stop searching, including finding information, failing to find information, and technical problems (Griffiths & Brophy 2005). This shows that searching information does not necessary lead to finding it; sometimes there is difficulty in finding it especially with the complicated tools used.

The above findings reveal that electronic information is easily searched more than print resources therefore this research seeks to find which format the postgraduate students of Makerere University prefer while searching for information from journals.

2.6 Students' preferred journal formats

Studying the students' information seeking behaviours outside the classroom can be useful when addressing some of the learning problems. Students experience behavioural problems both in classroom and outside the class room like the library, art room, and cafeteria. For example, according to Wright (2013, p. 7) there is a correlation between students who actively participate in classroom activities and their preferences for the activities they do outside the classroom, such as in libraries, art rooms and gym. Wright's study attempts to show a connection between class work and library activities though it was not specific on which library activity and also shows that learning is promoted by certain information seeking behaviours. In this study, the research will narrow the study on the correlation between use and the type for journal format preferred by postgraduate students.

De Groote and Dorsch (2003) carried out a survey in the Library of Health Sciences at the University of Illinois, Chicago, to assess the usage of the online resources over the print formats. The overall results indicated that 71% of the respondents preferred online journals over print journals (De Groote and Dorsch 2003, p. 237). Sathe, Grady, and Giuse (2002, p. 235) also concur with De Groote and Dorsch having done a similar study at Eskind Biomedical Library, Nashville, Tennessee. These were major observations though both of these studies are slightly dated, having been conducted almost ten years ago, carried out in USA and only engaging students of Health Sciences. This study will focus on Makerere University postgraduate students. Now, according to the literature reviewed, there is no similar study that has been carried out in Makerere University, nor even in any Ugandan University as a whole.

It is not only in USA where there is a growing interest in electronic journal formats. According to Tyagi (2011, p. 4586-4516) it was discovered that the preference for journal electronic format is related to the discipline and age of the respondents and it is greater among the academic staff. The problem with Tyagi's study is that it encompassed all library users including academic staff, research scholars, postgraduate students and undergraduate students. This study, as mentioned earlier, will focus on journal preference formats among postgraduate students.

Having done a survey on learning needs of students with visual impairment in Zambia Akakandelwa and Munsanje (2012, p. 49) recommended the provision of teaching and learning materials in electronic formats that can be magnified or converted into audio, which eases access to the information therein. This shows that responding to users' needs is important in boosting learning and research. Makerere also admits students with diverse needs; this study will endeavour to investigate the journals formats preferred by post graduate students so as to find ways to satisfy them.

Studying preferred journal formats of postgraduate students stretches further from the library to student research and research grants application. Woodburn (2013, p. 47) while doing his PhD research preferred electronic journals to print because he found print journals so laborious when doing his document analysis compared to digital, which he found easy. Moving on to research grants, some Research grant awarding bodies like Netherlands Organization of Scientific Research (2012, p. 21) specifically prefer some journal formats over others as some formats are considered to have a higher impact factor than others. In this study, special focus will be put on what journal format postgraduate students of Makerere prefer at the different levels such as research, writing papers and course assignments.

Many libraries are retaining two journal formats in their collection development strategies; however the ever rising costs of dual format subscriptions makes this strategy to be seen as unnecessary by some users (Gyeszly 2001, p. 5). Some users wonder why libraries do not just unsubscribe print journals as they can access the same information electronically. However, the academic community including students and faculty argue that a library can have permanent

ownership of the print collection and therefore permanent access whereas that is not the case with the electronic journals. On this note Mapel, Wright and Seeds (2003) state that, "The academic community is still reluctant to give up traditional library volume counts (ownership) in favour of institutional web access to information resources" (Mapel, Wright & Seeds 2003, p. 428).

According to Condic (2004, P. 9) students who had gone through library instruction preferred money to be spent on electronic materials whereas those who had not gone through library instruction preferred purchase of print. This shows that some students do not appreciate electronic journals simply because they have little or no knowledge about them and could grow to appreciate them if they had training.

2.7 Use of journals in academic institutions in Uganda

Journals are not greatly used in Ugandan libraries. Based on research done on selected institutions in Uganda, Kinengyere (2007) stated that Uganda has moved forward in ensuring availability of information resources for researchers. It was concluded that availability of information does not necessarily mean that it is used: it was discovered that some of the available resources are not even used, meaning that users might not be aware of them or not know what libraries have to offer (Kinengyere 2007, p. 328). This is one of the reasons for low journal usage in Ugandan libraries, therefore librarians should offer information literacy programmes so that users know what is available and how to utilise these resources (Kinengyere 2007).

Most Ugandan academic and research institutions access journals through the Consortium of Uganda University Libraries (CUUL). Consortium of Uganda University Libraries (CUUL) was formed in 2000 and comprised public and private institutions of higher learning (Kinengyere 2007, p. 329). The aim was to share skills, human resource development, and library resources, to mention but a few (Kinengyere 2007). As a result, through the Consortium, several Ugandan university libraries and affiliated institutions had access to electronic resources at subsidised prices supported by the International Network for Availability of Scientific Publications (INASP) (Kinengyere 2007, p. 330).

As actions were geared towards the use of information resources, information literacy training programmes were carried out concerning electronic resources. These included the use of electronic resource databases such as those provided by EBSCO, AGORA, HINARI, Emerald, Blackwell synergy, open access journals and search services such as Google Scholar (Kinengyere 2007, p. 331). According to Kinengyere's findings, electronic resource usage tripled in 2005 as institutions using electronic databases rose from 17 to 35. This could have been due to increased awareness of electronic resources which were previously neglected. As a result, CUUL encouraged member libraries to be consistent in their subscription as it would be the means of sustaining electronic journal usage in case of eventual withdrawal of INASP support (Kinengyere 2007, p. 334).

Kinengyere and Olander (2011) conducted a pilot study on the knowledge, attitudes and practices of e-resource users and found that some respondents preferred electronic to print formats as they were easily accessible and easy to use whereas others argued that e-resources still had to be printed to be utilised (Kinengyere & Olander 2011, p. 5). They further concluded that most respondents were not aware of all the available e-resources; additionally, lack of connectivity and other factors hindered access to these resources (Kinengyere & Olander 2011, p. 7). However, users' attitudes towards electronic databases depended on the results of searching: if one gets results after a search then the database is categorised as good and if no results then it is not considered worthwhile (Kinengyere & Olander 2011, p. 8). This research will however focus on the preference for journal formats among postgraduate students of Makerere University.

2.8 Journal formats in academic institutions in Uganda

Kinengyere, Kiyingi and Baziraake (2012) in their research carried out on the use of e-resources in the medical field in Ugandan universities found out that electronic information resources are important in academic institutions and noted that libraries are transitioning from using print predominantly to using both print and electronic resources. This is due to ICTs and other factors that have helped increase research in developing countries of which Uganda is one (Kinengyere, Kiyingi & Baziraake 2012, p. 90). Subscriptions to most databases were through the PERII programme, which is supported by the International Network for Availability of Scientific

Publications, and other database subscriptions are managed through the CUUL. Open access journals are accessed through databases like World Health Organisation Library and Pub Med (Medline). This shows that Ugandan universities did not remain behind concerning collection development of journals and information provision.

They further noted that despite the information literacy trainings done by libraries, usage of electronic resources is still low in Ugandan libraries (Kinengyere, Kiyingi & Baziraake 2012, p. 91). However, there was an increase in usage between 2006 and 2007 which could have been a result of the training sessions (Kinengyere, Kiyingi & Baziraake 2012, p. 91). This study found out that there were factors affecting the use of e-resources which include: searching skills, number of available resources, internet speed, awareness, and the availability of facilities matching user numbers of researchers (Kinengyere, Kiyingi & Baziraake 2012, p. 96). This meant that acquiring resources was not an end in itself as low usage was accounted for by the above factors (Kinengyere, Kiyingi & Baziraake 2012). However, their study did not find out which format of journals medical students preferred, which could be one of the factors that affect usage and thus supports the need for this current study.

2.9 Journal formats in Makerere University

Several studies have been carried out by Makerere University Library staff including masters' theses, user feedback through email and suggestion box, user statistics, and information literacy reports; these were published in annual reports and development partner reports (Kinengyere, Kiyingi & Baziraake 2012, p. 91). However they focus on usage, not on student's preferences: hence the need for this study.

Okello-Obura (2010) in his research carried out on the Library and Information Science postgraduate students of Makerere University found out that the university has not only provided print information but also embraced electronic information provision such as full-text journal databases and electronic books through donor support programmes (Okello-Obura, & Ikoja-Odongo, 2010). At that time most Makerere University postgraduate students were not using electronic journals, according to the list of references they submitted, despite Makerere University Library subscribing to several databases (Okello-Obura 2010, p. 99). This showed

that most of them were using print resources for their research despite the availability of electronic resources.

