

**ROLES OF POSTGRADUATE STUDENTS' SATISFACTION WITH E-
RESOURCES AND PERCEPTION OF DAYSTAR UNIVERSITY AND
MULTIMEDIA UNIVERSITY LIBRARIES**

CAROLINE KATHOMI MURITHI

**A THESIS SUBMITTED TO THE SCHOOL OF SCIENCE AND
TECHNOLOGY IN PARTIAL FULFILLMENT FOR THE REQUIREMENT OF
THE CONFEREMENT OF DEGREE OF MASTERS OF SCIENCE IN
INFORMATION SCIENCE OF KENYA METHODIST UNIVERSITY**

SEPTEMBER, 2020

DECLARATION

Declaration by Candidate

I declare that this thesis is my original work and has not been presented for a degree or any other award in any other university.

Sign 

Date 24-10-2020

Caroline Kathomi Murithi

ISK-3-9589-3/2018

Recommendation by Supervisors


We confirm that the work reported in this thesis was carried out by the candidate under our supervision.

Sign 

Date 26-10-2020

Dr. Paul Gichohi PhD

Kenya Methodist University

Sign 

Date Date 26-10-2020

Dr. Grace Irura (PhD)

University of Nairobi

COPYRIGHT

© 2020 Caroline Kathomi Murithi

All rights reserved. No part of this thesis may be reproduced, stored in any retrieval system or transmitted in any form or by any means, electronically, mechanically, by photocopying or otherwise, without prior written permission of the author or Kenya Methodist University, on that behalf.

DEDICATION

I dedicate this research thesis to my loving family who have supported and inspired me throughout this academic journey.

ACKNOWLEDGEMENT

I would like to thank God for enabling me complete this work.

Appreciation is extended to my supervisors Paul Gichohi (PhD) and Grace Irura (PhD), colleagues and friends for their contribution towards this study.

I am indebted to my supervisor Dr. Paul Gichohi (PhD) who's incisive reading, constructive critique, sacrifice, encouragement and very timely responses throughout my entire research has been invaluable. His scholarly advice, insightful comments made this work a success.

I would like to thank the CoD Information Science Department Ms. Catherine Mueni for her encouragement together with the entire faculty. Appreciation is further extended to Dr.Chao for webinar training which impacted my field work.

I also extend my sincere thanks to my husband Rankesh and our children Joy, Gideon, Favor and Grace for their encouragement and support throughout my studies. Appreciation goes to my parents for their impact to the core of my being and instilling a mindset of hard work while scaling any wall.

Finally my gratitude goes to the library staff and students of both Daystar and Multimedia University libraries for taking time to fill out my online questionnaires amidst corona virus pandemic and challenges.

ABSTRACT

University libraries play a central role in supporting teaching, learning and research activities as citadels of information and knowledge. They provide wide range of user-centered information sources and services, and customer-centric response mechanisms which are expected to not only satisfy users, but also to create an impression of one stop shop for all users' information needs. Despite the aforementioned value contribution, research has shown that most postgraduate students' perception of university libraries is inappropriate. This can be attributed to among others the users' experience and satisfaction which they have had with e-resources. This study examined the contributory roles of satisfaction with e-resources in influencing the perception of university libraries by postgraduate students' at Daystar University and Multimedia University. The objectives of the study were to assess the nature of support services provided, staff competencies; and determine satisfaction with e-resources and the perception of university libraries by postgraduate students in the two universities. The study was guided by the connectivity theory, the self-efficacy theory and the theory of reasoned action. It adopted descriptive survey research design. The target population was postgraduate students and library staff who are in charge of e-resources, and heads of university libraries in both universities. Twenty percent of postgraduate students, that is, 116, and 6 library staff from both universities participated in the study. Postgraduate students were first stratified into two: Masters, and PhD students, and then, a simple random sampling technique was applied in each stratum, while all the six library staff were purposively selected. Self-administered questionnaires and interviews were used to collect data from students and staff respectively. Pre-testing was used to determine both reliability and validity of the research instruments. Data was analyzed descriptively using mean, percentage, frequency and standard deviation. Inferential statistics, that is, correlation and regression analysis were used to assess the relationship between the study variables. The findings revealed that when combined, all the predictor variables (support services on e-resources, competencies of library staff and satisfaction with e-resources) positively and significantly influenced the perception of university libraries by postgraduate students. The study concluded that support services offered on e-resources, competencies of library staff and satisfaction with e-resources are significant contributors of the perception held by postgraduate students towards university libraries in Kenya. Overall, satisfaction with e-resources was identified as having the most significant influence on perception of university libraries by postgraduate students, followed by support services on e-resources and then library staff competencies. The study recommended need for the universities' library management to strengthen e-resource support services, enhance library staff competencies through training and development programs up mechanisms for enhancing users' satisfaction in university libraries. The results have implications on continuous capacity building policies and programs of library staff.

TABLE OF CONTENTS

DECLARATION	ii
COPYRIGHT	iii
DEDICATION	iv
ACKNOWLEDGEMENT	v
ABSTRACT	vi
LIST OF TABLES	x
LIST OF FIGURES	xi
ABBREVIATIONS AND ACRONYMS	xii
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background of the study.....	1
1.2 Statement of the problem	11
1.3 Purpose of the study	13
1.4 Research objectives	13
1.5 Research questions	13
1.6 Significance of the study	14
1.7 Scope of the study	16
1.8 Limitations of the study.....	16
1.9 Definition of terms	18
CHAPTER TWO	19
LITERATURE REVIEW	19
2.1 Introduction	19
2.2 Support services on e-resources provided by library staff	19
2.3 Competencies of library staff who provide services on e-resources.....	24
2.4 Satisfaction with e-resources provided by the library.....	30
2.5 Perception of University Libraries	36
2.6 Theoretical Framework	43

2.7 Conceptual Framework	50
CHAPTER THREE	53
RESEARCH METHODOLOGY.....	53
3.1 Introduction	53
3.2 Research design	53
3.3 Location of the study.....	53
3.4 Target population	55
3.5 Sampling technique and sample size.....	56
3.6 Data collection instrument.....	59
3.8 Data collection procedure.....	62
3.9 Data analysis and presentation.....	64
3.10 Ethical considerations	66
CHAPTER FOUR.....	68
RESULTS AND DISCUSSION	68
4.1 Introduction	68
4.2 Reliability Statistics	68
4.3 Response Rate.....	69
4.4 Background profiles of the Respondents.....	69
4.5 Descriptive Statistics Results.....	71
4.6 Diagnostic Tests Results	91
4.7 Correlation Analysis Results	95
4.8 Multiple Regression Analysis Results	97
4.9 Chapter summary	103
CHAPTER FIVE.....	105
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.....	105
5.1 Introduction	105
5.2 Summary.....	106

5.3 Conclusions	110
5.4 Recommendations	112
REFERENCES	115
APPENDICES	125
Appendix I: Introductory Letter	126
Appendix II: NACOSTI Research Permit.....	127
Appendix III: Authorization letter	129
Appendix IV: Introduction letter	130
Appendix V: Questionnaire for post graduate students	131
Appendix VI: Interview guide for library staff in charge of e-resources.....	140

LIST OF TABLES

Table 3.1: Dayster university sample size	56
Table 3.2: Multimedia university sample size	59
Table 4.1: Reliability Statistics	68
Table 4.2: Background Profiles of Postgraduate students	70
Table 4.3: Descriptive Statistics on Support Services	72
Table 4.4: Descriptive Statistics on competencies of library staff	78
Table 4.5: Descriptive statistics on postgraduates satisfaction with e-resources.....	80
Table 4.6: Level of Satisfaction	83
Table 4.7: Descriptive statistics on Perception of university libraries	87
Table 4.8: Kolmogorov-Smirnov Test on Normality	89
Table 4.9: Test of Heteroskedasticity: Levene's Test of Equality of Error Variances	93
Table 4.10: Durbin-Watson test of Auto-correlation.....	94
Table 4.11: Multicollinearity tests.....	95
Table 4.12: Correlation Results: Satisfaction Factors and Perception	96
Table 4.13: Model Summary: Satisfaction Factors and Perception	98
Table 4.14: ANOVA: Satisfaction Factors and Perception	99
Table 4.15: Coefficients: Satisfaction Factors and Perception	100

LIST OF FIGURES

Figure 2.1: Conceptual Framework.....	50
Figure 2.2: Operational framework.....	52
Figure 4.1: Linearity test: Scatter Plots	Error! Bookmark not defined. 92

ABBREVIATIONS AND ACRONYMS

CBD	Central business district
CD	Compact disk
CD-ROMS	Compact disk read-only memory
CUE	Commission of University education
KLISC	Kenya library and information services consortium
KNLS	Kenya national library services
ICTs	Information communication technologies
MARC	Machine readable catalogue
MMU	Multimedia University of Kenya
OPAC	Online public access catalogue
POD	Print on demand
ALIA	Australian library and information association
NACOSTI	National commission for Science, Technology and Innovation

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

This study set out to investigate the contributory roles of satisfaction with e-resources among postgraduate students' in influencing the perception of university libraries. The main issue of concern in this study was establishing the perception of postgraduate students upon university libraries as they are the heavy users of university libraries whose perception had influence on the utilization of the resources (Oyewole & Adetimirin, 2014). This was very critical because university libraries struggle to maintain their prominent and critical role of supporting higher education's core mission of teaching, learning and research through providing standard information resources (Goldie, 2016).

1.1.1 Perception of university libraries by postgraduate students

A university library is a library that is positioned around teaching and institutions of higher learning and serves to support learning, teaching and research (Allen & Taylor, 2017). University libraries are also the drivers in selection and implementation of e-resources accessed by users. Burke (2011) suggested that perception of a library is the way users see and think the library is. In this study, perception of a library was used to mean the way a user thinks or feels about the services offered in the library. Burke (2011) noted that users see the library from the electronic paradigm thus today's end users don't see the library as a primary destination for research.

Kim (2017) noted that university library is a preferred place to study and spend time during non-class times on campus, hence perceiving it as a place for primarily learning and information seeking. Perception of the library by the users is measured by the speed of access to needed research materials, availability of current and up-to-date materials, cost of access and distractions within the facilities

(Chiemeke, 2007; Rawayau, 2019). The ambience of the websites was also very key. This was because library websites are the number one place users' visited to get information and the only way library services are used by patrons who never or rarely visit the library physically. Library websites are also expected to be easy to navigate, friendly, and interactive as well as welcoming (Chow, 2014; Rawayau, 2019).

Globally, substantial research work such as Okogwu (2019) and El Fadil (2013) have been dedicated on establishing the perception of postgraduate students on university libraries resulting in viewing the library as an essential organ of the University that provides both standard academic information resources and assistance on information search skills (El Fadil.,2013). Various problems encountered in assessing e-resources included slow internet connectivity, information overload, loss of access to content due to cancellation of subscription as well as lack of e-resources relevant to users need, remote access challenges among others. These problems were crucial in forming the perception towards university libraries (Okogwu.,2019).

In the developed countries such as Australia, China and Pakistan, university libraries are considered unique in providing a one-stop-shop that offers a large variety of

resources in both print and electronic formats as found in the Australian Library and Information Association (ALIA) (Allen & Taylor, 2017; Raju, 2019). Students view libraries as facilities equipped with new technologies, places for education; while librarians help students to make good use of library facilities since they have the expertise. ALIA 2003 (as cited in El Fadil, 2013) suggested that libraries are also viewed as part of the solution to many community problems such as training users to become literate and become informed citizens. It is also clear and common that the perception towards university libraries is influenced by information retrieval, organizing services, and information providing services (Osman & Kwafoa, 2020). However, the way postgraduate students perceive university libraries was not attributed to satisfaction with electronic resources, thus providing a ground for the current study determining the concept of perception.

Studies done in developing countries such as Nigeria, Cameroon, Morocco such as Bawack (2019), El Fadil (2013), Ekere Omekwu and Nwoha (2016) respectively, indicated that libraries were perceived as essential organs of the university that provide both standard academic information resources and assistance on academic search skills. Postgraduate students are among the greatest users of library services and their perception of libraries has great influence on the utilization of information resources hence the need for this study (Oyewole & Adetimirin, 2014). University libraries provide assistance in locating appropriate and reliable information for both print and online resources. Librarians were perceived to be teachers helpful in critical evaluation of information (Oyewole & Adetimirin, 2014).

In addition, librarians bridge the information gap by ensuring that users had the resources and skills they need to live, work, learn and teach (El Fadil, 2013). University libraries were viewed in their involvement in exhibitions and introduction to information communication technology. One of the significant changes found was increase in the ask an expert site. Thus, the study was investigating types of support services on the use of e-resources provided by library staff. It also showed a great relationship between satisfaction with e-resources and perception of university libraries.

Some of the emerging trends in university libraries were the issues of fake news and other forms of specious information presented as fact. These have drawn new attention to the old problems of resource evaluation and information credibility. University librarians had developed numerous workshops and research guides devoted to fighting fake news by promoting information literacy (Research planning and review committee, 2018). Furthermore, the changing environment of university libraries was impacted significantly on the knowledge, skills requirement and role of the library leaders. Effective leadership in libraries was extremely required for future scenarios. These emerging trends were affecting library leadership as libraries require a set of competences and great motivation to handle the changing shape of libraries. Therefore university library leaders have to play a significant role in the transformation period of libraries (Aslam, 2018).

1.1.2 Prevalence of electronic resources in libraries

The use of electronic resources in libraries began with the development of the machinereadable catalogues (MARC) format in the mid 1960s. Bibliographic databases

became available about the same time. E-resources originated from the concept of E-publishing (Hawthorne, 2008). According to Singh (2012), e-resources can be stored, delivered and accessed when required; therefore, the services of the libraries were not confined within the walls but are integrated into local, regional, national and international networks. Singh further noted that university libraries too were becoming hybrid; meaning, they contain a mix of traditional print resources and a growing number of electronic resources. E-resources are the information resources in which information is stored electronically and accessible through electronic system and network (Singh, 2012).

Electronic information resource is a very broad term that includes a variety of different publishing model including online public access catalogues (OPAC), compact disks (CD), compact disk read-only memory (CD-ROMS), online database, e-journals, e-books, internet resources, print on demand (POD) email publishing, wireless publishing, electronic link and web publishing et cetera (etc.). It is worth noting that the advent of information communication technology (ICTs), the internet and particularly the electronic information resources had revolutionized literally everything under the sun flat. This had made the world smaller making time shorter with the rapid evolution of ICTs. These technologies had emerged as boons to us with libraries and information centres being the biggest beneficiaries (Singh, 2012).

Publishers around the globe have reaped the benefits of these technologies to an increasingly appreciable extent and brought in a plethora of electronic resources in abundance. This had consequently resulted in a paradigm shift in the original philosophy

of actual processing of resources to actual access of the same. The main reasons for university libraries to have electronic information resources include; responsiveness to client's needs, costs, sources of information, access to information relevant to technical, reference, and management functions, transformational change in the information landscape, repurposing library space etc. (Singh & Khan, 2012).

Lefuna (2017) (as cited in Ternenge and Kashimana, 2019) suggested there was remarkable proliferation of electronic resources in the 21st century. This had tremendously changed the information seeking attitude of students and researchers globally. In recent times electronic information resources were the major sources for information dissemination in Universities mostly by researchers. The importance of electronic resources to students and University libraries cannot be over emphasized. They offered postgraduate students a chance to access relevant and current information from different subject areas.

1.1.3 Students' satisfaction with electronic Information resources

Zeithman and Bitmar (2000) (as cited by Tiemo and Atebo, 2016) defined users' satisfaction as the means which users determine that a product or service meet the required needs and expectations. In this study, satisfaction with electronic resources was used to mean having a library product or service that meet the required need information needs and expectations of a user. Iwhiwhu and Okorodudu (2012) (as cited in Tiemo & Atebo, 2016) suggests satisfaction of users in information resources and services was a means through which users judge if the library services provided to them were adequate

and also determining if their expectations were being met. User satisfaction was derived from the ability to identify the specific use of library services with the help of new technologies that were used with ease as well. Further Ijiekhuamhen, et al.,(2015) (as cited in Tiemo and Atiemo, 2016) suggested the extent or level of library usage reflected the degree of user satisfaction which may be measured by use of questionnaires or interviews. Adequate and comfortable infrastructure, adequate space and improved collection in terms of quality and quantity are also indicators of satisfaction in libraries. Librarians who continuously engage in research activities helps to meet the needs of their users hence go a long way in improving user satisfaction.

Due to the rapid development of ICTs, e-resources compliment the printed resources in libraries presently as well as playing an integral part of information sources to provide quick and easy services to the readers. These electronic environments have changed the information seeking behavior of researchers. Measuring user satisfaction was one of the vital methods of evaluating the effectiveness of library resources and services (Thanuskodi, 2019). Thus, the study embarked on determining the satisfaction with electronic resources by post graduate students.

Developed countries like Pakistan have researched on satisfaction with electronic resources in public universities where findings pointed out to satisfaction with electronic resources despite experiencing many problems such as lack of training and non-availability of remote access for subscribed resources, slow downloading among others were identified (Ahmed & Amjad, 2014). In a study done in Pakistan by Khan and Bhatti (2017) most postgraduate students used electronic resources for gathering

general information while satisfaction level with subscribed e-resources was agreed by 60.2%. Moreover, a greater percentage was satisfied with provision of internet in the library. Other challenges noted included lack of time to access e-resources in the library, lack of training and non-availability of remote access for subscribed resources were significant issues and inadequate training programs by librarian (Sritharan, 2018).

These studies explored on satisfaction with e-resources in public universities and the general users' satisfaction without specificity on private Universities or any perception it would create on the university library. In Tanzania, Kenya, Nigeria and Morocco studies by Ekere et al. (2016) noted that electronic resources were heavily used and becoming part of school systems. Katabalwa researched and found out in Tanzania that 69% of postgraduate students use electronic journals weekly indicating the extent to which they supplement the print resources so e-journals highly supported print resources (Katabalwa, 2016). Additionally, on user satisfaction with electronic resources showed that 36% of users make use of digital repository on a daily basis while 39% use electronic books and 17% make use of e-journals (Sisimwo, 2016).

Notably, university libraries are becoming equipped with diverse information sources (both print and non-print). Recent trends demonstrated increasing subscription to online information sources and in strengthening of online user support services such as emails for example answering questions via email, graphics and images supporting access to resources, discussion groups, file transfer among others (Khasseh et al., 2017). Further and recently, traditional libraries containing large number of printed documents are being transformed to paperless libraries with the capacity of limitless volumes of

information being digitized. Digital libraries are becoming part and parcel of school systems in many countries in Africa (Ekere et al., 2016). Graduate students of Ifrane relied on the web for their academic assignments and research (El-Fadil, 2013). These studies discussed much interest on using internet for accessing scientific information for teaching, learning and research. The study further reviewed that faculty of science respondents secured maximum level of search by obtaining information by scientific journals and electronic publication.

1.1.4 Situation at Daystar University and Multimedia University

Daystar University is a private faith-based institution. The University has got three campuses with the main campus being located in Machakos County 40KMs from Nairobi city. Each campus has got a library. The main campus library also named Agape library has a sitting capacity of 600. Nairobi law campus and Nairobi campus are located in Nairobi county valley road with libraries whose sitting capacity is 244 and 200 respectively. The libraries are automated using Koha system whose modules are integrated thus creating a seamless interaction of services. Postgraduate programs are offered in Nairobi campus on evening mode among others. Daystar University has got five schools and four of the schools offer various postgraduate programs.

Multimedia University is a public university in Kenya (Commission for University Education[CUE], 2018). It specializes in information communication technology and mass media education (Multimedia University, 2020). Similarly Multimedia university has in-depth adoption of ICT and has expanded how lecturing is done and how students get various institutional information. The institution has a full

capacity digital library that functions entirely online with well-stocked e-resources that are meant to serve the students and other library users. This digital library is one of its kind making it a pioneer in digitalization of library services in Kenya (CUE, 2018).MMU has got five schools among them offering various postgraduate programs. The university has positioned itself to being a market leader in I.T, media, science, engineering and business.