According to this research, Makerere University Library and Information Science (LIS) postgraduate students had adequate computer skills which would enable them to access electronic resources (Okello-Obura 2010, p. 103). Therefore, they could have accessed them if they wanted because they had the skills but still did not use them. LIS students also agreed that they needed e-resources for their academic work and that the library should continue to subscribe to them meaning that they were starting to acknowledge them; Swain and Panda (2009) stated that the attitude of users to information is shifting from print to e-resources.

There are however some problems hindering access by students to e-resources, including lack of access to computers, internet connectivity, awareness of resources and searching skills. Okello-Obura advises that information professionals need to create awareness of e-resources and look for improved ways of managing subscriptions, such as consortial subscription (Okello-Obura 2010, p. 104). This research however did not focus on the preferred formats by the students.

2.10 Conclusion

Journals are of importance in an academic institution. In this chapter literature was reviewed in relation to the topic. Use of journals was discussed including factors that affect use. The relationship between libraries and journals was also discussed as libraries play a major role in the provision of journals in an academic institution. The transition from only print to both print and electronic was also discussed and the dilemma facing librarians.

Students searching behaviour was discussed as it also affects use and preference of journals. Then students' preference for journal formats was discussed. These vary for various reasons that were discussed arising from the literature.

The next chapter discusses the research methods that were employed in carrying out this research.

CHAPTER THREE

RESEARCH METHODS

3.1 Introduction

The discussion of research methods provides an outline of the research methods chosen and how they suit the research problem so as to fulfil the objectives of the research. This is what the researcher used to conduct the research. In this section the methods, research paradigm, research design, research approach, research strategies that were used to guide the study on the use of journal preferred formats by postgraduate students of Makerere University are discussed. Furthermore, the study population, data collection methods and data analysis are discussed in this chapter.

3.2 Overview and goal of the research

The goal of this research is to ascertain whether postgraduate students are using the subscribed journals of the library, how they are using them and to ascertain which formats students prefer. In this case the following questions need to be answered.

1. Are postgraduate students aware of journal availability in the library?

2. In what ways do they use the journals?

3. Which format of journals do they seek in the Library?

4. How do they use the different formats in different contexts?

5. Why do they use the specific formats?

6. How does the Library support access to the specific formats?

To answer the above questions a research plan is needed: therefore, the next sections discuss the design of the study and the choice of research methods.

3.3 Research paradigm

A research paradigm is defined as broad conceptual framework within which we can conduct research and analyse issues (Oliver 2010, p. 27). In the social sciences it has been adopted to mean a framework of ideas and concepts used to conduct research (Oliver 2010). In addition, it is stated that, "The need to understand and make sense of data led to the development of the major perspective in sociology and social science research known as interpretivism" (Oliver 2010, p. 73).

This research is qualitative in nature basing on the interpretive paradigm. According to Sarantakos (2005, p. 39) this paradigm "involves reflective assessment of the reconstructed impressions of the world, and integration of action processes in a general context". According to Crotty (1998, p. 67) "interpretivism looks for culturally derived and historically situated interpretations of the social life world". It therefore emphasises production of meanings and learning of views, opinions and perceptions of people in life. It is further argued that its use increases validity of data since respondents are given an opportunity to express their feelings and opinions through the data collection methods (Oliver 2010).

This paradigm is important to the study as it helped to find out the perceptions and preferences that postgraduate students have towards journals.

3.4 Research design

According to Kumar (2005, p. 84) a research design is "a plan, structure and strategy of investigation so conceived as to obtain answers to research questions or problems". Kothari (2004, p. 32) explains that it is a set of conditions used in collecting and analysing data combining relevance with the purpose of research. It entails two stages: namely, planning, where the researcher plans and constructs a design, and execution, which includes collecting and analysing data (Sarantakos 2005, p. 105).

24

The importance of the research design is to direct research action as well as to give clarity to the research study (Sarantakos 2005). Also Kothari (2004, p. 32) states that a "research design is needed because it facilitates the smooth sailing of the various research operations, thereby making research as efficient as possible yielding maximal information with minimal expenditure of effort, time and money". Without a well thought research design, results of the research might not serve the purpose and misleading conclusions could be given (Kothari 2004).

This research constitutes one of a descriptive nature as it sought to describe particular characteristics of a given population (Kothari 2004, p. 32). In this case the preference of journal formats by postgraduate students of Makerere University was investigated. This descriptive research therefore has a rigid design according to Kothari (2004, p. 37) including:

- Formulating objectives of the study
- Designing data collection methods
- Selecting the sample population
- Collecting data
- Analysing data
- Reporting findings

3.5 Research approach

There are three research approaches used by researchers, namely the quantitative approach and qualitative approach and mixed approach (Creswell 2009, p. 3). Quantitative research deals with testing of objective theories with measurable variables which results in numerical data that is analysed using statistical procedures (Creswell 2009). On the other hand, a qualitative approach is used to understand or explore meaning that is ascribed to a problem: for example, why people do certain things (Creswell 2009, p. 4; Kothari 2004, p. 32). This involves collecting data from the environment within which the participants are situated by the researcher and interpreting the meaning of the data (Creswell 2009). A mixed approach is one that combines both the qualitative and quantitative approaches which gives strength to the study by broadening understanding of the researcher through the different sets of data collected (Creswell 2009, p. 4).

25

This research applied the qualitative research approach because the researcher wanted to get an in-depth understanding of journal usage and student journal format preferences.

According to Creswell (2014, p. 185) several authors convey the following features of qualitative research:

- Qualitative research is conducted in natural settings where participants experience the phenomena being studied and information is gathered by either talking to them or observing them directly
- Most qualitative studies are of specialised nature and require specialised instruments; therefore it is only when one encounters a similar environment that they could consider reusing a previously used research instrument
- Qualitative researchers build themes through the data and determine if additional data is needed or not
- Qualitative research keeps a focus on participants' meaning in relation to a problem, not the meaning expressed by the researchers or literature
- The initial research plan in qualitative research is not tightly prescribed. Some phases such as questions or forms of data collection may change as the researcher collects data
- The researcher in qualitative research reflects on how their experiences are potential in shaping interpretation of the research data and shape direction of the study
- In qualitative research the researchers develop a large picture of the study in order to set the problem or issue under study into a context

3.6 Research strategy

The researcher employed the case study strategy to conduct this research so as to fulfil the objectives of the research. A case study is one of the many research strategies used in conducting research: case studies are used to by researchers to explain real life events such as organisational processes, group behaviour among others (Yin 2009). According to Singh (2006, p. 148), "case-study means intensive investigation of the particular unit represented". In that case a unit could be an institution, religion, to mention but a few (Singh 2006; Oliver 2010; Kumar 2011). In other words, it ranges from general studies to an individual or group (Berg 2000, p. 225). Further still

"Case studies are a design of inquiry in which the researcher develops an in-depth analysis of a case, often a program, event, activity, process, or one or more individuals" (Creswell 2013, p. 14).

A case study deals with social activity and meanings brought by social factors in given settings where it is assumed that things may not be as they seem and therefore encourages in depth search leading to gain better understanding of the case (Yin 2009). The rationale for applying a case study strategy was to get an in-depth understanding of how students are using journals and what journal preferences they have.

3.7 Research location
According to Musoke (2012) Makerere University Library is one of those academic libraries responding to technology changes in the information sector. These include changes in information resources such as inclusion of electronic journals into the service along side the print journals. This offers a focal point for the study of preferences of library users in this case the preference of journal formats.

The library service is comprised of the Main Library which is a central point for students from all colleges and 10 college libraries that serve their colleges. Respondents from these libraries were given a chance to participate in the study so that there is representation from every college.

3.8 Population
According to Hoyle, Harris and Judd (2002) a population is defined as "the aggregate of all the cases that conform to some designated set of specifications" (Hoyle, Harris, & Judd 2002, p. 182). In addition, it is regarded as "a set of all cases of interest" (Shaughnessy, Zechmeister & Zechmeister, 2012, p. 141). In this regard the population should have the given characteristics that the researcher specifies for a given study.

According to Powell (1997) it is necessary to have a good selection of the study population in order to fulfil the objectives of the study. In this research therefore the study population will be

postgraduate students who comprise of Masters and Doctoral students of Makerere University. Postgraduate students were chosen because Vakkari (2008) and Borgman et al. (2005) argue that postgraduate students are more likely to utilise resources for research and teaching. Postgraduate students were therefore chosen because they are the major users of journals (Kinengere 2012, p. 64). It is therefore important to include a population that is aware of the phenomenon under study.

3.8.1 Sampling procedure

Shaughnessy, Zechmeister & Zechmeister, (2012, p. 141) state that it is practically impossible to contact everyone in a large population. Therefore, there is a need to select some participants from a given population; this is referred to as sampling. Sampling is the process of selecting a few respondents from a population in the expectation that the results from this sample group can become a basis for generalisation about some characteristic of the population (Kumar 2011, p. 193). The advantage of sampling is that it saves time, whereas its disadvantage is that one does not get exact information about the population but an estimate of some characteristics of it.

Selection of a sample in qualitative research differs from that of quantitative research. In quantitative research the sample should be unbiased and representative of the population, whereas sampling in qualitative research is based on several factors such as ease of access and potential of respondents (Kumar 2011, 192). In quantitative research, the size of a sample is determined by the level of confidence expected of the results whereas in qualitative research it is about the saturation of collected information, meaning that no new information is added during data collection (Kumar 2011, p. 192).

There are two main sampling strategies, namely probability and non-probability, and some scholars suggest using a mix of the two. With the probability sampling every element of the population has an equal chance of selection and is not influenced by choices (Kumar 2011; Oliver 2010). Non probability sampling is used when the number of elements is unknown and sampling is based on other decisions (Kumar 2011, pp. 207; Sarantakos 2005, pp. 164). It has several approaches, such as quota, accidental, purposive, expert and snowball techniques (Kumar 2011).

In this study quota sampling technique was used. This was done by collecting data from the Main Library and college libraries, meaning that all postgraduate students using these libraries were given a chance to participate in the study. According to Hoyle, Harris, and Judd (2002, p. 186), the rationale for this technique is to include diverse elements of the population. The researcher therefore chose this technique to have representation of postgraduates from all colleges participate in the study.

3.8.2 Sample Size.

Determining the sample size depends on the methodology, nature of the study, time and resources available, homogeneity of the population: that is, the more the population is homogenous, the smaller the requisite sample and vice versa (Sarantakos, 2005, p. 171). In qualitative research, sample sizes are relatively small compared to the quantitative studies because as the study goes on there is no guarantee that more information will be gathered and also analysing a large sample can be equally laborious (Babbie, 2010). Powell and Connaway (2004, p. 189) state that there is no necessarily-correct sample size and selecting a representative sample is not considered because the purpose of a qualitative study is to obtain depth, complexity, rich and understanding rather than to generalize. Moreover, sample size is determined by the nature of data collected which means that the end-point is not predictable: the researcher collects data until a saturation point of information needed has been reached (Kumar, 2011; Sarantakos 2005). In this study, the researcher recognised level of saturation from the point at which repetitive answers were given to the questions asked and no new information was given by respondents.

The sample size was determined by the number of postgraduate students who access the Research Commons in the Main Library and those who access college libraries. The Research Commons is accessed by 50 to 300 researchers on a weekly basis depending on the season. On average about 10 postgraduate students have access college libraries weekly. So the sample was 150 postgraduate students 50 from the Research Commons and 100 from the ten college libraries.

3.9 Data collection methods.

Data collection methods are correct tools or instruments used to collect data for a specific study (Payne & Payne, 2004). There are basically two sources of data: namely, secondary sources and primary sources. A secondary source is where data is already available and primary source is where data has to be collected (Kumar 2005, p. 207). In this study, data was collected by means of questionnaires.

3.9.1 Questionnaires as data collection instrument

A questionnaire is a list of questions designed by the researcher which are to be answered by chosen respondents (Kumar 2005, p. 207). Semi structured self-administered questionnaires were used in this study. The rationale for using this tool was to eliminate disadvantages associated with other methods. Unlike the interview where the researcher asks the questions and records answers, in the questionnaire respondents read and write answers by themselves according to what they understand (Kumar 2005, p. 207). The questionnaires consisted of sixteen (16) closed-ended and six (6) open-ended questions. However, according to Sarantakos (2005), the researcher should further determine the suitability of the tools chosen. In this case, questionnaires have certain advantages as discussed below;

3.9.1.1 Advantages of using a questionnaire

- The researcher is able to access quick data/information in short period of time (Powell & Connaway, 2004, p. 124). In this study, both the open-ended and the closed-ended questions were easy to understand therefore respondents were able to answer without any difficulty

- Questionnaires provide freedom of expression to respondents because their identity is not revealed (Kumar 2005, p. 130). This advantage is important for this study because respondents were able to answer all questions fully hence availability of relevant and genuine information enables the respondents to answer all the questions fully

- The study is not affected by the respondents who are not available (Kothari 2004, p. 100). In this study, the questionnaires would be given to those postgraduates who were

available in the library; this therefore was an advantage to the researcher who was working under schedule

3.9.1.2 Disadvantages of the questionnaire

There are several disadvantages associated with a questionnaire. However, it should be noted that although these disadvantages existed, they were addressed by the researcher hence the advantages triumphed over the disadvantages as discussed below:

- Due to lack or limited supervision, there is likely to be partial response (Powell & Connaway 2004, p. 125; Mugenda & Mugenda 2003, p. 71; Kumar 2005, p.130). However, during data collection process in this study, the researcher and college library personnel were available to provide help and also cross check whether the questionnaires were fully filled

- It can only be used among literate people (Kumar 2005, p. 130). The target population for this study were postgraduate students of Makerere University; hence they are literate and fully answered the questions

- Respondents can consult others and therefore not give their own opinion (Hoyle, Harris, and Judd, 2002, p. 98). The respondents were required to fill the questionnaire at that particular time they accessed the library hence eliminating discussion during break offs

3.9.2 Forms of questions

The questions in a questionnaire should be thoughtfully designed to meet the objectives of the study. There two types of questions that will be included in the questionnaire namely; open ended and close ended questions.

3.9.2.1 Close ended questions: these are questions in which the possible answers are listed for respondents to choose from. These questions should be appropriate ones; a free-choice category (Hoyle, Harris, & Judd 2002, p. 101). According to Hoyle, Harris, & Judd (2002), these format of questions are good because they provide a better picture of the different characteristics of the respondents.

3.9.2.2 Open ended questions: these are questions designed in a way that respondents' answers are recorded according to their understanding of the questions (Hoyle, Harris, & Judd 2002, p. 101). These questions are important because in-depth information is collected as respondents are given a chance to express themselves with no bias compared to the close ended questions (Hoyle, Harris, & Judd 2002). However, they are hard to analyse and some information is lost due to respondents who cannot express themselves (Hoyle, Harris, & Judd 2002, p. 101).

The closed- ended questions asked were related to gender, course offered, year of study etc. These questions were asked in order to provide get a better picture of the different characteristics of the respondents and how they relate with journal format preferences. On the other hand, open-ended questions were asked so as to get an in-depth understanding of the views of respondents towards the phenomenon under study.

3.9.3 Pre-testing

According to Sarantakos (2005, p. 225) pre-tests are applied on individual elements of a research instrument to ascertain its structure. In this research a pre-test was conducted on the questionnaire to ascertain the arrangement of questions, relevance of questions and if their wording is clear to the respondents, in accordance with Sarantakos (2005, p. 226).

3.10 Data analysis and interpretation

Qualitative data analysis is a time consuming and complex process which requires careful interpretation of data into useful meaning (Leedy & Ormrod 2010). Leedy and Ormrod (2010) further state that a researcher begins with a lot of information that must be sorted and categorised through inductive reasoning into meaningful themes. It involves organising and coding data to generate descriptions of places or events which means taking the data apart and putting it back together to get meaning out of it (Creswell 2014).

According to Creswell (2013) it is important to categorise gathered data into themes. It is further noted that in case study research it is important to use codes to generate detailed description of the study (Creswell 2014). Qualitative data analysis can either be done with the aid of a

computer data analysis program which can help sort and organise information or through hand coding (Creswell 2014).

The researcher used content analysis to make meaning of data from the questionnaires. According to Berg (2000) content analysis can be employed with both quantitative and qualitative data. This method is good in qualitative research as textual counts help in organising, indexing and retrieving of the data (Berg 2000). The researcher coded responses in order to make meaning of them, then created a Google Forms sheet from Google Drive applications where the responses where entered and analysis was done. The application presented data in a worksheet form and responses were presented in graphs.