Daystar and Multimedia universities belong to Kenya library and information services consortium (KLISC). This consortium was formed in 2003 with the main objective of collective subscription to electronic resources to cope with the increasing cost of information resources. The consortium draws its membership from public/national/academic and research institutions. Its secretariat is based at the University of Nairobi. There exist numerous databases consisting of numerous electronic resources. Both universities provide full-text online books (15,000 and 12,000 for Daystar and Multimedia universities respectively) and full-text online journals (25,000, and 23,000 for Daystar and Multimedia universities respectively) as well as print books and print journals, audial visual resources, and institutional repository consisting of past exam papers and theses abstracts (Daystar University, 2020; Multimedia University of Kenya, 2020).

All online electronic information sources are provided via off-campus and on-campus modes. Librarians at both Universities were heavily involved with imparting skills that were required for effective and maximum use of e-resources Naik (2014). He further stated that the ability to seek and exchange information using databases is not

only dependent on access to technology but required possession of with necessary technical skill. In both universities' librarians and faculty coordinate in order to offer skills to postgraduate students to perform their research with organized internal update trainings. The situation at both universities warrants investigation since no other study has been done attributing perception of university libraries by postgraduate students to satisfaction with e-resources.

1.2 Statement of the problem

As noted by the Kenya CUE (2016) a University library is expected to provide current, varied, sufficient and authoritative information resources for all academic programs on offer, and adopt Information Communication Technologies (ICT) in the provision of information. Notably, universities libraries are expected to provide sufficient facilities and information resources for supporting learning, teaching and research activities by ensuring adequate ICT infrastructure, seamless support for on-site and off-site students and well-trained staff to cater for on-site and off-site students (Kenya Education Network, 2018; Naidu & Kishore, 2019; Noh et al., 2018). These guidelines are expected to position University libraries as a one-stop place for scholars who are seeking for information and knowledge and hence elicit good perception from users (Kenya Education Network, 2018). The perception formed thereof is expected to gradually result to good utilization of information resources by users after which they became satisfied for having fulfilled their information needs (Multimedia University of Kenya, 2020).

Despite the adoption of the aforementioned CUE's standards and guidelines, the perception of libraries by users has been dwindling (Knight, 2017; OCLC, 2010). This threatens the conventional perception of university library as a center for information and knowledge. Researchers such as Burker (2011) didn't see the library as a primary destination for research. Burker reported that students preferred the internet to the physical University library for their research, pointing out how students are nowadays able to access many databases without licensing limitations. This outlook ironically further erode user perception of a university library, despite the heavy investment in e-resources. The study by OCLC (2010) on perceptions of library noted that 89% of users began their information search from online electronic resources hence, the complicated navigation process witnessed in many university libraries websites and the lack of ready virtual support for online users was raising unprecedented user's dissatisfaction despite the many e-databases subscribed by university libraries (Burker, 2011). This also raises questions on staff's competencies in providing virtual support to postgraduate students.

The available literature such as Nzivo (2012) focused on satisfaction at Kenya national library services (KNLS) while Perera (2005) (as cited by Yusuf and Iwu 2010) emphasized on the values of information literacy in university libraries towards addressing plagiarism. Emphatically, no study has been done in Kenya and particularly at Daystar University and Multimedia University on contributory roles of user satisfaction with electronic resources in influencing perception of university libraries hence a conspicuous research gap. The study aims to specifically examine support services, competency of library staff, and the satisfaction with an aim to establish the

extent to which they influence perception of libraries by postgraduate students at Daystar and Multimedia Universities.

1.3 Purpose of the study

The purpose of this study was to examine how satisfaction with e-resources influences the perception of university libraries by postgraduate students at Daystar and Multimedia universities.

1.4 Research objectives

- i. To determine the support services on e-resources that are provided by library staff to postgraduate students at Daystar University and Multimedia University
- ii. To examine the competencies of library staff who provide e-resource services to postgraduate students at Daystar University and Multimedia University
- iii. To determine the satisfaction with e-resources by postgraduate students at Daystar University and Multimedia University
- iv. To determine the perception of university libraries by postgraduate students at Daystar University and Multimedia University

1.5 Research questions

- i. What support services on e-resources are provided by library staff to postgraduate students at Daystar University and Multimedia University?

- ii. What are the competencies of library staff who provide e-resources to postgraduate students at Daystar University and Multimedia University?
- iii. How is the satisfaction with e-resources by postgraduate students at Daystar University and Multimedia University?
- iv. How is the perception of university libraries by postgraduate students at Daystar and Multimedia University?

1.6 Significance of the study

Addressing satisfaction with e-resources would significantly influence perception of university libraries by postgraduate students. This study hopes to provide in-depth knowledge to the Universities and library management on the role satisfaction with electronic resources plays in influencing the perception of university libraries. Library management would find this study relevant and help them to enforce and ensure satisfaction with electronic resources amongst postgraduate students in order to promote perception of university libraries. Further, they would find a basis to bargain for more finances from the University to support the library. The University would find these results relevant by ensuring that the annual subscriptions they paid for the e-resources were being exploited and that the library contributed to learning and research which is its core function. Thus this would encourage universities to increase library funding for more electronic resources.

This study would benefit the faculty by providing information on the connection that exists between satisfaction with e-resources and perception of university libraries by

postgraduate students, enabling them to book their students for more information literacy trainings in the library in-order to become more empowered to utilize the e-resources thus having a positive perception over the library: Further the findings of this study would be very useful in providing literature to students who may wish to carry out a similar study thus acting as a launching pad for other extensive studies that would be carried out in this area. The study further would benefit KLISC by learning its effectiveness as far as the provision of e-resources was concerned, enhancing their effectiveness and also help in strengthening subscription of e-resources through the consortium. Additionally, KLISC would establish problems experienced by libraries in accessing e-resources and further propose solutions to improve provision of e-resources to consortium libraries.

Kenya's economy requires huge financial support which would be attracted by research done in all areas for purposes of finding solutions to various problems. Knowledge gotten from this study about contributory roles of e-resources in influencing perception of university libraries by postgraduate students' would be useful to the government in attracting more foreign students in our Kenyan Universities.

The outcome of this study hopes to contribute to new knowledge in the field of information science when contributory role of satisfaction with electronic resources in influencing the perception of university libraries was clearly established. Since there is little literature that exists on perception of university libraries being influenced by satisfaction with e-resources, such knowledge was expanded. The findings are valuable

in guiding the establishment of suitable structures and other measures for addressing the key drivers of perception of university libraries in Kenya.

1.7 Scope of the study

The study was done in Kenya. Data was collected from postgraduate students and library staff drawn from Daystar and Multimedia universities. The main information collected was on support services, library staff competency, satisfaction and perception of libraries at Daystar University and Multimedia university libraries. This study did not cover all university libraries in Kenya since electronic information resources provided by these libraries are almost similar and thus the outcome of the study will reflect a similar state in these other University libraries. This study was not scrutinizing other indicators of perception of university libraries at Daystar and Multimedia universities for example library policies.

1.8 Limitations of the study

As noted by White and Mcburney (2013) limitations of a study are issues that come up during the study and the researcher has little control over their occurrence or influence over the results. This study was limited to a sample of two institutions in Nairobi County against 47 counties in Kenya and at the same time having a conveniently selected sample. Lack of a longitudinal approach was also a limitation. This was because it was not possible to investigate the impact of every factor on perception of University libraries by postgraduate students over a long period considering the time set for finishing the postgraduate program.

1.9 Assumptions of the study

The study was guided by the assumption that respondents would be cooperative and honestly provide information that was reliable. The respondents are further assumed to have comprehensive understanding of their institutions and would have a common understanding of the research questions posed to them. The researcher further assumes that the two institutions Daystar and Multimedia Universities had ICT infrastructure that support access to e-resources. The researcher as well assumed that online support for postgraduate students was offered in the two Universities.

1.9 Definition of terms

University library

This is a library that is attached to a higher education institution which serves two complementary purposes to support the school's curriculum, and to support the research of the university faculty and students (Rajan, 2017).

E- Resources

These are the resources in which information is stored electronically and accessible through electronic system and network (Singh, 2012).

Perception

Perceptions is defined as the coming to an opinion about something or have a belief about something (Oyewole & Adetimirin, 2014).

Satisfaction

This is a fulfillment of ones wishes, expectations or needs (Naidu & Kishore, 2019).

Student

This is a person who is learning at a college or University (Malatji, 2017).

University

This is an institution of higher learning providing facilities for teaching and research and authorized to grant academic degrees (Madondo et al., 2017).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provided the literature review of the variables undertaken in the study. The study looked at support services on e-resources; competencies of library staff that provided e-resources; satisfaction with e-resources; perception of university libraries; and the relationship between satisfaction with e-resources and perception of university libraries by postgraduate students. Theoretical framework and conceptual framework follow thereof while operational framework concludes the chapter.

2.2 Support services on e-resources provided by library staff

Support services on e-resources are procedures that a university library performs through its staff, to ensure that electronically stored information was accessible through the intended electronic system and network without a glitch (Singh, 2012). The types of support services on e-resources include: acquisition of e-resources, access of e-resources, preservation of e-resources and evaluation of e-resources (Emery et al.,2020)Support services on e-resources were investigated in this study so as to get a holistic view on support services on e-resources in Daystar and Multimedia University.

The indicators of support services on e-resources in a university library were the number of trained staff to offer support services, turnaround time for responding to e-resources queries and number of training programs available to staff on acquisition,

accessibility, preservation and evaluation of e-resources (Cotter, 2012). Therefore, an effective support service on e-resources should be user friendly, quick, relevant and easily accessible (Ahmed & Amjad, 2014).

University libraries have had the mandate to sufficiently quench the ever-growing educational thirst from different users. To achieve this mandate, various university libraries in developed countries had been strengthening their support services to users of e-resources. Emery et al., (2020) gives guidelines in their book on how e-resource management should be done. According to Emery et al., (2020) pertinent issues surrounding support services on e-resources such as lack of flexibility from the traditional e-resources methods; skimpy clasp of academic publishing models; certification rappers for access; use and re-use; lagging management of graphic meta-data; outdated guidelines to follow in case of a challenge with library systems; and poor safeguarding of digital information. The book missed a critical review on the regulations made to ensure copyrights of students' journals in e-resources are protected from being republished again.

Kay (2019) did a study on improving access to e-resources for users at the University of Derby in United Kingdom (UK). The study was as a result of University of Derby getting acquainted with a Library system called Plus 2.0 whose purpose was to improve user accessibility easiness. The Plus 2.90 system had apps that users would be able to access the library services even on their mobile phones, tablets and computers with more ease; icons connecting to full journal articles and abstract only resources. As a way of ensuring everyone knew that such kind of a system existed, University of Derby

advertised a lot about it on twitter. However, the study didn't give account of other social media platforms usage which may leave out the students in the dark especially the ones that do not engage in twitter for social networking.

Tait et al., (2016) aimed to identify the role of information technology utilities in the transformation of university libraries. They noticed that libraries were shifting towards adoption of IT utilities in serving the growing research needs, and in executing and overseeing open access initiative. There were however challenging issues such as changes of business models of academic publishing; logistical challenges; concerns about keeping control of data so that it does not get abused; ethical issues especially on plagiarism; poor data management; reduction of staff numbers; low budgets allocation to hire skilled personnel or train the current staffs. This study relied wholly on secondary data to come up with the above observations. Information technology has always been subjected to menaces of cyber security issues. Though Tait et al. (2016) agrees that university libraries were adopting, the study did not indicate what measures university libraries had put into place to ensure they curb any cyber security if it ever happens.

According to Chen and Lin (2018) university libraries have been experiencing issues related with coping up with new methods of teaching, researching and learning. The libraries have been changing their focus and services from informational positioned to knowledge positioned. That is why there had been advocacy to improve on not just availing e-resources, but also providing supporting service to disseminate knowledge at a very fast pace and diversely. The study considered Xiamen University in their study to measure the new model called embedded service model. From the model, librarians play

a key role in sharing knowledge. Chen and Lin (2018) did not to assess how a university library can make sure that only constructive knowledge was being disseminated without any traces of destructive knowledge. That was, the techniques that university libraries used to sieve the huge volume of subscribed knowledge from e-resources and other online material, which befited university students.

A synopsis done by Anna and Srirahayu (2020) in Indonesia led the way in emerging nation's literature. Anna and Srirahayu (2020) evaluated if virtual reference which utilizes social media and chats at the website were used for direct and online information services at the Indonesian university libraries. While consulting 629 university libraries in Indonesia, the study ascertained that virtue reference was lowly used and many libraries were still using telephone and emails as their main modes of relying information services. The study did not gather convincing evidence on the area of time intervals taken by virtual response team to respond to queries as a contributory factor to low usage of virtue reference. There is need to assess the usage level of virtue reference services by post- graduate students at Daystar University and Multimedia University.

Taking a very interesting turn, Khasseh et al., (2020) did a survey on how the disabled are accorded library services in public libraries in East Azerbaijan province, Iran. Khasseh et al., (2020) established that 56.9 percent of public libraries do not have enough resources to handle the disabled; lack of policies to provide library services to the disabled; and 51.6 percent of library buildings not structured to support the disabled which was a very sad scenario. Khasseh et al., (2020) did not inquire whether there have

been any innovative local solutions given by the public libraries to support the group of disabled library users that were working. This would ensure that the same local innovative techniques could be replicated to other libraries as they wait for the government to provide resources.

Regionally, Ezema and Akpom (2018) who did a study on electronic library support services and resources for law students in South East Nigerian University libraries and reported that law students were aware and able to access the e-resources in the library. CD ROM, law pavilion, open access journals, e-magazines, DOAJ, JSTOR, Lexis Nexis, and electronic journals were some of the e-resources they were aware of. However, the law e-resources journals were at the time of the study inaccessible to the students but previously were accessible. Ekere et al., (2016) did not further enquire why there was inaccessibility of the e-resources. In as much as the law students were aware of their existences, the level of usage could be low hence the university library unsubscribes the least used e-resources to maintain economy of scale.

Tlakula and Fombad (2017) reviewed the utilization of electronic resources by undergraduate students in the University of Venda. The study found out that undergraduate knowledge of e-resources was very low. The students did not differentiate between accessing e-resources from the internet and from the digital library. There were issues with low trainings limited to once a year offered by the library staff to help the student comprehend more on e-resources. The study relied on information from third year students in social sciences because they were the most active library users at the time of the study. This current study considered postgraduate students since they mostly

utilize library e-resources especially in advanced research writing stages (Allen & Taylor, 2017).

Masese et al., (2016) gave a review on the approaches that boosts access and utilization of e-resources by graduate students in designated university libraries in Kisii county, Kenya. Masese et al., (2016) established that there was an increase in utilization of e-resources on graduate students depending on the various courses they undertook. The challenging issues identified by the study included: aspects such as poor training on how to access e-resources; insufficient computer devices to be used while accessing e-resources; lack of awareness on what can be accessed on the e-resources; and meagre internet connection issues. The study used stratified sampling method to recognize students who would participate in answering the questionnaires. In grouping the students, the study did not consider grouping the students according to whether the students were at course work level or at research component level. They only grouped them according to their gender and type of courses they were pursuing (Masese et al., 2016). A post graduate student working on their thesis will rely more on e-resources as compared to a student who is using e-resources for their assignments.

2.3 Competencies of library staff who provide services on e-resources

Competency of a library staff is the aptitude that the library staff possesses which is used to perform tasks effectively and ensuring high standards of professionalism while providing e-resources in a university library (Dresselhaus, 2019; Rajan, 2017). The types of competencies of a library staff related to e-resources are computer knowledge, internet knowledge, network knowledge, data search and retrieval knowledge,

operational knowledge of equipment and tools such as servers (Kenchakkanavar, 2014; McNeil, 2001). These arrays of competencies were all measured in this study so as to get a holistic view on effectiveness of support services on e-resources that are provided by library staff in Daystar and Multimedia University. The indicators of competencies of a library staff in a university library include years of experience as a librarian, number of trainings on e-resources attended and education level (Sutton, 2011). An effective and competent library staff should be well knowledgeable on e-resources, good communicator and reliable (Tetteh & Baah, 2019).

Globally, there has been precedence on emphasis made on university libraries to have competent staff. Time and resources are amicably saved when a librarian has the required aptitude to manage e-resources in a university library. According to Sutton and Collinge (2018) while establishing whether key aptitudes for electronic resources librarians necessitated review, the study insinuated that from the few sum of e-resources librarian positions in public libraries studied, there was no validation for the need for review of their aptitudes. Results of Sutton and Collinge (2018) used public libraries in America as their target population. Users of public libraries were not looking for highly specialized information hence may not demand high knowledge such as subject specific databases. However, at the university libraries, postgraduate students were researchers who may be looking for very complex information which may demand the supporting staff to be very knowledgeable and thoroughly trained. The current study used questionnaires to gather information on how students evaluate competencies of library staff that provide e-resources in Daystar and Multimedia Universities' libraries.

Ballegooie and Browning (2019) did a review on how key competencies such as preserving e-resources assets in the library's structures; issuing catalog-level access to all e-resources; and metadata preparation for bibliographic records in all set-ups, can be used as a guideline when offering training to upcoming e-resource experts. The motivation behind the study was as a result of insufficient expertise discovered on performing e-resources roles in library and data studies programs at university of Toronto libraries in America. Ballegooie and Browning (2019) established that merging e-training offered and having a definite workplace experience would sharpen the e-resource skills levels of the library staff and masters' students undertaking information technology course. The study concluded that university of Toronto had adopted this mode of e-training which allowed them to practice the skills acquired in the university library. Ballegooie and Browning (2019) did not further look at how the parties involved in this program were interested towards participating in a library to gain work experience. For example, master's students would want to acquire an e-resource skill to use in other fields apart from a library set-up.

A review made by Sewell and Kingsley (2017) assessed research support ambassadors' program which was an initiative that sharpens the aptitude of employee in extents like research information administration and open access. Sewell and Kingsley looked into issues that surrounded diverse library training program such as library staff not being able to expand their significance especially in research; absence of knowledge on basic research formats hence not being able to place their e-resource skills to research work. The study done at Cambridge University cannot have an exhaustive conclusion

because it just completed its second phase hence there is need to wait and know how other remaining stages will perform.

Anchored on the importance of leadership competence among academic librarians in Hong-Kong, Wong (2019) set to gather their insights on the matter. The study identified that various librarians had diverse insights on whether leadership competence was relevant especially based on different leadership levels. Wong advised that there should be formation of leadership aptitude profile. The study however used anonymous online questionnaire uploaded on the software dais Qualtrics. This method of data collection is hard to follow up with the respondents and high likelihood of getting false information since the respondents do not know the intent of use on their answers. The current study did not use online method but drop and pick of questionnaires was utilized with a very clear target population.

From a student perspective point of view, librarians who had noteworthy expertise in their line of work of e-resources service provision, are revered more than those who do not (Liu et al., 2019). Liu et al., (2019) compared university of Pekeng in China and university of Tsukuba in Japan, and their results noted that few studies have been done pertaining consultation-founded learning in Asia. Liu et al., (2019) avoided looking into a scenario where a librarian may be an expert but lacks effective communication skills. That is, for example using a very complicated grammar and terminologies that are not common with students hence student avoiding them. E-resource which also falls under the category of consultation-founded learning raises a gap of knowing the perceptions of

students towards competencies of the librarians offering the services in Daystar University and Multimedia universities in Kenya.

In developing nations, Bajpai and Margam (2019) considered on the ICT skills and competencies of library and information science specialists employed in university libraries. The study that was conducted at the University of Delhi in India, established that many of library information specialists had elementary know how of ICT to manage libraries, however, some areas such as operating system and software required more specialized individuals. That meant that there was need to improve on ICT training skills in library staff in that university. The study did not however give a glimpse of whether the university library had begun any training on handling operating system and software in the library.