3.11 Quality assurance

It is important for a researcher to identify some reliability and validity strategies that ensure accuracy of the research findings (Creswell 2014, p. 201). The researcher therefore employed the following strategies to ensure accuracy of the findings, taken from Creswell (2014, p. 201):

- The reliability of the questionnaires was achieved by pre-testing the questionnaires on a few postgraduate students to measure whether the questions make sense to the respondents. After pre-testing therefore miss leading questions were eliminated or rephrased to make sense to the respondents and the study
- Explanation of the significance of the research was provided at the beginning of the questionnaire as part of the introduction; definition of the terms were also provided in order to guide the respondents. Further still there was room for clarification during completion of the questionnaire from the researcher who was readily available within the library; these were put in place to ensure validity
- Findings were conveyed through a rich description which will make them more realistic and hence add to their validity

3.12 Ethical considerations

The researcher needs to identify ethical issues that may arise during research and try to address them, which if not considered seriously could cause several problems including financial and

legal issues (Shaughnessy, Zechmeister & Zechmeister, 2012, p. 59; Berg 2000). Berg (2000) points out some ethical issues, such as informed concept, confidentiality, anonymity, and secured data and plagiarism. The researcher took into consideration the above concerns as below:

- Receiving clearance from the Research Ethics and Integrity Committee of the University of Pretoria Faculty of Engineering, Built Environment and Information Technology to carry on with research. Questionnaires were approved by the committee with assurance that the data is used for academic purposes only
- Respondents were given an opportunity to understand the study objectives and a choice to participate or decline participation in the research. In this case a consent form was be drafted detailing the objectives of the research and its importance. Signing the consent form means that the respondents give their consent in participating
- The researcher ensured that responses are treated with confidentiality and anonymity. The questionnaire did not have any question that requires respondents to include their identification so that they can maintain their independence and express their thoughts freely
- All sources used in this study were acknowledged to avoid plagiarism

3.13 Conclusion

The discussion above presents the methodology that was adopted by the researcher in investigating the preferences of journal formats among postgraduate students of Makerere University. The following aspects of research methodology were discussed; research paradigm; research design; research approach; research strategy; population; sampling; data collection methods; data collection instruments; data analysis and presentation; quality assurance and ethical considerations. Chapter four is a presentation and discussion of the findings that were obtained from the data collected and analysed.

CHAPTER FOUR

PRESENTATION AND DISCUSSION OF FINDINGS

4.1 Introduction

The research methods and data collection instruments employed in this study were discussed in chapter 3. This chapter presents and discusses findings from the self administered questionnaire that was distributed to postgraduate students as well as content analysis from usage statistics of the periodical section of the main library. The chapter consists of two parts. The first part is the presentation of the research findings in accordance with the research questions while the second part is discussion of those findings.

The findings are presented in tables, percentages, frequencies, charts and text. Data was analysed following the format of the questionnaire and the research questions.

The researcher used the quota sampling strategy and as a result distributed a total of 150 questionnaires in the main library and all college libraries as a way of giving postgraduate students from ten colleges a chance to participate in the research. As Hoyle, Harris, and Judd (2002, p. 186) state, this type of sampling facilitates inclusion of diverse elements of the population.

4.2 Description of respondents

In this section, the respondents provided data concerning their college, qualification pursued and their year of study. The sample size consisted of one hundred and fifty (150) respondents from

main library and ten college libraries. One hundred and fourteen (114) questionnaires were returned, which is 76% response rate.

Out of the 114 respondents, Twenty five (25) were from College of Humanities and Social Sciences (CHUSS), seventeen (17) from College of Business and Administrative Studies (COBAMS), fourteen (14) from College of Health Sciences (CHS), twelve (12) from College of Agriculture and Environmental Sciences (CAES), ten (10) from College of Computing and Information Science (COCIS), ten (10) from college of College of Education and External Studies, nine (9) from College of Natural Sciences (CONAS), seven (7) from College of Veterinary medicine, Animal Science and Biosecurity (COVAB), six (6) from College of Engineering, Design Art and Technology (CEDAT), two (2) from School of Law and two (2) chose other and indicated that they were external users. That was a total of one hundred and fourteen (114) respondents. This shows every college on the University was represented.

CEDAT	6	5.3%
COBAMS	17	14.9%
COCIS	10	8.8%
CAES	12	10.5%
CEES	10	8.8%
CHS	14	12.3%
CHUSS	25	21.9%
Sch of Law	2	1.8%
COVAB	7	6.1%
CONAS	9	7.9%
Other	2	1.8%
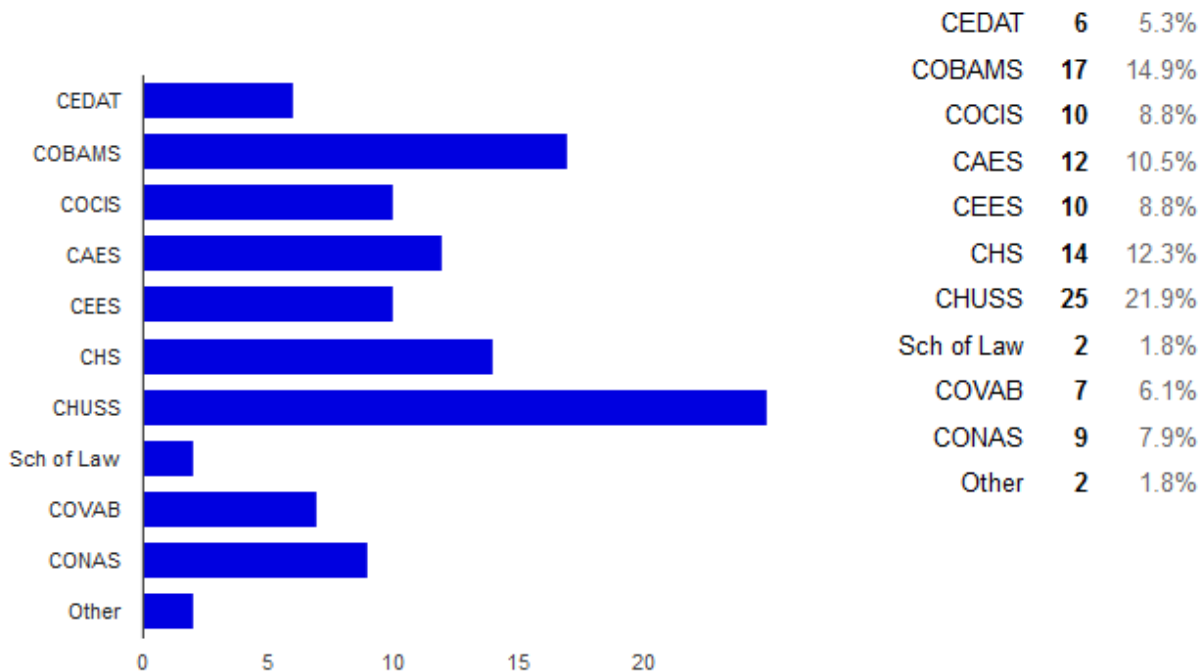
Figure 4.1 College of respondents (n=114)

36

4.2.1 Qualification pursued

82 (71.9%) of the respondents were masters' students, 23 (20.2%) were PhD students and 9 (7.9%) were pursuing postgraduate diplomas. Within the different qualifications that the respondents pursued, 32 (28.1%) were in their first year, 68 (59.6%) second year students, 6 (5.3%) were in their third year, 7 (6.1%) were in their fourth year and 1 (0.9%) indicated that he/she was an external user. From the above figures, the majority of the respondents were in their second year of studies.

4.3 Access to journals

This section provides an understanding of postgraduate students' access to journals. Findings were analyzed in the context of:

- ☐ Access to the library

- ☐ Access to journals

- ☐ How they learnt about journals

- ☐ Why students use journals

4.3.1 Access to library services

To ascertain whether respondents accessed the library services, a question about access to Makerere University Library which required a Yes or No answer was asked.

Out of the 114 respondents, 107 (93.9%) of the respondents confirmed being able to access the library and 7 (6.1%) answered No. These statistics therefore revealed that majority of the postgraduate students access the library.

4.3.1.1 Frequency of access to library services

Out of the 107 respondents who indicated that they accessed library service, 49 (45.8%) accessed the library weekly, 30 (28%) daily, 17 (15.9%) accessed the library monthly, 8 (7.5%) used the library when need arises for example during exams and 3(2.8%) did not respond to this question. The figure below shows the frequency of library access by the respondents.

Daily	30	28%
Weekly	49	45.8%
Monthly	17	15.9%
Yearly	0	0%
No response	3	2.8%
Other	8	7.5%

Figure 4.2 Frequency of access library services (n=107)

4.3.1.2 Reasons for not accessing the library

The 6.1% respondents who did not access the library stated the following reasons;

☐ Lack of awareness of library services

☐ Library access needs identification which they had not yet acquired and so could not access.

This shows that library needs to create strategies that will encourage the rest of the students to access it.

4.3.2 Access to journals

The respondents were further asked whether they accessed journals subscribed to by Makerere University Library. Out of the 114 respondents, 83 (72.8%) indicated that they had accessed

library journals. Only 31 (27.2%) of respondents surveyed had not accessed the journals. The high response can be attributed to the good marketing of the library services and resources; however students reading lists also show that many of the recommended information sources are journals.

4.3.2.1 Frequency of access to journals

Those who accessed journals were asked to state how often they accessed journals from Makerere University Library. Out of the 83 respondents who indicated that they accessed journals, the majority accessed them weekly (38), then monthly (22), few accessed them daily (11), two (2) accessed them yearly. Then others (10) mentioned that they access journals when need arises.
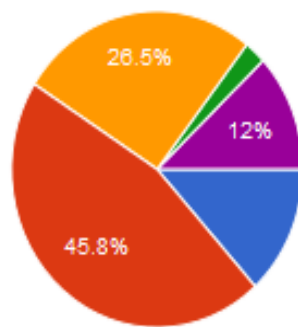
Daily	**11**	13.3%
Weekly	**38**	45.8%
Monthly	**22**	26.5%
Yearly	**2**	2.4%
Other	**10**	12%

Figure 4.3 Frequency of journal access (n=83)

4.3.2.2 Reasons for not accessing journals

The 27.2% of the respondents who didn't access the journals indicated the following reasons for not doing so;

☐ Lack of awareness of journals that are available to the students.

☐ Journals do not meet their information needs

- Some accessed information through other search engines such as Google and Google scholar; therefore they didn't see the need to use library journals.

- Further still limitations such as passwords stop some from using these journals. The above reasons mostly hinge around awareness and access problems.

4.3.2.3 For how long have you known about library journals?

Out of the 114 respondents, 37 (34.9%) indicated that they have known about the journals between 1-2 years, 29 (27.4%) in less than a year, 17 (16%) in 2-5 years, 14 (13.2%) more than 5 years and 9(8.5%) were not aware of the journals. This shows that postgraduate students get to know about journals in their first and second year and that is around the time when the library carries out user education for new students. These percentages are higher than the ones who actually use the journals meaning some know about the journals but are not using them.

Table 4.1: How long respondents knew about journals

Journal awareness period	Response count	Percentage
Less than a year	29	25.4%
1-2 years	37	32.5%
2-5 years	17	14.9%
More than 5 years	14	12.3%
Not aware of journals	9	7.9%
Non responses	8	7.0%
Total	**114**	**100%**

4.3.3   How they learnt about journals

There are several ways in which respondents learnt about journals provided by the library. For the sources that respondents indicated how they learned about the journals, from the highest to the lowest source were; lecturer's reference (48), fellow students (34), 27 library website, 26

internet sources, 25 through library user education, 22 through workshops attended, 14 from their librarians and 10 from library current awareness posts. This shows that postgraduate students have several ways in which they learn about journals and therefore the library needs to boost those areas to increase journal knowledge among postgraduate students, for example since most by the recommendation of a lecturer, lecturers should be trained by the library about journals so that students can get to know more.

However, it should be noted that the respondents were asked to tick all the applicable sources how they learned about the journals. As a result of this, the number of responses exceeded that of respondents since more than one source was ticked.

Table 4.2: How respondents learnt about journals

Source of information	Response count	Percentage
Lecturer's reference	48	46.2%
Fellow students	34	32.7%
Library website	27	26%
Internet sources	26	25%
Library user education	25	24%
workshops	22	21.2%
Librarians	14	13.5%
Library current awareness posts	10	9.6%
Other	5	4.8%

4.3.4 Why students used journals

Respondents were given a multi choice question to indicate why they accessed journals, however they were given an option to choose more than one and that explains the number of responses exceeding the respondents' number. The reasons given by the 83 respondents were: For research

95(88%), course assignments 64 (59.3%), writing papers 33 (30.6%), followed by current awareness 25 (23.1%) and 4 (3.7%) of the respondents indicated that they used journals for other purposes such leisure and verifying information. This shows that research is cited more frequently and therefore the library should enhance access to journals in order to satisfy that need.

Table 4.3 Respondents' use for journals

Reasons for using journals	Response count	Percentage
Research	95	88%
Course assignments	64	59.3%
Writing papers	33	30.6%
Current awareness	25	23.1%
Others	4	3.7%

4.4 Journal format preferences

This section provides an understanding of journal format preferences. Findings were analyzed in the context of:

 ☐ Journal format preferences

 ☐ Reasons for format preferences

 ☐ How they accessed preferred formats, and

 ☐ Challenges faced in accessing preferred formats

4.4.1 Journal format preferences

Journal format preferences depend on the reader of the journal. When asked which format they preferred most postgraduate students chose electronic format 56 (52.3%) while a good number still chose both electronic and print 42 (39.3%). Few chose the print format 9 (8.4%).

4.4.2 Reasons for journal format preferences

Respondents were asked to give reasons as to why they chose the particular formats for their preference. 52.3 % of the respondents who indicated that they preferred electronic formats indicated the following reasons;

- Electronic format is easy to read
- There is no bulk to carry
- It is easily accessed anywhere anytime with availability of internet.
- Can access it anytime with a phone
- Easily stored and used for some time while print easily gets lost
- Provides a variety
- Sharing electronic format is easier than photocopying print
- Electronic journals are up to date compared to print format
- Original form i.e. no effect on quality caused by some prints
- Electronic format are good for easy referencing especially when using computer aided referencing tools like Mendeley
- Easy to copy and paste
- Easy comparison between several papers of electronic journals
- Electronic is good because of the regular supply of journals

The nine (8.4%) respondents who indicated they preferred print formats stated the following reasons;

- Printed copies can be easily read without computer visual problems and notes are easily made
- One gets access to the full journal and can make copies easily

43

- Electronic formats are affected by technological editing software, but the print formats provide raw information that you can get as it is

- With print format it is possible to make use of the material even outside the library

- Some journals in print are not available in electronic

- Print is easy to use even when electronic services are down for example in absence of internet and power

- Easy to use print version for citations

Forty two (39.3%) of the respondents who preferred both print and electronic also had reasons for their answers as stated below;

- For comparison purposes

- Both serve best purpose in whatever situation

- Accessibility is easy for both printed and electronic formats

- Obtain information from both formats. Sometimes online journals have wider and richer information and other times print journals are better

- Having both formats allows for the flexibility and convenience

4.4.3 How the students accessed the preferred journal formats

There are several ways in which the postgraduate students access journals. Respondents were asked to choose from the list how they accessed journals. Most of them indicated that they use the university internet (41.7%), 44(40.7%) access them through the main library, 37 (34.3%) use personal internet, 19 use college libraries, and 4 (3.7 %) used internet cafés as indicated in the graph below. These statistics show that postgraduate students mostly use university resources to access journals.

Main Library	44	40.7%
College Library	19	17.6%
University internet	45	41.7%
Personal internet	37	34.3%
Other	4	3.7%
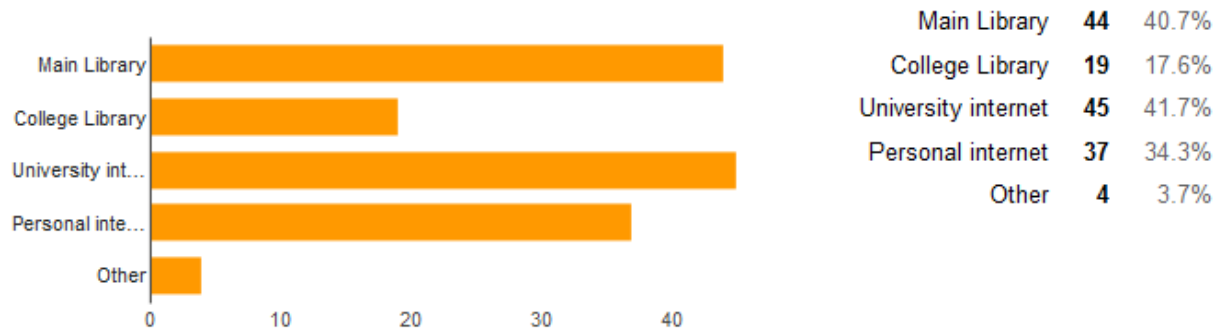
Figure 4.4 Journal access means

4.4.4 Challenges faced by respondents in accessing preferred journals

Although 52.3% of the respondents indicated that they preferred accessing electronic journals, they also stated the following challenges:

- Library access issues; at times research commons are closed therefore one cannot access journals, sometimes there is congestion in the library
- Infrastructure issues such as few computers available, unstable internet and power failure
- Most e-journals require passwords which makes the procedure hectic yet some passwords do not work
- Makerere University Library is not subscribed to some journal databases yet some relevant articles require subscription
- Document delivery service response is slow for journals that are not subscribed to by the University and requested for through that service
- Internet costs as some have to visit internet cafes and others have re-charge personal internet
- Document restrictions for example no copying
- Difficult to access old issues such as below 1980
- Limited awareness

It is also important to know the challenges that the students who preferred print journals were facing, 9 (8.4%) of the respondents indicated the following challenges:

- The procedure for accessing the main library is tiresome and the process of accessing journals is lengthy/ time consuming yet time scheduled to utilize the print materials is not enough
- Some journals are too old and information is outdated which may not be relevant
- Busy schedule not able to meet the closing time at the library
- Prints are not easily accessed because they need call numbers and also physical access while in the library yet copies are few
- Lack of guidance, orientation and knowledge about library operations

4.5 Library's ability to enhance access

In order to ascertain the respondents' opinions towards library management's ability enhance access to both print and electronic journals, 50 (45.9%) answered in affirmative; their reasons to these answers were:

- They have provided a lot of free journals we can use for our research
- Library has provided several training sessions, for example Information Competence and Management course helps in accessing such services, as well as other trainings at the beginning of each academic year
- The library is well stocked with both new and older texts which would not be available online
- Library staff to assist researchers are available in the research commons to guide right researchers
- Current awareness and selective dissemination is provided on notice boards, library websites
- Infrastructure to access the electronic journals such as computers, internet and generators are available
- Mobile accessibility

However, majority of the respondents with a percentage of 52.3% indicated that the library was not doing enough to enhance access to journals and they stated the following reasons:

- Limited awareness campaigns

- Library access issues such as identification, closing hours and congestion

- Not all library staff have knowledge about journals

- Lack of follow up on the trained students

- Infrastructure limitations such as few computers, slow internet and power failures

4.6 Recommendations on how the Library can enhance access to preferred journal formats
Respondents were asked an open-ended question which required them to indicate some recommendations on how the library can enhance access to their preferred journal formats, The following responses were received:

- Increase on awareness campaigns through workshops, short courses, seminars and notice boards and follow up on trainees should be done

- Provide passwords for access to journals through giving them to students but also lecturers who can pass them on to students
- Print journals should be made accessible for longer hours such as lending them at the beginning of the research year
- Provide a step by step manual for postgraduate students to follow this can be uploaded on the library website and also sent to students email addresses.
- University should archive electronic journals so as to access them at a later date
- Library should subscribe to more journal databases so as to increase on articles accessed
- Infrastructure needed to access journals should be maintained for example bandwidth should be allocated to the library in order to increase downloading speed, increase in electronic gadgets needed, making sure generator is in good condition in case of power failure and systems should be maintained

- More responsive and customer friendly library personnel should be hired and trained on how to guide students on access

- Accessing the library should be made easy not through identification documents

- Allow postgraduate students to contact the library through specific channels

- There should be provision for course registration and then taken directly to directory containing journals linked to that course

- Document delivery service should be stepped up. There is a need to respond to journal requests on time

- Need for joint effort of the library and lecturers to enforce students to use library services hence increased access through liaising with colleges and providing information at departmental levels

4.7 Conclusion

In conclusion therefore, Makerere University postgraduate students access library services and therefore access journals. They however have different format preferences when accessing these journals of which majority expressed an interest in electronic format more than print format mainly because it was easy to access and there is available infrastructure necessary for access. Those who did not access journals gave reasons why such as lack of awareness and suggestions were made on how Makerere University Library can enhance access to journals.

CHAPTER FIVE

SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

5.1 Introduction

This chapter of the mini-dissertation presents a summary of the findings that were presented and discussed in chapter four in accordance with the research question and sub questions. This chapter also presents conclusions and recommendations taken from this research.

The purpose of this research was to assess whether journals are used by postgraduate students of Makerere University and to establish the preferred format of access. The following sub research questions were used to satisfy this purpose:

Research Sub questions:

1. Are postgraduate students aware of journal availability in the library?
2. In what ways do they use the journals?
3. Which format of journals do they seek in the Library?
4. How do they use the different formats in different contexts?
5. Why do they use the specific formats?
6. How does the Library support access to the specific formats?

In order to answer those questions, the researcher carried out a qualitative study using a questionnaire that was administered to the respondents because it was flexible and gave

respondents time to answer the questions. Below is the summary of the findings that were taken from the research.

5.2 Summary of findings

This section presents a summary of the findings that were presented and discussed in chapter four in accordance with the themes followed by the research.

5.2.1 Journal awareness and accessibility

This section was meant to answer the first and second sub research question in chapter 1. Findings revealed that postgraduate students of Makerere University are aware of the existence of journals provided by the library. They learnt about these through several ways such as lecturers' reference, notice boards, library user education, workshops and many more. Results revealed that postgraduate students mostly learnt about journals in their first and second year. This means that they learn about journals early enough in their course of study.

Results also show that majority of the postgraduate students access these journals through several avenues: some physically walk to the library, others use University internet and others personal internet.

There are several reasons why postgraduate students access journals provided but most of them showed that they used them for course assignments followed by research. Writing papers is another reason they accessed journals whereas those who used them for current awareness were few.

However there are some respondents who do not access journals due to reasons such as: lack of awareness towards journals, for some journals do not meet their information needs and limitations such as passwords hinder their access.

5.2.2 Journal format preferences

This section was to answer the third, fourth and fifth sub research questions. There are two journal formats subscribed to by Maklib that can be accessed by all library users including

postgraduate students. Results of the research show that majority of the postgraduate students had preference for the electronic format of journals, the reasons for which included: availability of infrastructure such as computers, internet and power for easy access of the electronic journals, ease of storage and sharing, and easily referenced especially using referencing software.

However the few who preferred to use the print format indicated that it was easy to read and acts as a backup in the absence of power and internet meaning that it was not their first choice. This shows that with availability of the necessary infrastructure the electronic format is preferred to print.

5.2.3 Challenges faced by accessing preferred formats

There are several challenges facing postgraduate students while accessing their preferred formats. Those who preferred electronic format of journals faced several challenges such as slow, or no, internet, few computers yet with restricted access times, restricted library access, some journals require subscription, some passwords were not known and those who would request for articles through document delivery service had delayed or no article delivery.

However those who preferred print journals also faced some challenges including: the process of accessing the library can be lengthy, time allocated for access is short, some journal subscriptions are not current and lack of guidance about library operations.

5.2.4 Library support towards enhancing access to preferred journal formats

This section was to answer the sixth sub research question. Respondents were asked to indicate whether they think Maklib does enough to enhance access to their preferred journal formats. The majority stated that library was not doing enough and gave several reasons as to why they thought it was not doing enough which included: limited awareness campaigns causing a lack of awareness among students, library access issues such as required identification, some library staff lack knowledge about journals causing a lack of guidance for students and poor infrastructure such as few computers, power cuts and slow internet. The above mentioned reasons hinder access to their preferred journals formats.

Respondents suggested solutions to the above mentioned problems which included: increase on awareness campaigns and trainings, library access should be made easier, access to journals should be easy by providing the necessary infrastructure and maintaining it: for example, providing a generator in case of power surges, provision of passwords, have communication avenues between students and library, liaising with lecturers to ensure students use the journals, and improve on the document delivery service.

5.3 Conclusions

Respondents access library services and are aware of journals subscribed to by the library. Those who are not aware suggest that library increases its awareness campaigns in order to enhance access to the available journals. There are several ways in which postgraduate students learn about journals such as lecturer's reference, trainings and many more.

Postgraduate students access journals mainly through the library, university internet and personal internet. These journals are mainly used for course work and research purposes and a few for current awareness.

Majority of postgraduate students prefer to have access to the electronic format of journals due to ease of access, storage and referencing, availability of infrastructure and up to date information. However some prefer print mainly due to ease of reading and as a backup during power and internet shortage.

Respondents suggested Maklib needs to do more to enhance access to the different journal format such as increase on training sessions, improve infrastructure and have trained staff to guide students.

5.4 Recommendations

Based on research findings and conclusions, the researcher made recommendations below;

5.4.1 Awareness campaigns

The researcher is of the view that there should be an increase in journal awareness campaigns. These campaigns would enhance awareness of journals among staff and students of the university.

These campaigns should be on going not a one time venture to keep reminding those who know and inform those who do not know about journals.

5.4.2 Training

There is need for an increase in training sessions offered to students. Usually the Maklib conducts training at the beginning of the academic year and thereafter training on demand. The researcher suggests that library staff would go to colleges and departments to conduct training every beginning of the semester.

An Information literacy curriculum should be developed and integrated into the existing programs so that librarians can train students on how to access resources including journals.

Following-up on the people trained should be undertaken to ensure that students access the journals in their respective formats.

5.4.3 Provision and maintenance of infrastructure

Most of the challenges students faced about access their preferred journal formats were infrastructure challenges. The researcher therefore suggests that the Maklib puts in place strategies that maintain infrastructure including;

Requesting for more bandwidth to be allocated to the library by the University IT department to ensure that internet is available and fast for download of articles.