Khan and Bhatti (2017) embarked on digital aptitudes for evolving and handling digital libraries. Information was gathered from universities librarians across Punjab jurisdiction. The study put into light that university librarians working in Punjab universities have rudimentary level of digital aptitudes for evolving and handling digital libraries. However, their digital aptitudes differ based on the type of university they are working in. In Africa, Baro et al., (2019) did an evaluation of digital literacy aptitudes and knowledge-founded aptitudes on librarians in African universities. While dealing with only librarians from English speaking nations in Africa agreed that computer related aptitudes were higher compared to metadata management aptitudes and library website management aptitudes.

This was evidenced especially in between Nigerian and South African librarians. The study did not collect data from non-English-speaking African nations such as Morocco, Egypt, Algeria, Tunisia, Ethiopia, Sudan, South Sudan and Chad. This led to the study not being exhaustive to support their argument of low literacy level of librarians in African universities. The study failed to look at the number of metadata management and library website management aptitudes experts that were present in each university. Their numbers would have aided in having a solid foundation for cost-effective training. The experts would have been recommended to train other librarians hence improving the literacy levels.

Bawack (2019) who reviewed the university libraries in Cameroon especially technological advancement confirmed that there was a crisis in Cameroon libraries with regards to competency of library staff who provide services on e-resources. Unexpected vicissitudes in the data environment has caused a sudden shift in ICT field. Bawack (2019) insinuated that university libraries in Cameroon are at the verge of being irrelevant if staff do not align their competencies with the technological shift. The study agreed with Bawack and Nkolo (2018) who indicated that insufficient digitalization; poor state of ICT infrastructure; poor internet; unstable electricity supply; poor bandwidth to download resources in Cameroon affected competency levels of library staff that provide services on e-resources. Both studies did not shed light on what policies did the universities commission in Cameroon had come up with to curb the growing trend in the university libraries' staff. There must have been a review done by the commission, which was not indicated in this study.

The study concluded that there is insufficient aptitude especially on e-resources management on librarians and also low adoption of digitalization. Raju (2019) documented the current inclinations in scholarly communication and how to accept them especially from an angle of competency. Raju while conducting the study in South Africa confirmed that there is need to have unceasing expertise expansion prospects to improve the present spots and train for recent responsibilities so as to handle scholarly communication key aptitudes. This was as a result of contests emanating in espousing emergent scholarly communication facilities.

2.4 Satisfaction with e-resources provided by the library

Satisfaction with electronic resources is defined as having a library product or service that meets the information needs and expectations of a user (Ofordile, 2019). The types of satisfaction with e-resources are knowledge/psychological satisfaction economic satisfaction, social satisfaction, operation satisfaction and health-wise satisfaction (Suchánek & Králová, 2018). Economic satisfaction is the fulfillment derived from using an e-resource that is financially viable where the postgraduate student does not incur inflated charges to access the e-resource (Grattan Institute, 2018; Suchánek & Králová, 2018). Social satisfaction is the fulfillment a postgraduate student gets when an e-resource is able to give them relevant information that can be relatable to various interactions they encounter such as other students, lecturers, professors and the entire community (Grattan Institute, 2018; Suchánek & Králová, 2018). Operation satisfaction is the fulfillment a postgraduate student gets when they are able to access e-resources as per their needs (Grattan Institute, 2018; Suchánek & Králová, 2018).

The indicators of satisfaction of e-resources include net promoter score, user satisfaction score, user retention score and abandonment rates (Feng & Wei, 2020). Net promoter score is how frequent a library user recommends library e-resources to other people (Feng & Wei, 2020). User satisfaction score indicates the level of library satisfaction with the library e-resources (Feng & Wei, 2020). User retention score shows how many library users are still using library e-resources (Feng & Wei, 2020). Abandonment rates entails how many library-resource users have stopped using them because of reasons emanating from low satisfaction rates (Feng & Wei, 2020). A satisfied postgraduate student on e-resource should be able to access instant, relevant and diverse e-resource service from the library (Ankara & Atuase, 2018).

Globally, users of university libraries have been keen on ensuring that they get ultimate satisfaction from the services offered in the library such as the e-resources. Krieb (2018), evaluated the influence of reference help and library training on retention and marks gotten by students. Krieb noted that the library was able to retain all undergraduate students that consulted with the reference counter or were present at library trainings and also had a statistically higher rate of remaining in school hence able to use library often. That means, by the act of just engaging the library services, students got some sense of satisfaction to even remain attached to the library and the school. The study looked at the library services offered in general, but this study narrowed down to electronic resources services and assess how satisfaction affects postgraduate students in Daystar and Multimedia Universities who engage in e-resources from libraries.

A survey by Soria et al., (2017) found out that students in their first academic year who utilized e-resources and books had meaningfully enhanced their chances of completion over withdrawing because of not being frustrated while looking for literature to do their assignments and normal studies. The study also found out that students who utilized e-books and acquired library instruction training had meaningfully enhanced their chances of completion over withdrawing. Soria et al., (2017) considered undergraduate students in public universities located in the Midwest America in their study. The study did not establish satisfaction index which will be critical to examine in the current study especially with regards to postgraduate students in Daystar and Multimedia Universities.

According to Vichea et al., (2017), many students did not seem to know the sole purpose of a library. This observation was made after a study at the University of Cambodia found out that though students' academic performance improved as a result of engaging library utilities at the university, most of them do not know many library services apart from borrowing books and reading. Vichea et al., (2017) also showed that most of them could not tell whether they were satisfied or not with the library services. The questions asked when collecting data by Vichea et al., (2017) were vague and did not effectively measure adequately satisfaction levels in students, no wonder the students could not tell whether they were satisfied or not. The current study will ensure satisfaction questions asked based on indicators such as knowledge satisfaction, economic satisfaction, social satisfaction, operation satisfaction and health-wise

satisfaction. These indicators will guide a respondent on evaluating themselves to agree or disagree whether they are satisfied.

In other developed nations such as in Asia, studies such as Sohail and Ahmad (2017) reported that many library users were well knowledgeable with progresses in e-resources, services and their appropriate use in academics and research. Despite that, optimized satisfaction on use of e-resources was being hindered by sluggish downloading and obstruction of university's website. The study skipped looking at various internet providers that the libraries were getting internet from in Asia. A poor internet provider could be a contributory factor on poor e-resource downloads.

In Sri Lanka, Sritharan (2018) measured usage and user satisfaction on electronic information resources and services in a postgraduate institute of medicine library, university of Colombo. Sritharan found that most students were well satisfied with the library e-resource service but more subscription was required on e-resources; more training plans needed to be organized; distant access capacity was required; and innovation of mobile alert services for raising awareness on new issues of e-resource materials. The study did not elaborate the current state of how postgraduate medicine students were getting notification on new e-resources issues. This information was very important since medicine is an ever-changing field hence the students should be always aware of what is happening. The current study was keen at establishing the training patterns offered to the postgraduate students and the mode of communication on new e-resources issues.

While focusing on university libraries in Ghana, Tetteh and Baah (2019) assessed the user satisfaction that gets derived from library value. Tetteh and Baah considered under graduate students, faculty personnel and librarians in e-Ghana Institute of Journalism (GIJ) Todd and Ruth Warren institute and Ashesi University College (AUC) university libraries. They reported that library services, information resources and the physical library setting had slightly improved their value because users had shown high satisfaction on them. Tetteh and Baah (2019) noted that the libraries had inadequate e-resources, incompetent librarians; and there was low awareness on library services. These challenges could be directly attributed to the nature of computer systems the institutions had, which was not indicated as a challenge in this study. If there were no stable computer systems it would not be logic to invest heavily on e-resources and raise awareness because the purpose of disseminating e-resources would not be met. The current study assessed the kind of computer systems that the postgraduate students use to access library repositories.

Okuonghae and Igbinovia (2019) found that public libraries in Nigeria participated in making sustainable development goals a reality. This was through facilitating favorable learning space and availing information resources to users. Their study complained of poor communication in the libraries; and inadequate training of librarians which led to dissatisfaction among library users. Okuonghae and Igbinovia (2019) fell short in measuring how sustainable development goals were well known by the librarians. If a librarian did not understand what a sustainable development goal is,

they would have a hard time directing a library user on what e-resources they should read on the subject.

In Zambia, libraries are key drivers towards attainment of sustainable development goals (Chewe & Imasiku, 2018). The study by Chewe and Imasiku (2018) considered 30 librarians' respondents from 6 public libraries and established that libraries have had a challenge of disseminating relevant information that would lead to sustainable goals development in Zambia through e-resources. This was attributed to underfunding of libraries, poor ICT structures, outdated library materials; poor awareness raising skills among librarians; low number of librarians and poor policies. Public libraries' users may not really be interested in using the e-resources related to sustainable development goals, no wonder there is low funding. This is because most of them are not academicians and did not really understand what these sustainable development goals are in the first place. The current study used university libraries to get feedback on whether postgraduate students are aware on sustainable goals development.

In Kenya, Maina et al., (2017) on usage and user satisfaction of library resources in Kisii university showed that though there was satisfaction on available resources to some extent, both librarians and library users had not yet fully incorporated computerization; there was low awareness of library e-resources; and low training on library users was prevalent; and insufficient investments on e-resources and library management systems. The study used ex-post facto research design. This method when used in a study where there were just two variables like in Maina et al., (2017), the

connection between the variables does not estimate the cause and effect (Simon & Goes, 2013). The current study used descriptive research design and applied correlation and regression analysis to examine the relationship between the study variables.

Omete (2016), on cognizance and usage of e-resources by teaching personnel in university of Eldoret, established that there was low satisfaction with e-resources that emanated from low knowledge. Furthermore, Omete noted that usage of e-resources was low; absence of proper search aptitudes; and dearth of proper digital library structures. The study had very low target population of 27 respondents. The students were not picked for responses in this particular study yet they were the most frequent users of e-resources in a university library set-up.

2.5 Perception of University Libraries

Perception which can either be positive or negative is defined as a conscious intent of arriving at an interpretation of an aspect at immediate surrounding (Glattfelder, 2019). The different perceptions of university libraries by postgraduate students in this study was anchored on frequency of use of library, familiarity with the library information resources, support services, training and development and internet search engines (Computer Library Center, 2006). The perception of the library by the users was indicated by the speed of access to needed research materials, availability of current and up to date materials, cost of access and distractions within the facilities (Chiemeke, 2007).

Globally, the perception of users in university libraries determines the utility level of their services. A correlational study by Kim (2017) on the user perception and utility of the academic library, underpinned that they were a place for learning and information seeking. Kim (2017) confirmed that a library user's perception is positively correlated with the utility of an academic library. In agreement Jameson et al., (2019) stipulated that students always sought consultation from librarians on reference information services. Nevertheless, Jameson et al., (2019) suggested that the student's perceptions of librarians may be associated with non-utility of reference services; unfriendliness of librarians; poor cognizance about librarians' purpose; low confidence in librarians' aptitudes; failure to find librarians and library nervousness. These factors were two major causes of low perception towards consulting for referencing services. A university library has many other uses apart from referencing services such as e-resources services and hence basing a student's perception on just one function of a library may not be justifiable.

A captivating study by Mangrum (2019) in the university of Mississippi dwelt on the student and staff perceptions of university library utilization especially likening reality to explanation of space utility. The study reported that librarian's perception of student utility did not tally with the actual student utility information. For example, librarians thought students used library to socialize and group discussion while 65.2% and 43.4 % respectively of the students disagreed with that. This showed that there was a gap between the librarians and students views in the university on the purposes of a library. Approaching the aspect of perception from Malaysia in Asian context, Ali et al.,

(2018), used public libraries in his study. The study used a population of 383 library users who coherently refuted the supposition that library users had a negative view of librarians. The study variables included skills, nature of work and professional image of the librarians to arrive at conclusion. However, there was need to use a different point of view such as the user's perception on how technological shift is being handled by the librarians in university libraries in Kenya.

Noh et al., (2018) compared the perception between librarians and users about libraries' worth between two universities in Asia. The study reported that majority of the librarians appreciated highly than the library users. The study did cover a diverse area of value appreciation such as cultural, economic and social. These revelations put across perspective to find out if postgraduate students in Daystar and Multimedia Universities in Kenya share the same sentiments and also indicate the perceived value libraries have brought to them culturally, economically and socially.

The study by Zhang and Niu (2016) noted a technological change which had caused many libraries to adopt to e-books which are slowly phasing out hard-copy books due to the up-surgings demands on research and educational requirements. Though various prior literatures have widely shared on the technological shift, few studies had highlighted on the user perception and use of e-book in search of information (Zhang & Niu, 2016). Many postgraduate students are people above 30 years who may be conservative on changing from prior hard-copy books to e-books. This creates a gap to ascertain the perception of postgraduate students in Daystar and Multimedia universities concerning e-books.

In Western Africa, Nyantakyi-Baah (2016) did a study on the user perception of academic library service quality and value in Ghana. Nyantakyi-Baah found that students used library more than academic staff. Satisfaction was derived well from the quality of library services in both institutions. According to Nyantakyi-Baah's study, the greatest appreciated features of the libraries were the library resources, and the approachability of the librarians especially on consultations. Despite the numerous values derived from the library, Nyantakyi (2016) noted lack of framework to ascertain their value.

Shifting the focus from students to library staff, a Nigerian study by Rawayau (2019) assessed how negative perceptions of library staff would influence their job performance of delivering quality library services at Umaru Musa Yar'adua university library. Rawayau (2019) reported poor enthusiasm, cognizance, inadequate guidance and counseling of the profession in library as the reasons for negative perception of the librarianship. This meant that as a result of negative perception by librarians, a transfer of negative perception was inevitable in that university. Rawayau (2019) did not give a thought on how university policies and regulations in Umaru Musa Yar'adua University affected the perception of library staff.

In South Africa, Malatji (2017) did a study on students' perceptions of the role of the library in their studies at Tshwane University of technology. The study indicated that students had a positive perception on the library and satisfied with library facilities. Malatji (2017) further elaborated the reasons for positive perception was due to appropriate opening and closing times; a favorable atmosphere for learning; and aptitude

of the librarians aided the library to add to scholars' success results. Malatji (2017) disclosed that deficiency of library resources, students not attending training; librarians not communicating effectively on upcoming library events; absence of research backing, and an insufficient structure, deterred the library's support to scholars' success results. The study did not dig deeper on what would cause low attendance on training among students. The current study progressed further and knew some of the reasons why postgraduate students would skip trainings yet they will require library services in their academic journey.

Wangui (2018) did a study on the perception and attitude of postgraduate students on institutional repositories in a private university in Kenya, and concluded that there was negative perception which made institutional resources to be underutilized. The negative perception was ascribed to poor internet connection that caused too much time to download an e-resource and poor awareness of e-resources. Wangui (2018) did not assess other internet sources alternatives that can be used to access the repository apart from the university ones. For example, in Kenya, the government has provided safe free internet hotspots for people to browse and also do research in every community development fund (CDF) office.

Summary of Research Gaps

The reviewed literature in this chapter pertaining support services on e-resources, gave a wholistic view on the mandate that university libraries have had of ensuring that the growth in need for education is met. The university libraries have been trying to

strike a balance between offering the best support services and ensuring the relevance of the e-resources provided. Authors such as Emery et al., (2020) have given guidelines on what should be done to ensure that support services remain competitive enough in the academic arena. However, support services have had their own share on demerits such as librarians not being well trained on e-resources hence leading to challenges in maintaining discretion of data to limit its abuse. Change management by the universities effecting change from the traditional methods of e-resources to the current methods have been a tall order. The universities have been experiencing challenges on adding facilities and structures that handle the disabled library users well. In conclusion the reviewed literature showed that there is generally lack of awareness on e-resources and lack of computers to access the e-resources.

Turning our attention to the literature considered on competencies of library staff who provide e -resources in the university libraries there have been a battle with time and resources wasted as a result of incompetence. A study such as Sutton and Collinge (2018) pinpointed that time is lost when there is insufficient expertise especially on performing e-resources roles in library. This is because, the only few staff who had the required ICT skills would have to handle a lot of students. Librarians were also found not regularly updating their skills level especially on the area of research. This was seen to lead to absence of knowledge on basic research formats that keep on changing such as referencing formats. It was also established that there were gaps on metadata management skills where scenarios of unexpected technological changes in the data

setting has resulted to librarians not knowing what to do due to insufficient digitalization.

The literature reviewed on satisfaction with e-resources majorly showed there had been some improvement of e-resources as noted by a study such as Okuonghae and Igbinovia (2019). These improvements have been slowly improving satisfaction among various library users. Despite that, major challenges had been experienced in awareness, ICT management and the nature of e-resources provided. In awareness the literature complained a lot about few training, poor networking between diverse librarians, in different libraries and poor services delivery. In ICT, management had numerous issues such as users not being able to access certain e-resources, poor computer structures, complication in search of e-resource procedures and poor internet. Lastly on nature of e-resources, outdated e-resources were the major issue.

Last but not least, the past studies reviewed related on the kind of perception postgraduate students had towards university libraries drawn attention on mainly customer service skills and the library structures related to e-resources. On the one hand, customer service skills had really been emphasized by various authors. How well a librarian treats a library user, determines the kind of perception they will have towards the library. It was noted availability, communication skills and non-verbal signals coming from librarians play a vital role on perception. The literature argued that non-verbal communication may cause nervousness on approachability of a librarian by a student. When also a librarian seemed to be less confident on the information they were issuing out to library users, they acted against them. On the other hand, poor library

structures and systems proved to have negative perceptions. In addition, ineffectiveness in communication of training days resulted to very low turnout of students according to literature reviewed.

2.6 Theoretical Framework

This study was guided by three theories; connectivity theory, self-efficacy theory and theory of reasoned action. Connectivity theory directed studies into support services on e-resources. Self-efficacy theory guided studies into competencies of library staff. Theory of reasoned action guided investigation on independent variables with regards to satisfaction with e-resources and perception of university libraries.

2.6.1 Connectivity theory

Connectivity theory was first developed by Siemens (2005). The theory guided support services on e-resources in this study. Connectivity theory is also referred to as learning theory of the digital age, states that gaining knowledge is a procedure that happens within vague settings of ever-changing main essentials which are not completely under the control of the person getting it (Siemens, 2005). That is, for knowledge to be gained, it has to have a disseminator, a receiver and disseminating technique. The disseminator is the issuer of knowledge in an organization who may provide primary knowledge or secondary knowledge. Primary knowledge provision happens when the disseminator is the author of the information being disseminated while secondary knowledge provision happens when the disseminator provides

information of other authors to the receiver. For a receiver to gain either primary or secondary knowledge, they had to follow the stipulated procedures.

Gaining knowledge can exist inside an organization or a database, is intensive on linking particular information groups, and the networks that permit us to gain more knowledge than what we already know (Siemens, 2005). Connectivity theory was adopted in this study because of its practicability on support services on e-resources offered in a library. For example, a university library potential user had to be permitted by the institution to be able to access a library. This could either be through course registration if it is a student, employment if it is a staff or special permission in case of a visiting user. Once this is done, the receiver gets access to the library repository but does not really know how that information got into the library repository in the first place. The user does not understand where the information came from nor do they know for how long that information would remain there.

This vague information is only known by the person controlling the database access who happens to be a librarian. The librarian changes from time to time how and when the receiver can access the university library repository and in which the receiver is limited to its subjection. Therefore, the university library user is always obligated to consult for support services on e-resources in case they get stuck in the process of accessing the -resource of their choice. On the one hand, a library user will only be able to use the support services offered such as number of e-resources in a database while on the other hand, a librarian decides what e-resources a library user will be able to access through subscription of the e-resources process. This means that at the end, a library user

would gain more knowledge than what they knew when they accessed verified e-resources of a library through a verified channel which could be library website. Connectivity theory was used before by a study such as Carreño (2014) who investigated the applicability of the theory as an emergent solution to innovative learning strategies.

Connectivity theory has been criticized by prior literature such as Chatti (2010) where the study stipulated that it does not address aspects that are vital in learning such as reflection, learning from failures, error detection and correction and inquiry. Though there is always a portal of feedback at a university's library website for inquiry, complains, suggestion and compliments, personnel offering support services may not be able to amicably solve all the arising e-resources issues when incompetent. This reason therefore gives rise to self-efficacy theory.

2.6.2 Self-efficacy theory

Self-efficacy theory was developed by Bandura (1977). The theory guided the study on competencies of library staff in this study. Self-efficacy theory elaborates that a person showcases their aptitude in a task based on mastery criteria in a specific field. Mastery of a task is normally developed over time since the more one repeats a procedure of performing a task, the more they will comprehend of its entails. Over-time, they will be self-efficient and use less time to complete the same procedure. For self-efficacy theory to work, the entity performing the task needs to have stipulated objectives on how to achieve a desired goal. Therefore, an entities' judgement when performing a task to excellence level will be determined by their objectives and

standards developed over time. Bandura (1977) elaborates further that a person cannot showcase a skill that they have not possessed, no matter how hard they try. They can nevertheless learn the skill with time and be at a capacity to express the skill because they have mastered its underlying details.

With this revelation, self-efficacy is never limited to any person that desires to learn a skill in the field of their choice. Bandura (1977) argues that for a person to develop self-efficacy in an area, there is need to have a positive attitude towards the subject phenomenon. Any negative attitude demotivates an individual to submit and learn the basic concepts that are repeated for mastery of a skill. Prolonged negative attitude leads to rejection towards a certain aspect. The theory was adopted to direct competencies of library staff in this study because ICT skills training is found to increase self-efficacy which in turn influences ICT acceptance. ICT self-efficacy focuses on what an individual believes he or she can accomplish with ICT resources.

According to Aramide (2010) who used the self efficacy theory in their study before, indicated that computer self-efficacy two levels are all-purpose computing and precise computer responsibilities. All-purpose computing is a person's confidence to accomplish computer responsibilities transversely numerous computer spheres. Precise computing responsibilities are a person's awareness of effectiveness to accomplish computer connected responsibilities within a sphere such as word processing, use of internet amongst others. A library staff needs to be confident to deliver skillful tasks in ICT application in diverse areas before narrowing down to specific e-resource skills. When a library staff is able to widely apply ICT skills in diverse areas, they will be able

to effectively guide e-resource library users who may have a related problem to ICT. These problems could be an issue such as not being able to download because they are not logged in to the internet or the device they are using has filled capacity to be able to download more items. However specific e-resource skills relate to a librarian being able upload subscribed resources in the database, allow access to library users and manage the subscriptions to know when they expire amongst other detailed ICT skills.

Self-efficacy theory has been criticized by Biglan (1987) who indicated that self-efficacy theory does not justify what purpose the environment acts in defining behavior. On a normal basis, an individual's behavior ought to be affected by both internal and external environment surrounding them (Biglan, 1987). Self- efficacy theory overrides this vital attribute and considers only the positivity or negativity of the individual's attitude, but fails to explain what causes the attitude development (Biglan, 1987). There is always a background reasoning done on the advantages and disadvantages of partaking a course of action towards developing a skill. This background reasoning explained the theory of reasoning.

2.6.3 Theory of reasoned action

Theory of reasoned action was developed by Ajzen and Fishbein (1975). Theory of reasoned action guided satisfaction with e-resources and perception of university libraries in this study. The theory explained that an individual's perception towards a particular behavior led to a specific result. When the result benefits the individual, they begin practicing the behavior. Theory of reasoned action emphasizes that the development of behavior is a multi-stage attribute based on the results derived (Ajzen &

Fishbein, 1975). For an individual to develop a certain behavior the results gotten must be appealing to them otherwise, the individuals will drop the behavior (Ajzen & Fishbein, 1975). The judgment made on each result derived is left to individuals to make a decision (Ajzen & Fishbein, 1975). Continuous behavior for a length of time leads to experience accumulation on how to effectively perform a task.

The theory was adopted to direct the two variables because according to the theory, a library user will have a positive perception towards a particular behavior such as consulting with the librarian on how to access e-resources after they realize they can be able to access the e-resources. This made them start practicing the behavior of always consulting with the librarians to be able to access more e-resources from the library. This repetition of behavior led to ultimate satisfaction on library services and resources by the postgraduate student. A university library must have a mandate to ensure that accesses to e-resources are explained through continuous training to library users which positively affect their perception. The library e-resources ought to employ a higher percentage of accessibility so that the inaccessibility of e-resources does not lead to negative reasoned action. Theory of reasoned action has been used by Jones (2019) to examine faculty intentions to use social networking in distance learning courses.

The theory of reasoned action had been criticized by Trafimow (2009) that it is not a good indicator of human behavior. This was because human behavior was normally affected by various but not limited to factors such as age, intelligence level and the specific objectives that individuals had. A library user who had advanced in age may be conservative towards adapting various e-resources hence their reasoned of action

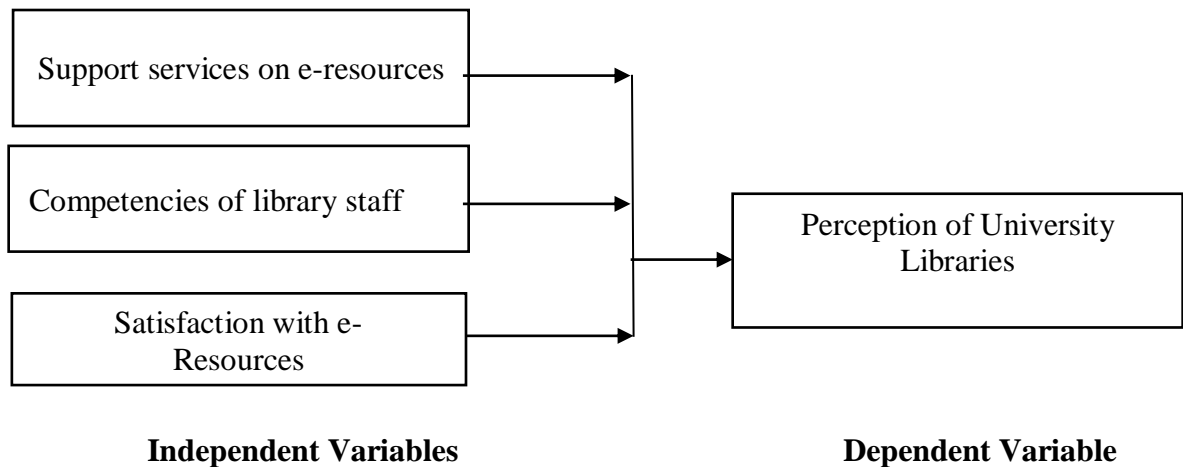
could be inclined towards rejecting e-resources affecting their perception. Intelligence quotient (IQ) that an individual has, affects how fast they grasped concepts on accessing e- resources. If they have a low IQ, they would definitely find it harder to understand the process hence had a negative perception leading to low satisfaction on e-resources. University library users may also have diverse objectives such as getting information very fast that is not meant for academic or research purposes. If they notice that it was hard to access the information, they developed a negative perception leading to low satisfactions. This critique didnt affect this study because the study did not concentrate on age, intelligence level or objectives of library users.

2.7 Conceptual Framework

Conceptual framework as presented in Figure 2.1 which demonstrated variables in this study. Dependent variable was located on the right and independent variables on the left. The dependent variable was the perception of university libraries, while the independent variables were the support services on e-resources, competencies of library staff, satisfaction with e-resources.

Figure 2.1

Conceptual framework



To precisely measure both the dependent and the independent variables, this study adopted an operational framework. The operational framework gave the indicators of each variable. The dependent variable was perception of university libraries. When acknowledging the different perceptions of university libraries that post graduate students have, this study looked at frequency of use of library, familiarity with the

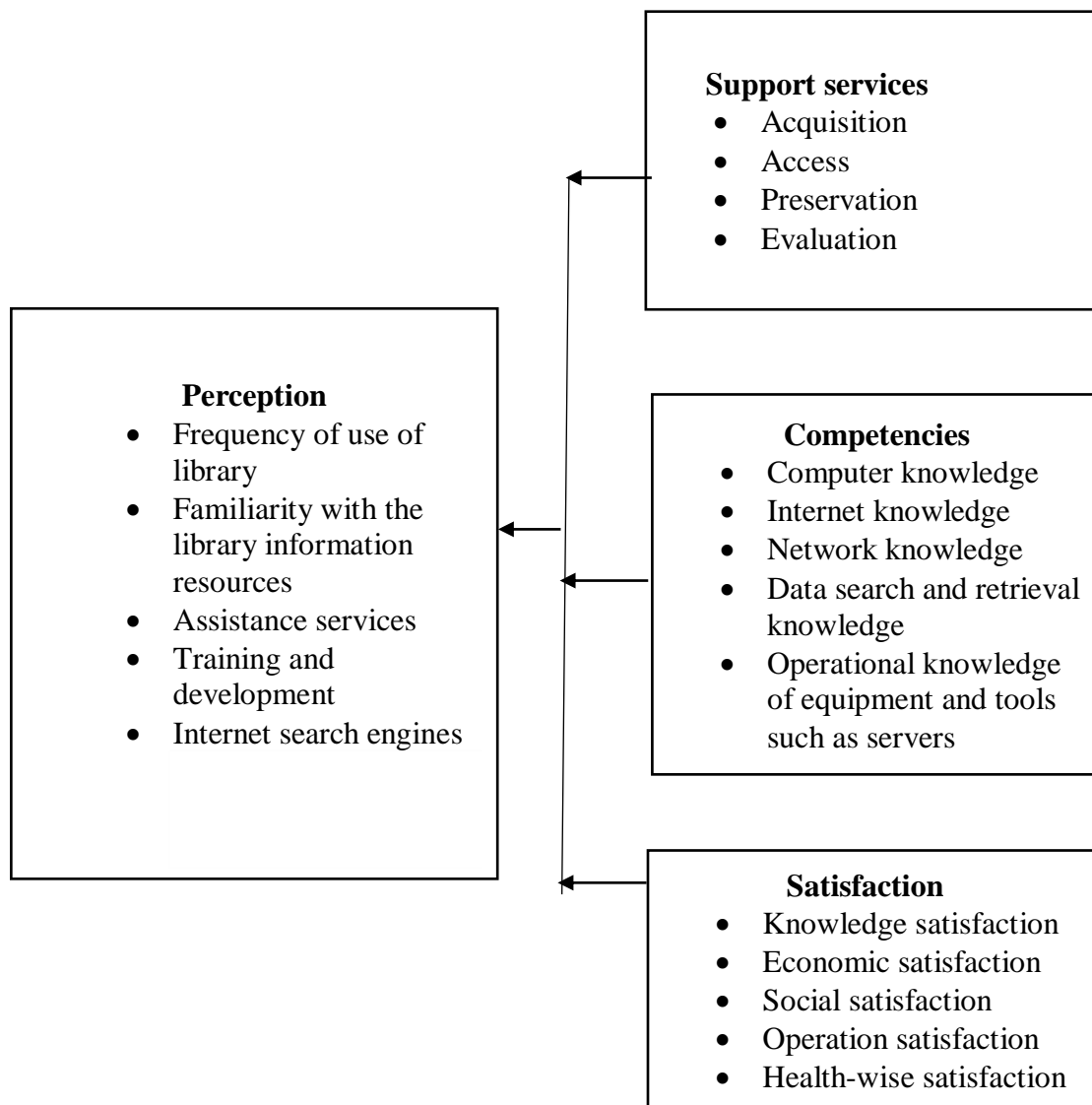
library information resources, assistance services, training and development and internet search engines (Chiemeke, 2007). The independent variables were support services on e-resources, competencies of library staff, Satisfaction with e-resources, perception of university libraries and satisfaction and perception of university libraries.

When measuring what support services in Daystar and Multimedia universities, the study would look at acquisition, access, preservation and evaluation (Emery et al., 2020). Competencies of library staff were measured by computer knowledge, internet knowledge, network knowledge, data search and retrieval knowledge, operational knowledge of equipment and tools such as servers (Kenchakkanavar, 2014; McNeil, 2001). Satisfaction will be measured by economic satisfaction, social satisfaction, operation satisfaction and health-wise satisfaction (Suchánek & Králová, 2018).

2.7.1 Operational framework

Figure 2.2

Operational framework



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter entails the research methodology that was used in the study. The study looked into the research design, location of the study, target population, sampling technique and sample size, instruments that were used to collect data, the procedure for collecting data, data analysis and ethical considerations.

3.2 Research design

The strategy that the study applies in its achievement of the objectives is referred to as a research design (Shajahan, 2009). A research design enabled a research to control how the study was guided without interfering with the focus or the environment of the study. The research design that was used in this study was descriptive survey research design. This kind of design was used because the study wished to define the respondent's nature and the outcome in a way that accomplished the purpose of the study by answering the research problem. In this study there was need to know the contributory roles of postgraduate students' satisfaction with e-resources on perception of Daystar and Multimedia University Libraries.

3.3 Location of the study

The location of the study is where the collection of data will be carried from (Zikmund et al., 2012). In this study, data was collected only from both Daystar and Multimedia Universities' libraries where post graduate students were present. Most post

graduate students were working hence do not study on fulltime basis but on part-time, weekend, evening and distance learning basis. They are therefore placed in campuses near town center because of proximity to their working places and convenience purposes. On the one hand, in Daystar University's, all postgraduate students were present in Nairobi campus which is in Nairobi county, along valley road.

The Nairobi campus of Daystar University has a functioning library which had incorporated e-resources services. On the other hand, Multimedia university's postgraduate students were mainly present in their main campus which is located in Nairobi county, 1km from Ongata Rongai town. This main campus had a functioning library which offers e-resources services. Daystar is a Christian leading private University in Kenya (Daystar University, 2020). It is well known for producing quality graduates in journalism and mass communication (Daystar University, 2020). The institution was chosen because apart from it being a leading private university, the quality of teaching had advanced to a point where there were a lot of online courses proving that they led in embracing technological advancement in Kenya (Kenya Education Network, 2018). Thus the researcher assumes postgraduate students in this institution heavily exploit e-resources.

Multimedia University is a public university in Kenya (CUE,2018). It specializes in information communication technology and mass media education (Multimedia University, 2020). Similarly Multimedia university has in-depth adoption of ICT and has expanded how lecturing is done and how students get various institutional information. The institution has a full capacity digital library that functions entirely online with well-

stocked e-resources that are meant to serve the students and other library users. This digital library is one of its kind making it a pioneer in digitalization of library services in Kenya (CUE, 2018).

3.4 Target population

This is a group of entities who have characteristics that are alike and can be used to give information needed in a study so as to accomplish its objectives (Wagner et al., 2011). For a population to be considered they had to be relevant and engage routinely with the variables of a study. The target population in this study was Daystar University and Multimedia university libraries. Information was provided by postgraduate students who interact with the library services. They were best placed to provide relevant and correct information on how satisfied they are with e-resources and their perception on their university libraries. There were 452 active postgraduate students in Daystar University while there are 131 in Multimedia University (Daystar University, 2020; Multimedia University, 2020). This resulted to a target population of 583 postgraduate students in both universities. A postgraduate student was identified as a university student who was pursuing master's degree and above. There was consideration of four library staffs from each of the universities being studied. These library staffs were the University librarians in charge of the library and library staff in charge of e-resources from the two Universities.

3.5 Sampling technique and sample size

Sampling is explained as selecting a small number of subjects to act as the representation of the entire population (White & Mcburney, 2013). The information collected on the samples is accepted as a true representation on the whole population of the study (White & Mcburney, 2013).

3.5.1 Sampling technique

Postgraduate students in each University was first grouped through stratified sampling technique into either Masters or PhD academic programs as indicated in Table 3.1 and 3.2 (Cooper & Schindler, 2018). These sets would be according to their program's course level. The postgraduate students within a stratum were further grouped into either course work or thesis component. By grouping them this way, there was a sure way of allowing all postgraduate students participate into the study. The study hence utilized systematic random sampling technique to get representative from each sub-stratum.

The library staffs were selected through purposive sampling technique. This was because the study did not consider all library staffs but deliberately the library staff in charge of the e-resources and the University librarian. On the one hand, an e-resource librarian was considered most appropriate in providing information on utilization of e-resources. The duty of the librarian included training users on information retrieval skills, and usually interacts with e-resource users on daily basis, hence, was better placed to explain issues from experience point of view. On the other hand, a University

Librarian sets library policies, manages learning resources while keeping budgets. They collaborate with University leadership such as deans, HODs, in-order to focus on future of library developments even of e-resources. They lead recruit and manage staff while evaluating a library workforce.

That means, there was 2 library staff in each university and a total of four library staff considered for the study. These library staffs were recognized by the researcher through consultation with the customer services staff at the library reception section.

3.5.2 Sample size

In calculating the sample size, the study selected a 20 percent sample proportion from the target population. This resulted to a sample of 116 for both Daystar and Multimedia universities. To derive at Daystar's sample size the researcher divided 452 by 583 multiplied by 116 which gave 90 as the sample size. In Multimedia, the researcher divided 131 by 583 multiplied by 116 which gives 26 as the sample size.

Table 3.1

Daystar university sample size

Academic program	Course level	Population	Sample size
Masters	Course Work	110	22
	Thesis	200	40
PhD	Course Work	32	6
	Thesis	110	22
Total		452	90

Table 3.2

Multimedia university sample size

Academic program	Course level	Population	Sample size
Masters	Course work	43	9
	Thesis	58	12
PhD	Course work	13	2
	Thesis	17	3
Total		131	26

3.6 Data collection instrument

Data was collected by use of online questionnaires which was administered online using Google form and online interview. The respondents of questionnaires were postgraduate students in both Daystar University and Multimedia University. Interviews were conducted on library staff in charge of e-resources and University Librarians in both Daystar and Multimedia Universities.

3.6.1 Questionnaires

The nature of the questions was closed-ended that had five level Likert scale statements that respondents had to either strongly disagree, disagree, neutral, agree or strongly agree. The questionnaire was categorized by six parts. The first part briefly asked questions pertaining the demographic data of the respondents; the second part handled the support services on e-resources. The third part handled competencies of library staff that provided e-resource services. The fourth part handled satisfaction with e-resources by postgraduate students. The fifth part of the questionnaire handled perception of university libraries by postgraduate students. The questionnaire that was used is in appendix III. The depth and reliability of the questions asked in the questionnaire was heavily borrowed from the literature reviewed in chapter two.

3.6.2 Telephone Interview

The researcher conducted interviews for library staff in charge of e-resources in both universities. The telephone interview guide had questions that were grouped in six parts. The questions were derived from the gaps identified in the literature review in chapter two. The first part was briefly asking questions about the demographic data of respondents; the second part handled the support services on e-resources. The third part handled competencies of library staff that provided e-resource services. The fourth part handled satisfaction with e-resources by postgraduate students. The fifth part of the questionnaire handled perception of university libraries by postgraduate students. The

interview guide that was used in the study is in appendix IV.3.7 Pre-testing the questionnaire

Before the main data collection for the study, the questionnaires were pre-tested to ensure that they relate to the study. According to Cooper and Schindler (2018) pre-testing is carrying out evaluation of research instruments suitability through conducting a small prior study in a different location from that of the main study. In the current study, pre-testing was done at Kenya Methodist University library in Nairobi campus. Kenya Methodist University didn't participate in the main study. The pre-testing respondents were 4 post graduate students who were selected through simple random method from the health science, business, and hospitality and information science departments. Two library staff also had a pre-testing interview and they were also selected by simple random method. The researcher selected them in this manner so that the results gotten would tell whether postgraduate students were comfortable answering the questions in the main study and mostly pursuing courses in these departments.

3.7 Reliability

Reliability refers to the precision and exactness of a measurement process and can be articulated in terms of steadiness, correspondence, and internal uniformity (Cooper & Schindler, 2008). The pre-testing results was used in spotting febleness in the plan and correct errors and indistinctness in scheming the questionnaire. Cronbach's alpha coefficient was used in measuring reliability. It was between 0.7 to 1 for a research instrument to be reliable (Cooper & Schindler, 2008;White & Mcburney, 2013).