Provision and maintenance of computers to students that do not have laptops so that they can access electronic journals while in the library

Ensure that access limitations are removed: for example, passwords should be well distributed for the electronic journals for those databases that require them.

Provision and maintenance of a standby generator to ensure constant power supply.

5.4.4 Trained library staff

There are some of respondents indicated that library personnel are not conversant with journals and therefore not able to help when approached. Therefore, the researcher suggests that all library staff should be trained on journal access and how to guide students with queries.

According to Maklib strategic plan (2007) enhancing access to quality information resources is one of the library's strategies. This is to be done through several ways including: improving library infrastructure and training of users. Furthermore improving collection development is another strategy including collection in online databases. These strategies have not been fully achieved but they show that the library has capacity to achieve the recommendations given by the researcher based on the research findings as they are in accordance with the library strategic plan.

REFERENCES

Akakandelwa, A., & Munsanje, J. 2012, 'Provision of learning and teaching materials for pupils with visual impairment: Results from a National Survey in Zambia' *British Journal of Visual Impairment*, vol. 30, no. 1, pp. 42-49, viewed 18 October 2013
http://0-jvi.sagepub.com.innopac.up.ac.za/content/30/1/42.short

American Library Association. 2002, *Anglo-American cataloguing rules (AACR2 2nd edn, 2002 revision with 2005 update)*, American Library Association, Chicago.

Babbie, E. 2010, *The Practice of social research,* Thompson Wadsworth, Belmont, CA.

Berg, B.L. 2000, *Qualitative research methods for the social sciences*. 4th edn, Allyn & Bacon, Boston.

Biddix, J. P., Chung, C. J., & Park, H. W. 2011, 'Convenience or credibility? A study of college student online research behaviors', *The Internet and Higher Education*, vol. 14, no. 3, pp. 175-182, viewed 22 August 2014
http://0-www.sciencedirect.com.innopac.up.ac.za/science/article/pii/S1096751611000042

Borgman, C. L., Smart, L. J., Millwood, K. A., Finley, J. R., Champeny, L., Gilliland, A. J., & Leazer, G. H. 2005, 'Comparing faculty information seeking in teaching and research: Implications for the design of digital libraries', *Journal of the American Society for Information Science and Technology*, vol. 56, no. 6, pp. 636-657, doi: 10.1002/asi.20154

Condic, K. 2004, 'Student preferences for purchase given limited library budgets', *Collection Building*, vol. 23, no. 1, pp. 5-12, doi: 10.1108/01604950410514686 #sthash.Bz9jT5MU.dpuf

Creswell, John W. 2009, *Research design: qualitative, quantitative and mixed methods approaches*, 3rd edn, Sage, Thousand Oaks, California.

Creswell, J. W. 2013, *Qualitative inquiry and research design: choosing among five approaches*, Sage, Thousand Oaks, California.

Creswell, J. W. 2014, *Research design: Qualitative, quantitative, and mixed methods approaches*, 4th edn Sage, Thousand Oaks, California.

Crotty, M. 1998, *Foundations of social research: meaning and perspective in the research process*, Sage, Thousand Oaks, California.

De Groote, S. L., & Dorsch, J. L. 2003, 'Measuring use patterns of online journals and databases', *Journal of the Medical Library Association*, vol. 91, no. 2, pp. 231, viewed 20 October 2013
http://0-www.ncbi.nlm.nih.gov.innopac.up.ac.za/pmc/articles/PMC153164/

Eason, K., Richardson, S., & Yu, L. 2000, 'Patterns of use of electronic journals' *Journal of documentation*, vol. 56, no. 5, pp. 477-504, viewed 10 October 2013
http://0www.emeraldinsight.com.innopac.up.ac.za/journals.htm?articleid=864137&show=abstract

Frazer, S. L. & Morgan, P. D. 1999, 'Electronic-for-Print Journal Substitutions: A Case Study at Old Dominion University', *Serials Review*, vol. 25, no. 5, pp. 1-7, doi:
10.1080/00987913.1999.10764500

Griffiths, J. R., & Brophy, P. 2005, 'Student Searching Behavior and the Web: Use of Academic Resources and Google', *Library Trends*, vol. 53, no. 4, pp. 539-554, viewed 16 October 2013 https://0-www.ideals.illinois.edu.innopac.up.ac.za/bitstream/handle/2142/1001/LT-53-4.pdf?sequence=2#page=25

Gyeszly, S. D. 2001, 'Electronic or Paper Journals? Budgetary, Collection Development, and User Satisfaction Questions', *Collection Building*, vol. 20, no. 1, viewed 12 June 2014 http://0-www.emeraldinsight.com.innopac.up.ac.za/doi/full/10.1108/01604950110366657

Hoyle, R. H., Harris, M. J., & Judd, C. M. 2002, *Research methods in social relations*, 7th edn, Wadsworth Cengage Learning, California.

Kakai M. 2003, A study of the information seeking behaviour of undergraduate students of Makerere University, Masters thesis, Makerere University, Kampala.

Khan, A. M., & Ahmad, N. 2009, 'Use of e-journals by research scholars at Aligarh Muslim University and Banaras Hindu University', *Electronic Library, The*, vol. 27, no. 4, pp. 708-717, viewed 1 October 2013 http://0www.emeraldinsight.com.innopac.up.ac.za/journals.htm?articleid=1810765&show=abstract

Kinengyere, A. A. 2007, 'The effect of information literacy on the utilization of electronic information resources in selected academic and research institutions in Uganda', *Electronic Library, The*, vol. 25, no. 3, pp. 328-341, viewed 7 July 2014 http://0-www.emeraldinsight.com.innopac.up.ac.za/doi/full/10.1108/02640470710754832

Kinengyere A.A. 2012, Utilisation of electronic health information resources in selected universities in Uganda, Doctoral thesis, Makerere University, Kampala.

Kinengyere, A. A., Kiyingi, G. W., & Baziraake, B. B. 2012, 'Factors affecting utilisation of electronic health information resources in universities in Uganda', *Annals of Library and Information Studies (ALIS)*, vol. 59, no. 2, pp. 90-96, viewed 7 July 2014 http://14.139.47.23/index.php/ALIS/article/view/80

Kinengyere, A. A., & Olander, B. 2011, 'Users' knowledge, attitudes and practices regarding electronic resources and information literacy: a pilot study at Makerere University', In *Qualitative and Quantitative Methods in Libraries QQML 2011*, viewed http://hdl.handle.net/10570/1655

Kothari, C.R. 2004, *Research methodology: methods and techniques,* 2nd edn, New Age International Publishers, New Delhi.

Kumar, H. A., & Dora, M. 2011, 'Citation analysis of doctoral dissertations at IIMA: A review of the local use of journals', *Library Collections, Acquisitions, and Technical Services*, vol. 35, no. 1, pp. 32-39, viewed 1 October 2013 http://0-www.sciencedirect.com.innopac.up.ac.za/science/article/pii/S1464905511000108

Kumar, R. 2005, *Research methodology: a step by step guide for beginners*, 2nd edn, Sage, London.

Kumar, R. 2011, *Research methodology: a step by step guide for beginners*, 3rd edn, Sage, Los Angeles.

Leedy, P.D. & Ormrod, J.E. 2005, *Practical research: planning and design*, Pearson, Upper Saddle River, NJ.

Leedy, P.D. & Ormrod, J.E. 2010, *Practical research*: *planning and design*, Pearson, Upper Saddle River, NJ.

Makerere University 1970, *Makerere University Act,* Makerere University, Kampala.

Makerere University 2007/2008, *Makerere University Strategic plan,* Makerere University, Kampala.

Makerere University Library (Maklib) 2007/2008, *Makerere University Library strategic plan,* Makerere University, Kampala.

Makerere University Library (Maklib) 2014, *Makerere University Library annual report*, Makerere University, Kampala.

Makerere University Library (Maklib) 2015, *Makerere University Library annual report*, Makerere University, Kampala.

Mapel, A., Wright, C. & Seeds, R. 2003, 'Analysis of Format Duplication in an Academic Collection', *Library Collections, Acquisitions, & Technical Services*, vol. 27, pp. 425–442, doi**:**10.1080/14649055.2003.10765947

Monopoli, M., Nicholas, D., Georgiou, P., & Korfiati, M. 2002, 'A user-oriented evaluation of digital libraries: Case study the "electronic journals" service of the library and information service of the University of Patras, Greece', In *Aslib Proceedings,* vol. 54, no. 2, pp. 103-117. MCB UP Ltd., viewed 15 October 2013
http://0-
www.emeraldinsight.com.innopac.up.ac.za/journals.htm?articleid=863948&show=abstract

Mugenda, O.M & Mugenda, A.G. 2003, *Research methods: quantitative and qualitative approaches.* Acts press, Nairobi.

Musoke, M. G. N. 2012, *Commissioning of the Makerere University Main Library New Building extension Booklet,* Makerere University, Kampala.