3.7.1 Validity

Validity is that ability of a research instrument to efficiently measure its originally intended goal in a study (Shajahan, 2009). Questionnaires were supposed to accomplish the general purpose of this study, answer research questions and bridge the gaps identified in chapter two. To achieve this, the study observed face, construct and content validity respectively (Shajahan, 2009). Face validity was done by discretely answering the research questions in this study. For example, face validity was established when the kind of support services on e-resources that are provided by library staff to postgraduate students; competencies of library staff who provide e-resources; level of satisfaction with e-resources; perception of university libraries by postgraduate students are known.

Criterion validity was measured to know how well the instruments measured the contributory role of postgraduate students' satisfaction with e-resources on perception of daystar and multimedia university libraries. Studies done before aided well on enabling the researcher handle construct validity by comparing the outcome with what was gotten by those studies. Content validity was achieved when the questions asked on the questionnaires were linked to both the independent and dependent variables in the study.

3.8 Data collection procedure

Collecting data was done systematically. The researcher acquired research permit from National Commission for Science, Technology and Innovation (NACOSTI). Daystar and Multimedia universities being private universities, they had protocols to be

followed such as getting authorization from the required authority. Therefore, the researcher sought authorization from the deputy vice chancellor (DVC) academics from the two universities to collect data from their students and staffs through emails which was granted. That was also formally communicated through an authorization letter to which they were required to consent. The authorization request letter is in appendix I. The researcher put the online questionnaires in a Google form. The researcher then attached the introductory letter (see appendix 11) requesting the participants to participate in the study. The researcher obtained telephone numbers and email addresses of students from the Deputy vice chancellor (DVC) academics and then sent the Google form link to the randomly selected postgraduate students since Universities had closed as a result of COVID-19 pandemic. After a few days of waiting, the researcher sent reminder emails and short messages through their telephone numbers and WhatsApp platforms only to the sampled postgraduate students once that was done the researcher waited for responses which were afterwards received for analysis.

3.8.1 Procedure for conducting interviews

Since COVID-19 pandemic had led to closure of Universities, the researcher discussed over telephone with the University librarians at Daystar University and Multimedia University libraries on the need to collect data. She introduced herself and the intention to carry out the interview. The researcher further requested the University librarians to participate in the interview since they were part of the respondents. This was through request for consent which was followed by emailing the introductory letter as well as the approved authorization letter to the University librarians.

Once the participants consented, the researcher later continued with the telephone conversation to gather data. After getting consent from the interviewees, the researcher recorded all the responses using a pen and a notebook. Afterwards, the researcher through telephone requested to interview the library staff in-charge of e-resources. The researcher was given a go ahead to interview them by being given their telephone numbers as well since COVID-19 could not allow physical interaction. The researcher called them at different times and requested for their consent to participate in the interview since they were part of the respondents. The researcher emailed them the introductory letter in appendix 11. After they agreed to participate the researcher discussed the questions over telephone while noting the responses on a notebook for further reference while analyzing the data. After every interview conversation the researcher thanked the respondents for participating in the interview.

3.9 Data analysis and presentation

Collected data was then preceded to data analysis stage. Both quantitative and qualitative data analysis was conducted from the collected questionnaires responses and interview responses.

3.9.1 Analyzing Quantitative data

Data gathered using google forms was downloaded in google spreadsheet was and checked to ensure that all the questions were filled. The same was transferred to Statistical Package for Social Sciences (SPSS) 25.0. In the SPSS it was coded. Once coded, the responses were then filled in so as to run various analysis. The first analysis

that was done involved running various tests such as normality, linearity, autocorrelation and heteroskedastic and multicollinearity tests. These tests enabled the researcher acknowledge whether the collected data was suitable for the study and outliers in the data removed. Thereafter, descriptive statistical analysis on each of the independent and dependent variable was done followed by model summary on each objective, the ANOVA analysis and then the linear regression analysis.

These results were presented on tables generated by the SPSS and a very detailed explanation on why the results were gotten as well as comparing them with what had ever been gotten in other studies was done. There was frequency, percentages, mean and standard deviation figures on each variable. At the end of analysis, a multiple regression analysis was done to know the contributory roles of postgraduate students' satisfaction with e-resources on perception of daystar and multimedia university libraries.

The general empirical model will be:

$$Y = K + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + e \dots 3a$$

Where;

Y= Perception

X1= Support services on e-resources

X2= Competencies of library staff

X3= Satisfaction with e-resources

K = constant coefficient (intercept)

β = slope coefficient of independent variables

ϵ = error term

3.9.2 Analyzing Qualitative data

The researcher noted on a note book all the responses received through telephone calls made to the respondents. She was guided by the interview schedule. Once interview data was collected, it was subjected to analysis. Interview analysis was done through thematic analysis method. The researcher closely examined the data to identify common theme, topics, ideas and patterns of meaning that come up repeatedly from the responses and the interviews. Once identified, the similar responses in the themes were then deemed to be the results of the interview that were used to generate an interview report for the study. The study was then tie qualitative and quantitative outcomes by triangulation where the results will be compared to the literature review and research objectives.

3.10 Ethical considerations

Firstly, the study primarily got the introduction letter from KEMU. Secondly, a research permit was gotten from NACOSTI through online application. The researcher further got authorization from the authorities responsible in the two Universities. The researcher obtained consent from the respondents by telephoning them requesting for their willingness to participate in the study. The researcher further ensured privacy in the study thus first called the participants before sending the questionnaires or conducting

the interviews and assuring the participants the data collected would be used only for research purposes. The researcher did not ask for identifying information in the survey thus ensured anonymity. The researcher further requested the interviewee to give consent for recording of the interview conversation prior to administration. Thus respondents were further asked not to indicate their names or any personal information anywhere. After data collections, the research assistants thanked the respondents for their contribution to the study. The study tried to avoid direct copying of previous studies and maintained the plagiarism report at 15% and below according to KEMU guidelines. The study ensured that there was no fabrication of data that was previously used by prior studies. In case of help gotten from other studies, the researcher cited according to APA referencing guideline in reference section of the study. In conclusion, the study maintained utmost ethical standards as per Commission for University Education Guidelines.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

In this chapter, findings are presented as per the study objectives. The outcomes are also interpreted and discussed with reference to reviewed empirical literature in chapter two. The aim of the research was to examine how satisfaction with e-resources influences the perception of university libraries by postgraduate students at Daystar and Multimedia universities. The chapter starts by providing results on data reliability and response rate. Second, findings on background profiles of the respondents are provided. Descriptive statistic results on each variable are then provided followed by diagnostic tests, correlation results and finally multiple regression model is presented.

4.2 Reliability Statistics

Prior to conducting the inferential statistics, reliability of the data was determined using internal consistency measure, that is, Cronbach's Alpha, which was computed using the SPSS software. The results are in Table 4.1.

Table 4.1

Reliability Statistics

Cronbach's Alpha	Number of Items	Comment
.890	26	Reliable

The Cronbach's alpha value was 0.890. According to Bhattacharjee (2012), the correlation coefficient above 0.7 was adequate and indicated worthwhile dependability of data. Therefore, the items in the questionnaire were considered reliable and adopted in the subsequent analyses.

4.3 Response Rate

A total of 116 questionnaires were administered to the sampled respondents. These were postgraduate students from both Daystar and Multimedia Universities. Out of the 116 questionnaires, 77 were properly filled and returned. This represented a 66.4% response rate. This could be attributed to the fact that data was collected via online questionnaires since schools were closed due to the corona virus pandemic. However, according to Saunders et al., (2009), a return rate above 50% was adequate for analysis.

4.4 Background profiles of the Respondents

Background information relating to the respondents is provided in this section. The categories include, gender, course program, level of studies and course type. The findings are summarized in Table 4.2.

Table 4.2*Background Profiles of Postgraduate students*

		Frequency	Percent
Gender	Female	48	62.3
	Male	29	37.7
	Total	77	100
Course Program	Masters	61	79.2
	PhD	16	20.8
	Total	77	100
Level of Studies	Course work level	40	51.9
	Research level	37	48.1
	Total	77	100
Course type	Analytical chemistry	1	1.3
	Applied mathematics	2	2.6
	Clinical Psychology	14	18.2
	Communication	8	10.4
	Community development	4	5.2
	Conselling Psychology	1	1.3
	Corporate communication	7	9.1
	Counselling Psychology	10	13.0
	Journalism and media studies	1	1.3
	MBA Marketing	2	2.6
	MBA Finance	12	15.6
	MBA Logistics	3	3.9
	MBA Monitoring and evaluation	1	1.3
	MBA Project Management	2	2.6
	MBA Strategic management	7	9.1
	Pure Mathematics	2	2.6
	Total	77	100.0

The findings in Table 4.2 revealed that there were more female (48, 62.3%) postgraduate students than male (29, 37.7%) students who took part in this survey. However, the gender composition met the constitutional requirement of at least a third representation from each gender. The results also indicated that most (61, 79.2%) of the

participants were pursuing master program, while the remaining (16, 20.8%) were doing PhD. The findings are line with the sampled population where the number of master students was more than those undertaking PhD programs.

Further, the findings show that (40, 51.9%) of the participants were doing their course work, while the remaining (37, 48.1%) were doing their research component. This implies that the number of students doing their course work and research component was almost the same. The postgraduate students both at course work and research work level require to use e-resources in university libraries implying that respondents in this study were better placed to give their perceptions on university libraries.

Additionally, the findings reveal that the participants were undertaking different courses in their respective universities. Among the courses mentioned by students were; clinical psychology, communication, counseling psychology and MBA finance. Having students from different courses taking part in this study was advantageous considering that, they had varying experiences with regard to the use of e-resources provided through university libraries and therefore provided meaningful information for this research.

4.5 Descriptive Statistics Results

This section provides descriptive statistic results for the study variables. The specific descriptive statistics included frequency, percentage, mean and standard deviation.

4.5.1 Descriptive Statistics: Support Services for E-resources

The first objective of the study was to determine the support services on e-resources that are provided by library staff to postgraduate students at Daystar University and Multimedia University. The participants were requested to rate their agreement or otherwise against each statement posed to them, using a 5-level Likert scale (strongly disagree meant a one, disagree was a two, neutral was a three, agree was a four and strongly agree was a five). The statements posed to respondents sought to ascertain the nature of support services on electronic resources that are provided by library staff to postgraduate students. The descriptive results are indicated in Table 4.3.

Table 4.3*Descriptive Statistics on Support Services*

Statements (N=77)	1	2	3	4	5	M	Std. Dev
The library is well stocked to support various types of electronic resources which are stored in both audio and visual formats.	3(3.9%)	7(9.1%)	25(32.5%)	39(50.6%)	3(3.9%)	3.42	0.86
The library subscribes periodically to electronic resources that are readily available to students	5(6.5%)	9(11.7%)	16(20.8%)	41(53.2%)	6(7.8%)	3.44	1.02
The library has a system of training students on various e-resources which are scheduled in different convenient times.	4(5.2%)	12(15.6%)	24(31.2%)	28(36.4%)	9(11.7%)	3.34	1.05
The library has a guideline manual given to postgraduate students on various services offered to familiarize themselves with the services of the library	7(9.1%)	21(27.3%)	20(26%)	23(29.9%)	6(7.8%)	3.00	1.12
The library has adequate human resources to keep track of the expiry dates of subscription of electronic resource access	4(5.2%)	4(5.2%)	25(32.5%)	31(40.3%)	13(16.9%)	3.58	1.01
There are adequate Information Communication Technology facilities in the library to access e-resources	5(6.5%)	25(32.5%)	15(19.5%)	25(32.5%)	7(9.1%)	3.05	1.13
Aggregate Mean						3.31	1.03

The findings in Table 4.3 indicate that majority of the respondents with an aggregate mean score of 3.31 and a standard deviation of 1.03 agreed with several statements on the kind of support services on electronic resources that are provided by library staff to postgraduate students.

The participants agreed with the following top three assertions: the library has adequate human resources to keep track of the expiry dates of subscription of electronic

resource access (44, 57.2%), $m=3.58$); the library subscribes periodically to electronic resources that are readily available to students (47, 61%), $m=3.44$); and the library is well stocked to support various types of electronic resources which are stored in both audio and visual formats (42, 54.5%), $m=3.42$). This implies that postgraduate students receive support services on e-resources provided by library staff given that there were adequate human resources, periodic subscription to e-resources and adequate stock to support various types of electronic resources. This supports Ahmed and Amjad (2014) assertion that an effective support service on e-resources should have adequate resources.

The university librarian was asked to explain the kind of support that they provide to postgraduate students with regard to access to e-resources. The interviewees responded by saying that the university has subscribed to software (RemoteXs) that enables remote access to e-resources. One University Librarian said, *“All our students including postgraduate are regularly inducted/trained on how to access and use the digital content through both off-campus and on-campus access platforms”*. Further, when asked to comment on internet bandwidth to support availability and accessibility of e-resources by postgraduate students, the interviewees noted that the bandwidth was fairly good, but sometimes there were fluctuations due to overload.

Further, the library staff in-charge of e-resources were asked to identify the types of support services offered to postgraduate students in the library with regard to accessing e-resources. The participants noted the following types of support services:

- 1) Conducting information literacy training to improve students' search and retrieval skills.
- 2) Bookmarking the relevant databases for postgraduate students according to their research needs.
- 3) Creation of accounts in e-platforms for accessing e-resources.

Further, when asked to comment on access and utilization of e-resources by postgraduate students, staff noted that postgraduate students mostly access e-resources for purposes of completing assignments and conducting research. They also agreed that the most commonly accessed e-resources were e-books and e-journals.

In addition, when asked about the challenges library staff experience when providing support services to postgraduate students with regard to e-resources, staff respondents highlighted the following:

- Failure to find specific information needed or finding it in abstract form.
- Huge volumes of irrelevant information resources, information overload.
- Inability or slow download of the required information resources, full-text/download delay.
- Poor internet connection due to insufficient bandwidth
- Inaccessibility of some information materials; some articles are not within the subscribed packages by the consortium.
- Difficulties in navigating through some databases.

- Poor ICT skills among some older postgraduate students.
- Inadequate searching and information retrieval skills among postgraduate students.

This means that university libraries have adopted several support services on e-resources to facilitate learning of the postgraduate students. One of the key support services that postgraduate students receive is training on the use of digital content. This is particularly important since students are able to access e-resources both in the university and outside the university. However, the library staff faces a number of challenges in the process of providing support services to the postgraduate students.

The foregoing findings are consistent with Cotter's (2012) observation that the indicators of support services on e-resources in a university library were the number of trained staff to offer support services, turnaround time for responding to e-resources queries and number of training programs available to staff on acquisition, accessibility, preservation and evaluation of e-resources. Further, the results are consistent with Tait et al. (2016) argument that university libraries face challenges including changes of business models in academic publishing; logistical challenges; concerns about keeping control of data, ethical issues especially on plagiarism; poor data management; reduction of staff numbers; and low budgets allocation to hire skilled personnel or train the current staffs. In addition, the findings agree with Chen and Lin (2018) assertions that university libraries have been experiencing issues related to coping up with new methods of teaching, researching and learning.

From the results, it is clear that support services for e-resources in university libraries are paramount in determining how students, particularly, the postgraduates perceive these libraries. The implication therefore is that universities library management has a responsibility to provide the necessary support services to postgraduate students. Some of the key support services for e-resources that postgraduate students require include orientation, training, bookmarking of e-resources, creation of accounts in e-platforms for accessing e-resources and variety of e-resource materials.

4.5.2 Descriptive Statistics: Competencies of Library Staff

The second objective of the study was to examine the competencies of library staff that provide e-resource services to postgraduate students at Daystar University and Multimedia University libraries. The participants were requested to rate their agreement or otherwise against each statement posed to them, using a 5-level Likert scale (strongly disagree meant a one, disagree was a two, neutral was a three, agree was a four and strongly agree was a five). The statements sought for a rating on competencies of library staff that provide electronic resource services to postgraduate students. The descriptive results are presented in Table 4.4.

Table 4.4*Descriptive Statistics on competencies of library staff*

Statements (N=77)	1	2	3	4	5	M	Std. Dev
Librarians are knowledgeable on how to offer references services such as APA formats amongst others.	1(1.3%)	4(5.2%)	21(27.3%)	30(39%)	21(27.3%)	3.86	0.93
There is a well-organized lending service procedure followed by the librarians	1(1.3%)	1(1.3%)	11(14.3%)	42(54.5%)	22(28.6%)	4.08	0.77
Librarians know how to operate computers and can effectively handle post graduate concerns on electronic resources.	1(1.3%)	3(3.9%)	18(23.4%)	37(48.1%)	18(23.4%)	3.88	0.86
There is orientation done by the librarians to postgraduate students on the type of electronic resources in the library and the library in general	1(1.3%)	5(6.5%)	8(10.4%)	42(54.5%)	21(27.3%)	4.00	0.87
Librarians offer bibliographic instructions such as searching for information on library database without strain.	1(1.3%)	9(11.7%)	20(26%)	42(54.5%)	5(6.5%)	3.53	0.84
Librarians have searching strategies skills that are required to guide postgraduate students on various sections of the database.	0(0%)	6(7.8%)	16(20.8%)	41(53.2%)	14(18.2%)	3.82	0.82
Aggregate Mean						3.86	0.85

The findings in Table 4.4 reveal that majority of the respondents with an aggregate mean score of 3.86 and standard deviation of 0.85 agreed with most statements on competencies of library staff providing electronic resource services to postgraduate students.

The respondents agreed with the following statements: there is a well-organized lending service procedure followed by the librarians (64, 83.1%), $m=4.08$); there is orientation done by the librarians to postgraduate students on the type of electronic resources in the library and the library in general (63, 81.8%), $m=4.0$); librarians know how to operate computers and can effectively handle post graduate concerns on electronic resources (55, 71.5%), $m=3.88$); librarians are knowledgeable on how to offer references services such as APA formats amongst others (51, 66.3%), $m=3.86$); librarians have searching strategies skills that are required to guide postgraduate students on various sections of the database (55, 71.4%), $m=3.82$); and librarians have searching strategies skills that are required to guide postgraduate students on various sections of the database (47, 61%), $m=3.53$). This implied that librarians were well-organized, took students through orientation, had computer skills, were knowledgeable on references services and had searching strategies skills. This supported Kenchakkanavar (2014) assertions that the types of competencies of a library staff related to e-resources are computer knowledge, internet knowledge, network knowledge, data search and retrieval knowledge, operational knowledge of equipment and tools such as servers. Further, these findings supported Tetteh and Baah (2019) argument that effective and competent library staff should be well knowledgeable on e-resources, good communicator and reliable.

When asked to state the skills and competencies they consider critical for library staff to effectively support postgraduate students in accessing e-resources, the university librarians responded by noting effective communication, interpersonal skills and IT skills as the main skills and competencies. Further, the library staff in-charge of e-

resources was asked to identify the kind special skills and competencies required in order to provide effective services on e-resources. The staff noted the following: computer skills, research skills, communication skills, training skills, and leadership-supervision and management skills.

When e-resources librarians were asked about the scope and frequency of refresher courses on e-resource management, one staff noted, *“due to the limited resources available, refresher courses are done on the basis of budget allocation towards individual departments to meet their training needs”*. Another staff reiterated that, *“trainings are conducted every semester in liaison with the lecturers; students can also request to be trained as individuals if they have a need for the same.”*

The findings imply that having competent library staff is fundamental in enhancing the provision of e-resources services to postgraduate students. According to the participants, effective communication, IT skills, research skills, training skills, and management skills are key competencies that library staff should possess. The findings concur with McNeil (2001) and Kenchakkanavar (2014) who noted that the types of competencies of a library staff related to e-resources are computer knowledge, internet knowledge, network knowledge, data search and retrieval knowledge, operational and knowledge of equipment. Further, the findings agree with Sutton (2011) postulation that indicators of competencies of a library staff in a university library include years of experience as a librarian, number of trainings on e-resources attended and education level.