Namaganda, A., & Sekikome, P. 2011, *Evaluation of MakLib services : Optimizing service delivery,* Makerere University, Kampala.

Netherlands, Organisation of Scientific Research 2012, ' Grant Application Form 2013 NWO', *Innovation Research Incentive Scheme*, pp. 21

 Nisonger, T. E. 2007, 'Journals in the core collection: definition, identification, and applications', *The Serials Librarian*, vol. 51, no. 3-4, pp. 51-73, viewed 31 October 2013 http://dx.doi.org/10.1300/J123v51n03_05

Okello-Obura, C. 2010, 'Assessment of the problems LIS postgraduate students face in accessing e-resources in Makerere University, Uganda' *Collection Building*, vol. 29, no.3, pp. 98-105, viewed 27 July 2014
http://0-www.emeraldinsight.com.innopac.up.ac.za/doi/full/10.1108/01604951011060385

Okello-Obura, C., & Ikoja-Odongo, J. R. 2010, 'Electronic information seeking among LIS postgraduate students at Makerere University, Uganda', *Library Philosophy and Practice (e-journal*, paper 499, viewed 22 August 2014
http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1517&context=libphilprac

Oliver, P. 2010, *Understanding the research process,* Sage, Los Angeles, CA.

Ollé, C., & Borrego, Á. 2010, 'A qualitative study of the impact of electronic journals on scholarly information behavior', *Library & Information Science Research*, vol. 32, no. 3, pp. 221-228, viewed 1 October 2013
http://0-www.sciencedirect.com.innopac.up.ac.za/science/article/pii/S0740818810000319

Payne, G., & Payne, J. 2004, *Key concepts in social research*, Sage, London.

Powell, R. 1997, *Basic research methods for librarians*, 3rd edn, Ablex, London.

Powell, R.R. & Connaway, L.S. 2004, *Basic research methods for librarians*, 4edn, Libraries Unlimited, Westport.

Pullinger, D. 1999, 'Academics and the new information environment: the impact of local factors on use of electronic journals', *Journal of information science*, vol. 25, pp.2, pp.164-172, viewed 22 October 2013 http://0-jis.sagepub.com.innopac.up.ac.za/content/25/2/164.full.pdf+html

Reitz 2013, *Online dictionary for library and information science,* 183, viewed 26 October 2015 http://www.abc-clio.com/ODLIS/odlis_jk.aspx

Sarantakos, S. 2005, *Social research*, 3rd edn, Palgrave Macmillan, Houndmills.

 Sathe, N. A., Grady, J. L., & Giuse, N. B. 2002, 'Print versus electronic journals: a preliminary investigation into the effect of journal format on research processes', *Journal of the Medical Library Association*, vol. 90, no. 2, pp. 235-243, viewed 21 October 2013 http://0-www.ncbi.nlm.nih.gov.innopac.up.ac.za/pmc/articles/PMC100770/

Shaughnessy, J.J., Zechmeister, E.B. & Zechmeister, J.S. 2012, *Research methods in psychology*, 9th edn, McGraw-Hill, New York.

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

Swain, D. K. & Panda, K. C. 2009, 'Use of electronic resources in business school libraries of an Indian state: a study', *Collection Building*, vol. 28, no. 3, pp. 108-16, viewed 22 August 2014 http://0-www.emeraldinsight.com.innopac.up.ac.za/doi/full/10.1108/01604950910971134

Tenopir, C., King, D. W., Edwards, S., & Wu, L. 2009, 'Electronic journals and changes in scholarly article seeking and reading patterns', *Aslib proceedings,* vol. 61, no. 1, pp. 5-32, viewed 16 October 2013

http://0www.emeraldinsight.com.innopac.up.ac.za/journals.htm?articleid=1766871&show=abstract

Tyagi, S. 2011, 'Use and Awareness of Electronic Information Sources at IIT Roorkee, India: A Case Study', *Journal of Library and Information Science. it*, vol. 2, no. 1, viewed 22 October 2013
http://leo.cilea.it/index.php/jlis/article/view/4586

Vakkari, P 2008, 'Perceived influence of the use of electronic resources on scholarly work and publication productivity', *Journal of the American Society of Information Science and Technology*, vol. 59, no. 4, pp. 602-612.

Woodburn, A. J. 2013, 'Topics in student-coach reflective journals, a study on coach reflection during undergraduate internships', Doctorat en psychopedagogie, Universite Laval, Quebec, Canada.

Wright, J. 2013, 'Teach the common core: how to manage classroom behaviours to promote learning for students in grades 3-12', paper presented at the *Response to Intervention & common Core State Standards*, Nassau BOCES, viewed 22 October 2013
http://www.interventioncentral.org/nassauboces

Yin, R. K. 2009, *Case study research: design and methods,* 4th edn, Sage, Thousand Oaks, CA.

APPENDIX A

QUESTIONNAIRE

Title: Assessing the use of journals and formats preferred by postgraduate students of Makerere University

This questionnaire is intended to collect data from postgraduate students of Makerere University. The goal of the study is to ascertain the preferred journal formats by postgraduate students and its implications for Makerere University Library services. Participant's details and data collected will remain confidential and anonymity of the participants is guaranteed.

Instructions: Please tick where appropriate and fill in where required.

A. Personal information

1. Please select the college you belong to

CEDAT	[ ]
COBAMS	[ ]
COCIS	[ ]
CAES	[ ]
CEES	[ ]
CHS	[ ]
CHUSS	[ ]
Sch of Law	[ ]
COVAB	[ ]
CONAS	[ ]

2. What postgraduate qualification are you pursuing?

Postgraduate diploma   [ ]   Masters   [ ]   Doctorate (PhD)   [ ]

3. What is your year of study?

Year 1	

Year 2	
Year 3	
Year 4	
Other, please specify	

B. Access to journals

4. Do you use Makerere University Library services?

Yes   [ ]   No   [ ]

5 a) If YES, how often do you use Makerere University Library services?

Daily	
Weekly	
Monthly	
Yearly	
Never	
Other, please specify	

b) If NO, please explain why

……

……

……

6. Do you access journals from Makerere University Library?

Yes   [ ]   No   [ ]

7 a) If YES, how often do you access these journals?

Daily	
Weekly	
Monthly	
Yearly	

Never	
Other, please specify	

b) If NO, please explain why

………

………

………

8. When did you first learn about journals at Makerere University Library that you need for your studies?

Less than a year	
1-2 years	
2-5 years	
More than 5 years	
Not aware of journals	

9. How did you first learn about journals at Makerere University Library that you need for your studies? (Please tick all that apply to you)

Library current awareness post on notice boards   [ ]

Library website   [ ]

Library user education/ orientation   [ ]

Lecturers' reference   [ ]

Fellow students   [ ]

Internet/ Intranet sources   [ ]

Workshops/ Seminars   [ ]

Librarian   [ ]

Other, please specify

....

....

....

10. What are your main uses for journals? (Please tick all that apply to you)

For current awareness   [   ]

For my research work   [   ]

For course materials and assignments [   ]

For writing papers   [   ]

Other, please specify

……………………………………………………………………………………………………

……………………...

....

C. Journal format preferences

11. What format of journals do you prefer to access and/or use at Makerere University Library?

Print format   [   ]

Electronic format   [   ]

Both print and electronic format   [   ]

12. What are the reasons for your preference of the journal formats you have indicated in question 11?

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

13. What is your level of satisfaction and comfort concerning your preferred journal format?

Fully satisfied   [   ]   Fully comfortable   [   ]

Partially satisfied   [   ]   Partially comfortable   [   ]

Least satisfied   [   ]   Least comfortable   [   ]

Not satisfied   [   ]   Not comfortable   [   ]

Other, please specify

……………………………………………………………………………………………………

…...

....

14. How do you access your preferred journal format?

Main Library   [ ]

College Library   [ ]

University internet   [ ]

Personal internet   [ ]

Other, please specify

………

………

………

15. What are the challenges of accessing the preferred journals?

………

………

………

………

………

D. Library support to enhance access to preferred journal formats

16 a) in your view do you think Makerere University Library is doing enough to enhance access to your journal preferred formats?

Yes   [ ]   No   [ ]

b) If YES, please motivate your answer

………

………

………

………

………

c) If No, please suggest ways in which library could enhance access to your preferred journal format

………

………

………

………

………

Thank you for your participation

APPENDIX B

Informed consent form

(Form for research subject's permission)

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

1   **Title of research project**: Assessing the use of journals and formats preferred by postgraduate students of Makerere University.

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

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

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

5   Where recording is required, I have explicitly allowed to be recorded during the interview.

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

Signed: _____   Date: _____

Witness: _____   Date: _____

Researcher: _____   Date: _____