The implication of the findings is that library staff competencies are crucial in the provision of efficient e-resource services to postgraduate students. This also means that the nature and level of staff competencies can determine the perception that postgraduate students have in regard to the university libraries. The library staff, particularly, those handling e-resources, should be well-equipped with the right skills so as to support postgraduate students requiring e-resource services. Some of the key skills that library staffs should have include ability to communication, IT skills, research skills, training skills and management skills.

4.5.3 Descriptive Statistics: Satisfaction with E-resources

The third objective of the study was to determine the satisfaction with e-resources by postgraduate students at Daystar University and Multimedia University. The participants were requested to rate their agreement or otherwise against each statement posed to them, using a 5-level Likert scale (strongly disagree meant a one, disagree was a two, neutral was a three, agree was a four and strongly agree was a five). The statements sought to examine the level of satisfaction with electronic resources among postgraduate students. The descriptive results are indicated in Table 4.5.

Table 4.5*Descriptive statistics on postgraduates satisfaction with e-resources*

Statements (N=77)	1	2	3	4	5	Me an	Std. Dev
The kinds of e-resources in the library repository are updated regularly and relevant with the course content required by post graduate student courses.	4(5.2%)	18(23.4%)	22(28.6%)	27(35.1%)	6(7.8%)	3.17	1.04
The file sizes of e-resources have low megabytes which is economical to postgraduate students where one can download multiple files at convenient cost.	0(0%)	6(7.8%)	45(58.4%)	23(29.9%)	3(3.9%)	3.30	0.67
Electronic resources in the library can be sent and re-shared through common ways such as emails, and WhatsApp messages.	1(1.3%)	16(20.8%)	31(40.3%)	27(35.1%)	2(2.6%)	3.17	0.83
Electronic resources are easy to access and download by post graduate students who have basic computer skills	0(0%)	12(15.6%)	14(18.2%)	41(53.2%)	10(13%)	3.64	0.90
The library environment and electronic resources are user friendly and do not expose postgraduate students to any hazards such as too much volume on audio resources and too much light for e-books	2(2.6%)	7(9.1%)	22(28.6%)	33(42.9%)	13(16.9%)	3.62	0.96
E-resources diverse huge volume has promoted more knowledge impartation to postgraduate students.	1(1.3%)	9(11.7%)	20(26%)	34(44.2%)	13(16.9%)	3.64	0.95
Aggregate Mean						3.42	0.89

The findings in Table 4.5 reveal that majority of the respondents with an aggregate mean score of 3.42 and standard deviation of 0.89 agreed with several statements on satisfaction with e-resources by postgraduate students. With reference to

the objective which sought to determine the satisfaction with e-resources, postgraduates were highly satisfied with ease of access of e-resources and ability to download (51, 66.2%) $m=3.64$); followed by huge volume of e-resources (47, 61.1%) $mean=3.64$); and then friendly library environment (46, 59.8%) $mean=3.62$). The results indicate that postgraduate students were less satisfied with relevance of the e-resources materials (33, 42.9%) $mean=3.17$); followed by ability to share the e-resources (29, 37.7%) $mean=3.17$). This implied that postgraduate students felt that e-resources were easy to access and download, the e-resources were many and diversified and the library environment was friendly for use of e-resources. This supports Ankarah and Atuase's (2018) assertion that a satisfied postgraduate student on e-resource should be able to access instant, relevant and diverse e-resource service from the library.

Further, the respondents expressed their overall level of satisfaction with e-resources provided through the university and results are presented in Table 4.6.

Table 4.6

Level of Satisfaction

	Frequency	Percent (%)
Poor	9	11.7
Fair	30	39
Good	31	40.3
Excellent	7	9.1
Total	77	100

The findings in Table 4.6 indicate that many students (31, 40.3%) felt that e-resources provided by the university were good, (30, 39%) felt that they were fair, (9,

11.7%) noted that they were poor, while (7, 9.1%) cited that the e-resources were excellent. Overall, most of the respondents expressed that e-resources provided by the university were fairly good.

When asked the main issues that cause dissatisfaction among postgraduate students with regard to e-resources in the library, staff respondents noted the following:

- i. Lack of sufficient networked computers
- ii. Poor internet connection
- iii. Power failure
- iv. Unavailability of required information materials
- v. Difficulty in identifying relevant databases to meet their information needs
- vi. Lack of access to the relevant information materials
- vii. Large mass of irrelevant materials
- viii. Need to filter the results from the search after which none is left

The library staff in-charge of e-resources was asked to state how they determine satisfaction of postgraduate student with e-resources service. The staff stated that the following key measures; the library has an e-resources utilization form, where users can write remarks to reflect their level of satisfaction; the library has a customer feedback form where users can fill in and give their complaints, compliments and recommendations; the library management carries out a customer satisfaction survey through to determine their level of satisfaction; and the library e-resources training forms allows trained students provide their feedback on level of satisfaction.

When asked to explain measures undertaken by the library in addressing the dissatisfaction mentioned above, staff respondents cited that the following: internet connection improvement, regular library staff meeting to review students' concerns, involvement of university management, collaboration with other universities on best library practices to adopt, students training, effective communication with students and increase volume of e-resource materials.

The findings imply that personalized service and immediate feedback are important factors that determine satisfaction with e-resources by postgraduate students. The results also imply that satisfaction among postgraduate students with regard to e-resources is influenced by a number of issues such as poor network connection, power failure, and lack of access to relevant materials among others.

The findings agree with assertions by Feng and Wei (2020) who provided indicators of satisfaction of e-resources to include net promoter score, user satisfaction score, user retention score and abandonment rates. Further, Ankarah and Atuase (2018) argued that satisfied postgraduate student on e-resource should be able to access instant, relevant and diverse e-resource service from the library. In addition, the results are consistent with Sritharan (2018) claim that most students were well satisfied with the library e-resource service but more subscription was required on e-resources; more training plans needed to be organized; distant access capacity was required; and innovation of mobile alert services for raising awareness on new issues of e-resource materials.

The implication of the findings is that satisfaction with e-resources is a critical determinant of postgraduate students' perception of university libraries. Students expect to receive the best library services that will facilitate and boost their learning. However, this is not always the case and sometimes they are dissatisfied with the library services. Some of the best practices that enhance students' satisfaction include good internet connection, students training, adequate and relevant e-resources, personalized services and immediate feedback.

4.5.4 Descriptive Statistics: Perception of University libraries by postgraduate students

The fourth objective of the study was to determine the perception of university libraries by postgraduate students at Daystar University and Multimedia University. The students were requested to rate their agreement or otherwise against each statement posed to them using a 5-level Likert scale (strongly disagree meant a one, disagree was a two, neutral was a three, agree was a four and strongly agree was a five). The statements were seeking to establish the perception of university libraries by postgraduate students. The descriptive results are shown in Table 4.7.

Table 4.7*Descriptive statistics on Perception of university libraries by postgraduate students*

Statements (N=77)	1	2	3	4	5	Mea n	Std. Dev
The library structural conditions have enabled postgraduate students to spend time in the library.	6(7.8%)	17(22.1%)	15(19.5%)	32(41.6%)	7(9.1%)	3.22	1.13
Friendly attitude and professional communication skills among librarians has improved more consultations by postgraduate students in the library	2(2.6%)	11(14.3%)	15(19.5%)	40(51.9%)	9(11.7%)	3.56	0.97
Convenient convey of training dates has improved attendance by post graduate students in the library.	3(3.9%)	15(19.5%)	28(36.4%)	29(37.7%)	2(2.6%)	3.16	0.90
Timely orientation on various library databases at the commencement of postgraduate courses has advanced knowledge of various library search engines options available to post graduate students	0(0%)	17(22.1%)	21(27.3%)	28(36.4%)	11(14.3%)	3.43	0.99
Numerous stocks of library electronic resources have improved the frequency of use of a library.	1(1.3%)	18(23.4%)	19(24.7%)	34(44.2%)	5(6.5%)	3.31	0.95
Reliable internet facility in the library has boosted the time spent in the library accessing e-resources	2(2.6%)	17(22.1%)	12(15.6%)	35(45.5%)	11(14.3%)	3.47	1.07
My general perception of library is good	1(1.3%)	9(11.7%)	14(18.2%)	45(58.4%)	8(10.4%)	3.65	0.87
Aggregate Mean						3.40	0.98

The findings in Table 4.7 reveal that majority of the respondents with an aggregate mean score of 3.40 and standard deviation of 0.98 agreed with several

statements on perception of university libraries by postgraduate students. The respondents agreed with the following four top statements: my general perception of library is good (54, 68.8%), $m=3.65$); friendly attitude and professional communication skills among librarians has improved more consultations by postgraduate students in the library (49, 63.6%), $m=3.56$); reliable internet facility in the library has boosted the time spent in the library accessing e-resources (46, 59.8%), $m=3.47$); and timely orientation on various library databases at the commencement of postgraduate courses has advanced knowledge of various library search engines options available to post graduate students (46, 40.7%), $m=3.43$).

The finding supported Chiemeke (2007) argument that the perception of the library by the users was indicated by the speed of access to needed research materials, availability of current and up to date materials, cost of access and distractions within the facilities. Similarly, the findings support Nyantakyi-Baah (2016) conclusion that the greatest appreciated features of the libraries were the library resources, and the approachability of the librarians especially on consultations.

The student respondents were asked to describe their library using descriptive adjectives with an aim to establishing their perception towards their library. Majority of the respondents described their library as resourceful, accessible, friendly, silent, focused, reliable, comfortable, modern, informative, warm, convenient and ambient. However, other respondents felt that their library was obsolete, old, limited and un-resourced. The perception of university libraries by students is paramount since it determines the extent to which they utilize them. On one hand, a good perception about

the library would result to more students making use of the library, while a negative perception about the library would lead to more students preferring other learning facilities and resources rather than the library. According to Kim (2017), a library user's perception is positively correlated with the utility of an academic library.

When asked to describe how they would like postgraduate students to perceive the library, both university librarians and e-resources librarians indicated that the students should consider the library as a reservoir center of current and relevant knowledge and information resources.

Subsequently, the interviewees noted that the management had taken measures to curb the negative perception of the library by postgraduate students. These measures included undertaking annual customer satisfaction survey and where the reports are presented to management for information and action on the areas of weakness.

When the library staffs in-charge of e-resources were asked what causes the library to be perceived negatively by postgraduate students, one staff noted that "*Our library is quite small in size; therefore there is the general perception that a small library has few information resources.*" Further, another staff reiterated, "*our library has inadequate and outdated print books.*"

The library staff also mentioned that their library was known by postgraduate students as having new and relevant print information resources on the shelves and a vibrant team always ready to assist users; and training on information search skills and postgraduate writing.

When asked how postgraduate students describe the library with reference to e-resources, one library staff noted that, *“The postgraduate students describe the library based on their level of satisfaction. The satisfied one appreciates our efforts noting that we are making steps in the right directions while the dissatisfied ones describe us as a struggling library.”* Further, another library staff stated that *“Postgraduate students like the library since it has a variety of information resources in electronic format that can be accessed remotely.”*

The findings concur with Jameson et al., (2019) suggestion that the student’s perceptions of librarians may be associated with non-utility of reference services; unfriendliness of librarians; poor cognizance about librarians’ purpose; low confidence in librarians’ aptitudes; failure to find librarians and library nervousness. Further, the results supports Nyantakyi-Baah (2016) claim that the greatest appreciated features of the libraries were the library resources, and the approachability of the librarians especially on consultations. In addition, the findings resonated with Malatji (2017) outcome that students’ perception was determined by appropriate opening and closing times; a favorable atmosphere for learning; and aptitude of the librarians aided the library to add to scholars’ success results.

From the discussions, it is evident that postgraduate students’ perception of university libraries is determined by a number of factors. The aspects of friendliness, professionalism, communication, reliability, and timeliness stood out as critical drivers of the perception held by postgraduate students on the university libraries.

4.6 Diagnostic Tests Results

Prior to inferential analysis, data was first subjected to a number of diagnostic tests. These included normality test, linearity test and heteroscedasticity test, autocorrelation test and multicollinearity tests.

4.6.1 Normality Test

Normality testing in this research was done by use of the Kolmogorov-Smirnov check because the observations exceeded 50. Kolmogorov-Smirnov test assume that data is normally distributed when the Asymp. Sig. (2-tailed) is greater than the p- value ($P > 0.05$). Table 4.8 illustrates the results.

Table 4.8

Kolmogorov-Smirnov Test on Normality

		Support services (X1)	Competencies (X2)	Satisfaction (X3)	Perception (Y)
N		77	77	77	77
Normal Parameters a,b	Mean	3.3052	3.8615	3.4221	3.3989
	Std. Deviation	0.62326	0.56481	0.54517	0.61591
	Most Extreme Differences				
	Absolute	0.079	0.129	0.112	0.137
	Positive	0.079	0.098	0.105	0.074
	Negative	-0.074	-0.129	-0.112	-0.137
Kolmogorov-Smirnov Z		0.697	1.135	0.986	1.204
Asymp. Sig. (2-tailed)		0.717	0.152	0.285	0.11

a Test distribution is Normal.

b Calculated from data.

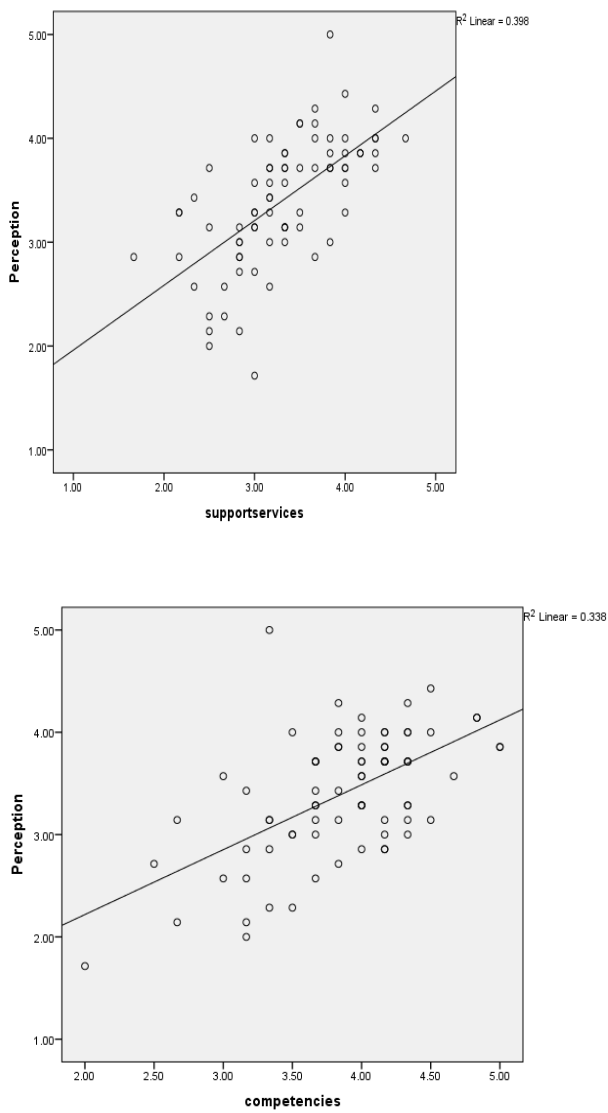
Based on the output of one sample Kolmogorov-Smirnov test, the Asymptotic Significant value of all study variables (X1, $P=.717$; X2, $P=.152$; X3, $P=.285$; and Y $P=.11$) are greater than 0.05 which indicated that data was normally distributed.

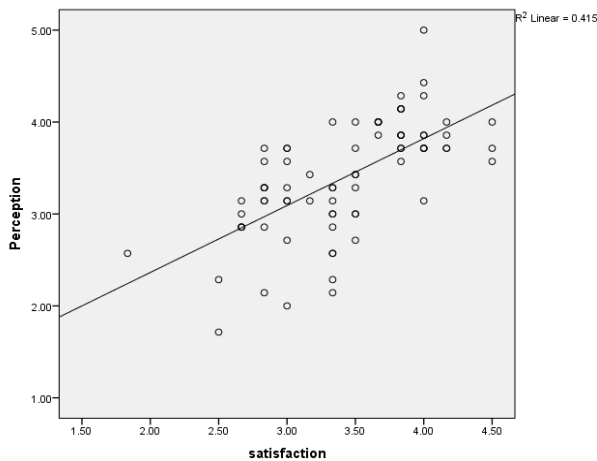
4.6.2 Linearity Test

In this study linearity test was conducted using scatter plots. The findings are demonstrated in Figure 4.1

Figure 4.1

Linearity test: Scatter Plots





The scatter plots in Figure 4.1 reveal existence of linear dependence between the independent variables (support services, competencies, satisfaction) and the dependent variable (perception). This is demonstrated by the fit line in each of the plots.

4.6.3 Test of Heteroskedasticity

The heteroskedasticity test was carried out by use of Levene's test of equality of error variances. Results are indicated in Table 4.9.

Table 4.9

Test of Heteroskedasticity: Levene's Test of Equality of Error Variances

Dependent Variable: Perception				
F	df1	df2	Sig.	
1.216	15	61	0.285	
1.431	15	61	0.162	
1.531	12	64	0.136	

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a Design: Intercept X1,X2, X3

The results in Table 4.9 show that all the p-values for independent variables (X1, X2 and X3) were more than 0.05 and therefore the null hypothesis of constant variance of error terms was accepted. This implies that the data was homoscedastic.

4.6.4 Auto-correlation Test

The test of auto-correlation test was done using Durbin-Watson. The Durbin Watson test reports a test statistics, with a value from 0 to 4, where: 2 denotes no autocorrelation; $0 < 2 < 2$ denotes a positive autocorrelation; while > 2 denotes a negative autocorrelation. The decision rule is that test statistic values in the range of 1.5 to 2.5 are relatively normal. Values outside this range could be cause for concern (Field, 2009). Outcomes are presented in Table 4.10.

Table 4.10

Durbin-Watson test of Auto-correlation

Model	R	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.757	0.555	0.41076	2.016

a Predictors: (Constant), X3, X2, X1

b Dependent Variable: Y

Based on results in Table 4.10, the null hypothesis of no autocorrelation was accepted and thus residuals are not auto-correlated (Durbin- Watson statistic value=2.016).

4.6.5 Multicollinearity tests

The research also tested for multicollinearity between independent variables using collinearity statistics. The outcomes are depicted in Table 4.11.

Table 4.11*Multicollinearity tests*

Coefficients ^a							
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-0.051	0.367		-0.14	0.889	
	X1	0.296	0.099	0.299	3.002	0.004	1.698
	X2	0.255	0.105	0.234	2.435	0.017	1.579
	X3	0.435	0.103	0.385	4.206	0	1.429

a Dependent Variable: Y

The findings in Table 4.11 indicate VIF values less than 10 implying that there was multicollinearity among the independent variables.

4.7 Correlation Analysis Results

This section provides findings on the correlation between the support independent variables (support services on e-resources [X1], staff competencies [X2], satisfaction [X3] and dependent variable (perception of university libraries by postgraduate students [Y]). The correlation analysis was used to show the relationship between variables in terms of strength and direction. Results are shown in Table 4.12.

Table 4.12:*Correlation Results: Satisfaction Factors and Perception*

		Y	X1	X2	X3
Y	Pearson Correlation	1			
	Sig. (2-tailed)				
X1	Pearson Correlation	.631**	1		
	Sig. (2-tailed)	.000			
X2	Pearson Correlation	.582**	.576**	1	
	Sig. (2-tailed)	.000	.000		
X3	Pearson Correlation	.644**	.512**	.455**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	77	77	77	77

** Correlation is significant at the 0.01 level (2-tailed).

The findings in Table 4.12 indicate that support services on e-resources, X1 ($r = .631^{**}$, $P = .000$), had a strong positive and significant correlation with perception of university libraries by postgraduate students (Y). The P value shows that relationship between the independent and dependent variable is very strong. This implies that improvement in support services on e-resources is statistically and significantly correlated with perception of university libraries by postgraduate students. The findings were similar to those of Ahmed and Amjad (2014) who established that support service on e-resources was a significant determinant of perception of university libraries by students.

The results also indicate that staff competencies, X2 ($r = .582^{**}$, $P = .000$), had a strong positive and significant correlation with perception of university libraries by postgraduate students (Y). The P value shows that relationship between the independent

and dependent variable is very strong. This implies that improvement in staff competencies is statistically and significantly correlated with perception of university libraries by postgraduate students. Therefore, enhancing staff competencies will lead to improved perception of university libraries by postgraduate students. The results are consistent with Kenchakkanavar, (2014) who concluded that competencies of a library staff related to e-resources significantly influenced students' perceptions of the library. Further, the results supported Tetteh and Baah (2019) argument that effective and competent library staff should be well knowledgeable on e-resources, good communicator and reliable.

The results further reveal that satisfaction with e-resources, X3 ($r = .644^{**}$, $p=.000$), had a strong positive and significant correlation with perception of university libraries by postgraduate students (Y). The P value shows that relationship between the independent and dependent variable is very strong. This implies increase in satisfaction with e-resources will result to improved perception of university libraries by postgraduate students. Ankarah and Atuase (2018) argued that a satisfied postgraduate student on e-resource should be able to access instant, relevant and diverse e-resource service from the library.

4.8 Multiple Regression Analysis Results

The main aim of this study was to examine how satisfaction with e-resources influences the perception of university libraries by postgraduate students at Daystar and Multimedia universities. Having separately established the existence of a positive and significant relationship of each of the three predictors (support services, staff

competencies and satisfaction) with perception of university libraries by postgraduate students, it was essential to establish how a combination of the three variables jointly influences the perception of university libraries by postgraduate students. A multiple linear regression analysis was therefore carried out to test the relationship between variables. The independent variables (support services, staff competencies and satisfaction) were regressed on the dependent variable (perception of university libraries by postgraduate students). Tables 4.13, 4.14 and 4.15 provide model summary, ANOVA and coefficient results respectively.

Table 4.13

Model Summary: Satisfaction Factors and Perception

Model	R	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.757 ^a	0.573	0.41076	2.016

^a Predictors: (Constant), X3, X2, X1

^b Dependent Variable: Y

Results in Table 4.13 indicate that all the three predictor variables in this study jointly explains 56% (adjusted $R^2 = .555$) of the total variations in the perception of university libraries by postgraduate students. The adjusted R-square was preferred because the constant value in Table 4.15 is insignificant. The Durbin-Watson value of 2.016 was higher than 1 which confirmed that no autocorrelation was detected hence the model is reliable in prediction. These results confirm the correlations output in Table

4.12 that a positive and significant relationship exists between all predator variables and the dependent variable.

Table 4.14

ANOVA: Satisfaction Factors and Perception

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.513	3	5.504	32.625	.000b
	Residual	12.317	73	0.169		
	Total	28.83	76			

a Dependent Variable: Y

b Predictors: (Constant), X3, X2, X1

The regression ANOVA model in Table 4.14 reveals an F statistic of 32.625 and reported P value of 0.000. The *P* value being less than the alpha value ($P < .05$), the proposed model is therefore statistically significant (good fit) in predicting the dependent variable.

Table 4.15:

Coefficients: Satisfaction Factors and Perception

Mode L		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	-0.051	0.367		-0.14	0.889
	X1	0.296	0.099	0.299	3.002	0.004
	X2	0.255	0.105	0.234	2.435	0.017
	X3	0.435	0.103	0.385	4.206	0.000

a Dependent Variable: Y

All the predictor factors of support services on e-resources (X1), staff competencies (X2) and satisfaction (X3) have identical (Likert) scales, however, the constant value in the model is insignificant, hence the use of standardized coefficients beta scores and not Beta coefficients as opposed to unstandardized B-coefficients. The multiple regressions results in Table 4.15 indicate that support services (X1), ($\beta_1 = 0.299$, $P = .004$); staff competencies (X2), ($\beta_2 = 0.234$, $P = .017$); and satisfaction with e-resources (X3), ($\beta_3 = 0.385$, $P = .000$) are significant and positively related to the perception of university libraries by postgraduate students.

Thus, the hypothesized model [$Y = K + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + e \dots 3a$] fitted with values from the analysis gave the following:

$$Y = 0.299X_1 + 0.234 X_2 + 0.385 X_3$$

Where:

Y=Perception of university libraries by postgraduate student

X1= Support services on e-resources

X2= Competencies of library staff

X3= Satisfaction with e-resources

The model implied that the perception of university libraries by postgraduate student could be explained by support services on e-resources, competencies of library staff and satisfaction with e-resources.

From regression weights in Table 4.15, it is very clear that all the independent variables (support services on e-resources, competencies of library staff and satisfaction with e-resources) are significantly influencing the dependent variable in varying degrees. When all of them are combined in one model, the most significant predictor of perception of university library by postgraduate is satisfaction ($\beta_3 = 0.385$, $P = .000$) followed by support services on e-resources ($\beta_1 = 0.299$, $P = .004$) and then staff competencies ($\beta_2 = 0.234$, $P = .017$).

The findings imply that satisfaction with e-resources contribute significantly towards perception of university libraries by postgraduate students. The findings are

consistent with Krieb (2018) postulation that library was able to retain all students that consulted with the reference counter or were present at library trainings and also had a statistically higher rate of remaining in school hence able to use library often. Further, the findings concur with Soria et al. (2017) argument that students who utilized e-books and acquired library instruction training had meaningfully enhanced their chances of completion over withdrawing. Additionally, the results mirror those of Sritharan (2018), who found that most students were well satisfied with the library e-resource service but more subscription was required on e-resources; more training plans needed to be organized; distant access capacity was required; and innovation of mobile alert services for raising awareness on new issues of e-resource materials. The implication is that satisfaction with e-resources is critical in influencing perception held by postgraduate students on the university libraries. Therefore, university libraries have a role to play in meeting the needs of the students, specifically, in regard to provision of e-resources.

The findings imply that support services on e-resources contribute significantly towards perception of university libraries by postgraduate students. This is consistent with Anna and Srirahayu (2020) assertion that if virtual reference which utilizes social media and chats at the website were used for direct and online information services at university libraries. Further, the findings resonate with Ezema and Akpom (2018) observation that students were aware and able to access the e-resources in the library. Additionally, the findings mirror Masese et al., (2016) establishment that there was an increase in utilization of e-resources on graduate students depending on the various courses they undertook. The implication is that university libraries need to improve the

support services on e-resources offered to postgraduate students, thereby improving the perception held by postgraduate students on the university libraries.

The findings imply that library staff competencies contribute significantly towards perception of university libraries by postgraduate students. This corroborates Ballegooie and Browning (2019) assertion that merging e-training offered and having a definite workplace experience would sharpen the e-resource skills levels of the library staff and masters' students undertaking information technology course. Further, the findings agree with Bajpai and Margam in 2019 conclusion that many of library information specialists had elementary know how of ICT to manage libraries, however, some areas such as operating system and software required more specialized individuals. In addition, the findings are similar to those of Bawack (2019) who found that university libraries in Cameroon were at the verge of being irrelevant if staff competencies were not with the technological shift. The implication is that university libraries need to improve the competencies of staff in-charge of e-resources. This will greatly improve the perception held by postgraduate students on the university libraries.

4.9 Chapter summary

From the foregoing findings and discussions, it is evident that the predictor variables (support services on e-resources, competencies of library staff and satisfaction with e-resources) have a positive and significant relationship with perception of university libraries by postgraduate students. When all predictors are regressed together, it is the level of satisfaction that had the highest impact followed by support services on e-resources, and then staff competencies. For support services on e-resources, several

aspects emerged as the most significant in influencing students' perception, these are: adequate human resources, periodic subscription to e-resources and adequate stock to support various types of electronic resources. For competencies of library staff, the aspects included proper organization, orientation, computer skills, references skills and searching strategies skills. Further, in the case of satisfaction with e-resources, the key aspects were; easy accessibility of e-resources, diverse e-resources and friendly environment. Overall, the satisfaction with e-resources emerged as the most significant factor in explaining perception of university libraries by postgraduate students, then support service on e-resources, while competencies of library staff ranked the least.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary, conclusion and recommendations of the study. The presentation is done in line with the objectives of the study. Areas of further research are also suggested. The purpose of the study was to examine how satisfaction with e-resources influences the perception of university libraries by postgraduate students at Daystar University and Multimedia university libraries. A review of empirical literature was done based on research objectives; relating the past studies to this study and with reference to perception of university libraries by postgraduate students. The reviewed studies indicated that there existed knowledge gaps. The study was informed by connectivity theory, self-efficacy theory and theory of reasoned action.

Descriptive survey design was adopted in guiding the investigation process. The total target population was 583 post-graduate students and 4 library staff in charge of e-resources and University librarians in Daystar University and Multimedia university libraries. Postgraduate students in each university were grouped first into either Masters or PhD academic programs through stratified sampling technique where 20 percent of Daystar and Multimedia universities postgraduate students were selected using simple random sampling method. The total number of masters and PhD students from both universities was 583. This resulted to 116 sample size. The library staff in the study was selected using purposive sampling technique. Self-administered questionnaires and

interview guides were used to collect data from the respondents and key informants respectively. Content and construct validity helped to ensure data quality, while Cronbach's alpha value was used to assess the dependability of the tools used in the research. Descriptive and inferential statistics were employed in the analysis of the research data. Data was presented using tables and figures.

5.2 Summary

The main findings of this study were identified and summarized under each thematic area of each research objectives. The findings on perception of university libraries by postgraduate students revealed that friendliness, professional communication skills, reliable internet, and timely orientation were key aspects that influenced students' view of university libraries. Other major findings with reference to each objective were highlighted below.

5.2.1 Support Services on e-resources and perception of university libraries by postgraduate students

The study sought to assess the support services on e-resources that are provided by library staff to postgraduate students at Daystar University and Multimedia University. It was noted that the library has adequate human resources to keep track of the expiry dates of subscription of electronic resource access, which was supported by a high mean of 3.58 and a standard deviation of 1.03. The library also subscribes periodically to electronic resources that are readily available to students as asserted by high mean of 3.44. Further, the library is well stocked to support various types of

electronic resources which are stored in both audio and visual formats as evidenced by a high mean of 3.42.

The correlation analysis results indicated that there is a significantly positive association between support services on e-resources and perception of university libraries by postgraduate students. This was supported by a correlation value of 0.631 and P value of 0.000.

Information from librarians and staffs in-charge of e-resources revealed that university libraries have adopted several support services on e-resources to facilitate learning of the postgraduate students. One of the key support services that postgraduate students receive is training on the use of digital content. This is particularly important since students are able to access e-resources both in the university and outside the university. The library staffs also face challenges in the process of providing support services to the postgraduate students. These challenges include: poor internet connection, and lack of skills by students.

5.2.2 Staff Competencies and perception of university libraries by postgraduate students

The study sought to examine the competencies of library staff who provide e-resource services to postgraduate students at Daystar University and Multimedia University libraries. Descriptive findings revealed that majority of the respondents noted that there is a well-organized lending service procedure followed by the librarians as supported by a high mean of 4.08 and standard deviation of 0.85. There is orientation

done by the librarians to postgraduate students on the type of electronic resources in the library and the library in general as asserted by a high mean of 4. Librarians know how to operate computers and can effectively handle post graduate concerns on electronic resources with a high mean of 3.88. Further, librarians are knowledgeable on how to offer references services such as APA formats amongst others as supported by a high mean of 3.86.

The correlation analysis results indicated that there is a significantly positive association between staff competencies and perception of university libraries by postgraduate students. This was supported by a correlation value of 0.582 and P value of 0.000.

Information from librarians and staffs in-charge of e-resources revealed that having competent library staff is fundamental in enhancing the provision of e-resources services to postgraduate students. According to the participants, effective communication, IT skills, research skills, training skills, and management skills are key competencies that library staff should possess.

5.2.3 Satisfaction and perception of university libraries by postgraduate students

The study sought to determine the satisfaction with e-resources by postgraduate students at Daystar University and Multimedia University libraries. Most of the respondents noted that electronic resources are easy to access and download by post graduate students who have basic computer skills as supported by a high mean of 3.64 and standard deviation of 0.89. Also, e-resources diverse huge volume has promoted

more knowledge impartation to postgraduate students as asserted by a high mean of 3.64. Further, the library environment and electronic resources is user friendly and do not expose postgraduate students to any hazards such as too much volume on audio resources and too much light for e-books as shown by a high mean of 3.64.

The correlation analysis results indicated that there is a significantly positive association between satisfaction and perception of university libraries by postgraduate students. This was supported by a correlation value of 0.644 and P value of 0.000.

Information from librarians and staffs in-charge of e-resources revealed that personalized service and immediate feedback are important factors that determine satisfaction with e-resources by postgraduate students. The results also indicated that satisfaction among postgraduate students with regard to e-resources is influenced by a number of issues such as poor network connection, power failure, and lack of access to relevant materials among others.

5.2.4 Contributory Roles of Postgraduate Students' Satisfaction with E-Resources on Perception of University Libraries

The main aim of the research was to examine how satisfaction with e-resources influences the perception of university libraries by postgraduate students at Daystar University and Multimedia University libraries. The multiple regression results revealed that, when all predictors are put together, a positive and significant relationship exist between support services on e-resources and perception of university libraries by

postgraduate students. This was supported by beta coefficient of 0.299 and a P value of 0.004.

From regression weights in chapter 4, it was evident that all the independent variables (support services on e-resources, competencies of library staff and satisfaction with e-resources) are significantly influencing the dependent variable in varying degrees. When all of them are combined in one model, the most significant predictor of perception of university library by postgraduate is satisfaction ($\beta_3 = 0.385$, $P = .000$) followed by support services on e-resources ($\beta_1 = 0.299$, $P = .004$) and then staff competencies ($\beta_2 = 0.234$, $P = .017$).

5.3 Conclusions

The conclusions herein are derived from the findings of the study and are done as per each of the research objective.

5.3.1 Support Services on e-resources and perception of university libraries by postgraduate students

Based on the findings for objective one, the study concluded that when combined with other predictors; support services on e-resources have a positive and significant effect on perception of university libraries by postgraduate students. From the results, it is clear that support services for e-resources in university libraries are paramount in determining how students, particularly, the postgraduates perceive these libraries. The implication therefore is that universities library management has a responsibility to provide the necessary support services to postgraduate students. Some of the key support services

for e-resources that postgraduate students require include orientation, training, bookmarking of e-resources, creation of accounts in e-platforms for accessing e-resources and variety of e-resource materials.

5.3.2 Staff Competencies and Perception of University Libraries by Postgraduate Students

According to the findings for objective two, the study concluded that when combined with other predictors; competencies of library staff has a positive and significant effect on perception of university libraries by postgraduate students. The implication of the findings is that library staff competencies are crucial in the provision of efficient e-resource services to postgraduate students. This also means that the nature and level of staff competencies can determine the perception that postgraduate students have in regard to the university libraries.

5.3.3 Satisfaction and Perception of university libraries by Postgraduate Students

In line with the findings of objective three, the study concluded that when combined with other predictors; satisfaction has a positive and significant effect on perception of university libraries by postgraduate students. The implication is that satisfaction with e-resources is a critical determinant of postgraduate students' perception of university libraries. Students expect to receive the best library services that will facilitate and boost their learning. However, this is not always the case and sometimes they are dissatisfied with the library services. Some of the best practices that enhance students' satisfaction include good internet connection, students training, adequate and relevant e-resources, personalized services and immediate feedback.

5.3.4 Conclusion based on the overall model

From the multiple regression results, the study concluded that when combined, support services on e-resources, library staff competencies and satisfaction with e-resources positively and significantly affect the perception of university libraries by postgraduate students. In particular, satisfaction with e-resources was identified as the most significant predictor of perception of university library by postgraduate students, followed by support services on e-resources and then staff competencies.

5.4 Recommendations

In view of the foregoing conclusions, the study made several recommendations which are presented as per each research objectives.

5.4.1 Recommendations on Research Findings

Based on the findings for objective one, support services on e-resources had a positive and significant effect on perception of university libraries by postgraduate students at Daystar and Multimedia university libraries. As such, this study recommends the need for the university library management to strengthen their support services on e-resources. In particular, the library management should focus on the following aspects; human resources, periodic subscription to e-resources and adequate stock to support various types of electronic resources. Improvement of the mentioned aspects will result to improvement in perception of university libraries by postgraduate students.

Based on the findings for objective two, library staff competencies had a positive and significant effect on perception of university libraries by postgraduate students at Daystar University and Multimedia university libraries. As such, this study recommends the need for the university library management to strengthen their staff competencies. In particular, the management should focus on the following aspects; proper organization, orientation, computer skills, references skills and searching strategies skills. Improvement of the mentioned aspects will result to improvement in perception of university libraries by postgraduate students.

From the findings for objective three, satisfaction had a positive and significant effect on perception of university libraries by postgraduate students at Daystar and Multimedia universities. As such, this study recommends the need for the university library management to strengthen the satisfaction related aspects. In particular, the management should focus on the following aspects; accessibility of e-resources, provision of diverse e-resources and friendly library environment. Improvement of the mentioned aspects will result to improvement in perception of university libraries by postgraduate students.

5.4.2 Implications on Policies and Practices

This study is expected to make significant contributions towards policy formulation and practices in the field of information science. In terms of implications on policies, the study informs relevant policy makers including the university management and ministry of education on areas to focus on in streamlining policies related to information science, particularly, e-resources in university libraries as well as public

libraries. Further, in terms of practices, the study informs library management and library staff on how best to improve provision of e-resource services to students. This includes adoption of variety of support services as well as equipping staff with the necessary competencies.

5.4.3 Recommendations for Further Research

The study examined how satisfaction with e-resources influences the perception of university libraries by postgraduate students at Daystar and Multimedia university libraries. The focus was on three components (support services, library staff competencies and satisfaction), which accounted for 57.3% of variations in the dependent variable. Future studies should consider other aspects that can be attributed to the remaining 42.5%.

REFERENCES

- Ahmed, S., & Amjad, A. (2014). Evaluation of researchers satisfaction with electronic resources in two universities of Pakistan. *Library Hi Tech News*, 31(7), 20-25. <https://doi.org/10.1108/LHTN-06-2014-0043>
- Ali, S., Yu, L., & Amran, N. (2018). Library user perception towards librarians in public library: A Malaysian story. *International Journal of Academic Research in Business and Social Sciences*, 8(9), 452– 463. <http://dx.doi.org/10.6007/IJARBS/v8-i9/4604>
- Allen, L. E., & Taylor, D. M. (2017). The role of the academic Library Information Specialist (LIS) in teaching and learning in the 21st century. *Information Discovery and Delivery*, 45 (1),1-9 <https://www.emerald.com/insight/content/doi/10.1108/IDD-09-2016-0030/full/html>
- Ankarah, E., & Atuase, D. (2018). *The use of electronic resources postgraduate students of the university of Cape Coast*. <https://digitalcommons.unl.edu/libphilprac/1632>
- Anna, N.E.V., & Srirahayu, D. P. (2020). *Evaluation of virtual reference and information services at university libraries in Indonesia*. <https://digitalcommons.unl.edu/libphilprac/3583>.
- Arkkelin, D. (2014). *Using SPSS to understand research and data analysis*. http://scholar.valpo.edu/psych_oer/1.
- Aslam, M. (2018). Perceptions of leadership and skills development in academic libraries. *Library Philosophy & practice*, 1724 (1), 1-28. <https://digitalcommons.unl.edu/libphilprac/1724>
- Ballegooie, M.V., & Browning, J. (2019). Cultivating TALint: Using the core competencies as a framework for training future e-resource professionals. *The Serials Librarian*, 76(1-4), 89-95. <https://doi.org/10.1080/0361526X.2019.1571785>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215. <http://garfield.library.upenn.edu/classics1989/A1989U419500001.pdf>
- Bajpai, V. K., & Margam, M. (2019). *ICT Skills and Competencies of Library and Information Science Professionals working in College Libraries, University of Delhi*. <https://digitalcommons.unl.edu/libphilprac/2275>
- Bawack, R. (2019). *Academic libraries in Cameroon in the digital age*. <https://digitalcommons.unl.edu/libphilprac/2547>

- Bawack, R., & Nkolo, P. (2018). *Open access movement: Reception and acceptance by academic libraries in developing countries*.
<https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=5385&context=libphilprac>
- Baro, E., Obaro, O., & Aduba, E. (2019). An assessment of digital literacy skills and knowledge-based competencies among librarians working in university libraries in Africa. *Digital Library Perspectives*, 35(3-4), 172-192. <https://doi.org/10.1108/DLP-04-2019-0013>
- Biglan, A. (1987). A behavior-analytic critique of Bandura's self-efficacy theory. *The Behavior Analyst*, 10(1), 1-15. <https://doi.org/10.1007/BF03392402>
- Bhattacharjee, A. (2012). *Social science research: Principles, methods, and practices*. Textbooks collection.
http://scholarcommons.usf.edu/cgi/viewcontent.cgi?article=1002&context=oa_textbooks
- Burke, W. W. (2011). *Organization change: Theory and practice* (3rd ed.). Sage
- Carreño, I. D. V. G. (2014). Theory of Connectivity as an Emergent Solution to Innovative Learning Strategies. *American Journal of Educational Research*, 2(2), 107-116. DOI: 10.12691/education-2-2-7
- Chatti, M.A. (2010). *The LaaN theory*. In: *Personalization in technology enhanced learning: A social software perspective*. Aachen, Germany: Shaker Verlag, 19-42. <http://mohamedaminechatti.blogspot.com/2013/01/the-laan-theory.html>
- Chen, J., & Lin, H. (2018). *Embedded library research support service: A knowledge management service framework in academic libraries*.
<http://library.ifla.org/2420/>
- Chewe, P., & Imasiku, I. (2018). Centrality of libraries in the actualization of sustainable development goals in Zambia. *European Journal of Social Science Studies*, 3(4), 253-265. <https://doi.org/10.5281/zenodo.2528432>
- Chiemeke, S. (2007). Users perceptions of the use of academic libraries and online facilities for research purposes in Nigeria. *Library philosophy and practice*, 9(2), 1-13.
https://www.researchgate.net/profile/I_Shaib/publication/28157290_Users'_Perceptions_of_the_Use_of_Academic_Libraries_and_Online_Facilities_for_Research_Purposes_in_Nigeria/links/54228db20cf290c9e3a84494/Users-Perceptions-of-the-Use-of-Academic-Libraries-and-Online-Facilities-for-Research-Purposes-in-Nigeria.pdf

- Chow, A. S., Bridges, M., & Commander, P. (2014). The website design and usability of US academic and public libraries. *Reference & User Services Quarterly*, 53(3), 253-265. <http://dx.doi.org/10.5860/rusq.53n3.253>
- Commission for University education, Kenya. (2016). *Education system in Kenya*. <http://www.cue.or.ke>
- Commission for University Education. (2018) *Universities data*. <http://cue.or.ke>
- Cotter, R. (2012). *Performance indicators for reference and informational services*. <https://docs.lib.purdue.edu/iatul/1996/papers/13>.
- Cooper, D. R., & Schindler, P. S. (2018). *Business research method* (10th ed.). McGraw-Hill Education.
- Dahan, S. M., Taib, M. Y., Zainudin, N. M., & Ismail, F. (2016). Surveying user's perception of academic library services quality: A case study in university of Malaysia Pahang (UMP) library. *The Journal of Academic Librarianship*, 42(1), 38-43. <https://doi.org/10.1016/J.acalib.2015.10.006>
- Daystar University (2020). *About Daystar university*. <https://www.daystar.ac.ke/about.htm>
- Dresselhaus, A. (2019). Core competencies at every stage: The serials librarian. *The Serials Librarian*, 76(1), 134-140. <https://doi.org/10.1080/0361526X.2019.1588620>
- Ekere, J. N., Omekwu, C. O., & Nwoha, C. M. (2016). Users perception of the facilities, resources and services of the MTN digital library at the university of Nigeria, Nsukka. *Library Philosophy & Practice*. <https://digitalcommonc.unl.edu>
- Emery, J., Stone, G., & McCracken, P. (2020). *Techniques for electronic resource management (TERMS) and the transition to open*. Chicago: American Library Association. <https://doi.org/10.15760/60/lib-01>
- El-Fadil, M.E. (2013). *Students' perception of the academic library and its role in information literacy delivery: The case of Al Akhawayn University, Ifrane, Morocco*. <https://doi.org/10.13140/rg.2.1.2225.6406>
- Feng, L., & Wei, W. (2020). A Combined Method of r-NPS and t-NPS Evaluations for Identification of Negative Triggers of Detractors' Experience, *Sustainability* 12(4),1-23. <https://doi.org/10.3390/su12041652>

- Field, A. (2009). *Discovering statistics using SPSS: (and sex and drugs and rock'n'roll)*. Sage. <http://sro.sussex.ac.uk/id/eprint/14911>
- Goldie, J. G. S. (2016) Connectivism: a knowledge learning theory for the digital age. *Medical Teacher*, 38(10), 1064-1069. <https://doi.org/10.3109/0142159X.2016.1173661>
- Grattan Institute (2018). *Mapping Australian higher education*. <https://grattan.edu.au/wp-content/uploads/2018/09/907-Mapping-Australian-higher-education-2018.pdf>
- Hawthorne, A., (2008). History of electronics. In Yu and Breivold (Eds). *Electronic resource management in libraries: Research and practice* California: Los Angeles. <https://www.igi-global.com>
- Ijiekhuamhen, O. P., Aghojare, B., & Ferdinand, O. A. (2015). Assess users' satisfaction on academic library performance: A study. *International journal of academic research and reflection*, 3(5), 67-77. <https://www.idpublications.org>
- Iwhiwhu, B. E & Okorodudu, P.O. (2012). Public library information resources, facilities and services: User satisfaction with Edo State Central library, Benin City, Nigeria. *Library Philosophy and Practice (e-journal)*. 747(1), 1-16. <https://digitalcommons.unl.edu/libphilprac/747>
- Jameson, J., Natal, G., & Napp, J. (2019). Evolving and enduring patterns surrounding student usage and perceptions of academic library reference services. *College & Research Libraries*, 80(3) 366-377. <https://doi.org/10.5860/crl.80.3.366>.
- John, B.. D. (2001). *Challenges of electronic resources: State of the art and unresolved issues*. http://eprints.rclis.org/4199/1/byrum_eng.pdf
- Jones, A.H.G. (2019). *Using the theory of reasoned action to examine faculty intentions to use social networking in distance learning courses* [Doctoral dissertation, The University of Alabam]. Tuscaloosa, Alabama. https://ir.ua.edu/bitstream/handle/123456789/6450/file_1.pdf?sequence=1&isAllowed=y
- Katabalwa, A. S. (2016). Use of electronic journal resources by postgraduate students at the university of Dar es Salaam. *Library Review*, 65 (6/7), 445-460. <https://www.researchgate.net>
- Kay, J. (2019). Improving access to e-resources for users at the university of Cerby: Enhancing discovery systems with library plus 2.0. *Insight the UKSG Journal*, 32(1), 1-12. <https://doi.org/10.1629/ukcg.452>.

- Kenchakkanavar, A.Y. (2014). Competencies for library and information science professionals in academic libraries. *Indian Journal of Library and Information Technology*, 4(2), 1-3.
https://www.academia.edu/attachments/38454096/download_file?st=MTU4NTU1MzAwMywxOTcuMTU2LjE5MC4xODg%3D&s=swp-splash-header
- Kenya Education Network (2018). *Bridging a 40-kilometer gap with remote teaching: the case of daystar university*. <https://www.kenet.or.ke/content/bridging-40-kilometer-gap-remote-teaching-case-daystar-university>
- Khan, S., & Bhatti, R. (2017). Digital competencies for developing and managing digital libraries: An investigation from university librarians in Pakistan. *The Electronic Library*, 35(3), 573-597. <https://doi.org/10.1108/EL-06-2016-0133>.
- Khasseh, A. A., Rahimi, Y.S., Azimi, H., Ghazizadeh, H., & Alipour, O. (2020). Library services to the disabled in the public libraries of Iran (A case study of East Azerbaijan province). *Library Philosophy and Practice (e-journal)*. 3551
<https://digitalcommons.unl.edu/libphilprac/3551>
- Kim, J. (2017). User perception and use of the academic library: A correlation analysis. *The Journal of Academic Librarianship*, 43(3), 209-215.
<https://doi.org/10.1016/j.acalib.2017.03.002>
- Krieb, D. (2018). Assessing the impact of reference assistance and library instruction on retention and grades using student tracking technology. *Evidence Based Library and Information Practice*, 13(2), 2-12. <https://doi.org/10.18438/eblip29402>
- Liu, Q., Allard, B., Lo, P., Zhou, Q., Jiang, T., & Isumura, H. (2019). Library user education as a window to understand inquiry-based learning in the context of higher education in Asia: A comparative study between Peking university and the university of Tsukuba. *College and Research Libraries*, 80(1), 1-10.
<http://digitalcommons.unl.edu/libphilprac/426>
- Maina, J., Masese, J. M., Omallah, B.G., & Makwae, E.N. (2017). Usage and user satisfaction of library resources in Kisii university library, Kenya. *International Journal of Library and Information Science Studies*, 3(3), 20-29.
<http://www.eajournals.org/wp-content/uploads/Usage-and-User-Satisfaction-of-Library-Resources-in-Kisii-University-Library-Kenya.pdf>
- Madondo, T., Sithole, N., & Chisita, C. T. (2017). Use of electronic information resources by undergraduate students in the faculty of management and administration at Africa University, Mutare, Zimbabwe. *Asian Research Journal of Arts & Social Sciences*, 2(2), 1-12. doi: 10.9734/ARJASS/2017/29633
- Majinge, R. M., & Mutula, S. M. (2018). Access to electronic and print information resources by people with visual impairments in university libraries: A Review of

- Related Literature. *Library Management*, 39(6-7), 462-473.
<https://doi.org/10.1108/LM-04-02017-0038>
- Malatji, K. J. (2017). *Students' perceptions of the role of the library in their studies at Tshwane university of technology, Polokwane campus* [Master's Thesis, University of South Africa]. South Africa.
<https://core.ac.uk/download/pdf/129899258.pdf>
- Mangrum, S.R. (2019). *Student and staff perceptions of university library usage: Comparing reality to interpretation of space usage* [PhD thesis, University of Southern Mississippi]. Hattiesburg, Mississippi.
<https://aquila.usm.edu/cgi/viewcontent.cgi?article=1001&context=highereddoctoralprojects>
- Masese, J.M., Omallah, B.G., Makwae, E.N., & Moenga, E.N. (2016). *Strategies to enhance access and use of e-resources by post graduate students in selected university libraries in Kisii county, Kenya*.
<https://www.academicresearchjournals.org/IJALIS/PDF/2016/October/Masese%20et%20al.pdf>
- McNeil, B. (2001). *Core competencies for libraries and library staff*.
https://works.bepress.com/beth_mcneil/8/download/
- Mishra, C., & Maharana, B. (2007). A survey of digital information literacy of faculty at Sambalpur University. *Library Philosophy and Practice*, 9(2) 144. <http://digitalcommons.unl.edu/libphilprac/144>
- Mount Kenya University- Eldoret (2020). *Mount Kenya University academics report*.
<http://www.mku.ac.ke>
- Multimedia University of Kenya (2020). *Multimedia University of Kenya: Vision and mission*. <http://www.mmu.ac.ke>.
- Naidu, T.R., & Kishore, A. (2019). Users evaluation of library resources and services at select universities in Andhra Pradesh. *International Journal of Library and Information Studies* 9(2), 146-155. <http://www.ijlis.org/img/2019>
- Noh, Y., Lee, K.H., & Choi, S. (2018). A study on comparing the perception between librarians and users about libraries' value. *International Journal of Knowledge Content Development & Technology*, 8(2), 67-100.
<http://ijkcdt.net/xml/14414/14414.pdf>
- Nyantakyi-Baah, L. (2016). *User perception of academic library service quality and value: The case of the Ghana institute of journalism and Ashesi university*

college libraries [Master's thesis, University of Cape town], Cape town, South Africa. <http://hdl.handle.net/11427/23392>

Nzivo, C.N. (2012). User perception on library services and information resources in Kenyan public libraries. *Library Review*, 61(2),110-12
<https://www.emerald.com/insight/content/doi/10.1108/00242531211220744/full/html>

Computer Library Center (2006). *College students' perceptions of libraries and information resources*.
https://www.immagic.com/eLibrary/ARCHIVES/GENERAL/OCLC_US/O060424D.pdf

Ofordile, O.J., Agbanu, N. A., & Nwankwo, N.G (2019). The use of e-library resources as a correlate of user satisfaction in university libraries in Anambra state, Nigeria. *International Journal of Social Sciences and Humanities Reviews*, 9(1), 103 – 112.
https://www.researchgate.net/profile/Ndidi_Nwankwo/publication/334576739_the_use_of_e-library_resources_as_a_correlate_of_user_satisfaction_in_university_libraries_in_anambra_state_nigeria/links/5d32267f4585153e59109515/the-use-of-e-library-resources-as-a-correlate-of-user-satisfaction-in-university-libraries-in-anambra-state-nigeria.pdf

Okogwo, I. F., & Mole, A.J.C. (2019). Difficulties of accessing electronic resources among postgraduate library users in university libraries in Southeast Nigeria. *Library Philosophy and Practice*, 1 (5), 1-11.
<https://digitalcommons.unl.edu/libphilprac/2425/>

Okuonghae, O., & Igbinovia, M.O.(2019). The role of academic libraries towards the attainment of sustainable development goals: The Nigerian Perspective. *Covenant Journal of Library & Information Science (CJLIS)*, 2(2), 51-68.)
<http://journals.covenantuniversity.edu.ng/index.php/cjlis/>

Omete, P. B. (2016). *Awareness and utilization of electronic information resources by academic staff at the university of Eldoret* [Master's Thesis, Kisii University]. Kisii, Kenya.
<http://library.kisiiuniversity.ac.ke:8080/xmlui/bitstream/handle/123456789/662/petronilla%20omete.pdf?sequence=1&isAllowed=y>

Orodho, A.J. (2003). Regional Inequalities in Education, Population and Poverty Patterns in Kenya: Emerging Issues and Policy Directions. *Population Association of Kenya Journal*, 4(1), 51-76.
<http://education.ku.ac.ke/index.php/component/content/article/89-faculty/64-prof-john-a-rodho>

- Osman, I., & Kwafoa, P. N. A. (2020). *Library services for the visually impaired: Case study of Academic libraries in Ghana*.
<https://digitalcommons.unl.edu/libphilprac/3545>
- Oyewole, O., & Adetimirin, A. (2014). Lecturers and Postgraduates Perception of Libraries as Promoters of Teaching, Learning, and Research at the University of Ibadan, Nigeria. *New Review of Academic Librarianship*, 21(1), 83-93.
<https://www.academia.edu>
- Rajan, T. N. (2017). *Library staff: Roles and responsibilities*.
<http://egyankosh.ac.in/bitstream/123456789/34900/1/Unit-4.pdf>
- Raju, J. (2019). Embracing New Trends in Scholarly Communication: From Competency Requirements in the Workplace to LIS Curriculum Presence. *Journal of Librarianship and Scholarly Communication*, 7(1), 1-25.
<https://doi.org/10.7710/2162-3309.2291>.
- Rawayau, U. H. (2019). The effect of negative perception of librarianship on the job performance of graduates` in Umaru Musa Yar`adua university library in Katsina state, Nigeria. *Global Scientific Journals*, 7(9),412-426.
http://www.globalscientificjournal.com/researchpaper/the_effect_of_negative_perception_of_librarianship_on_the_job_performance_of_graduates_in_umaru_mu_sa_yar_adua_university_library_in_katsina_state_nigeria.pdf
- Research Planning and Review Committee, A. (2018). 2018 top trends in academic libraries: A review of the trends and issues affecting academic libraries in higher education. *College & Research Libraries News*, 79(6), 286-296.
<https://doi.org/https://doi.org/10.5860/crln.79.6.286>
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*. Pearson education. <https://d1wqtxts1xzle7.cloudfront.net/61719476>
- Sewell, C., & Kingsley, D. (2017). Developing the 21st Century Academic Librarian: The Research Support Ambassador Program. *New Review of Academic Librarianship*, 23(2-3), 148-158.
<https://doi.org/10.1080/13614533.2017.1323766>
- Siemens, G. (2005). *Connectivism: A learning theory of the digital age*. <http://www.e-learnspace/articles.org/connectivism>.
- Simon, M.K., & Goes, J. (2013). *Ex post facto research*.
<https://www.dissertationrecipes.com/wp-content/uploads/2011/04/Ex-Post-Facto-research.pdf>
- Singh, O., & Khan, M. (2012). The relevance of electronic information resources in the digital era. *International conference on the on access to legal information &*

- research in digital age*, (1-12).
https://www.academia.edu/31894800/The_Relevance_of_Electronic_Information_Resources_in_Digital_Era
- Sisimwo, J. (2016). *Electronic resources and its application in collection development practices in academic libraries: the case of united states international university* (Master's thesis, University of Nairobi), Nairobi, Kenya.
<http://erepository.uonbi.ac.ke/handle/11295/109456>
- Shajahan., S. (2009). *Introduction to business research methods*, (4th ed). Jaico Publishing House.
- Sohail, M.D., & Ahmad, S. (2017). Use of electronic resources and services by faculty members and students of Fiji national university. *Journal of Library & Information Technology*, 37(3), 165-171.
<https://doi.org/10.14429/djlit.37.3.10a567>
- Soria, K. M., Fransen, J., & Nackerud, S. (2017). The impact of academic library resources on undergraduates' degree completion. *College & Research Libraries*, 78(6), 812-823. <https://doi.org/10.5860/crl.78.6.812>
- Sote, A., & Aramide, K. A. (2010). Influence of self-efficacy, perceived ease of use and perceived usefulness of e-library by academic staff in Nigerian universities. *In Scholarly Communication and Information: Mentoring, Mastery and Modernization*.
<https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=2416&context=libphilprac>
- Sritharan, T. (2018). Evaluation of usage and user satisfaction on electronic information resources and services: a study at postgraduate institute of medicine library, University of Colombo. *Journal of University librarians association of Sri lanka*, 21(2), 73-88. <http://doi.org/10.4038/jula.v2li2.7918>.
- Suchánek, P., & Králová, M. (2018) Customer satisfaction and different evaluation of it by companies. *Economic Research-Ekonomska Istraživanja*, 31(1), 1330-1350.
<https://doi.org/10.1080/1331677X.2018.1484786>
- Sutton, S.W. (2011). *Identifying core competencies for electronic resources librarians in the twenty-first century library* [PhD thesis, Texas Woman's University]. Texas, United States of America. https://tamucc-ir.tdl.org/bitstream/handle/1969.6/33/Sutton_dissertation_final.pdf?sequence=1
- Sutton, S.W., & Collinge, R. (2018). Competencies for e-resource librarians redux: What do they look like in 2017. *The Serials Librarian*, 74(1), 72-80. <https://doi.org/10.1080/0361526X.2018.1428029>

- Sritharan, T. (2018). Evaluation of usage and user satisfaction on electronic information resources and services: A study at postgraduate institute of medicine library, university of Colombo. *Journal of the University Librarians Association of Sri Lanka*, 21(2), 73-88. <https://doi.org/10.4038/jula.v21i2.7918>
- Tait, E., Martzoukou, K. & Reid, P. (2016). Libraries for the future: The role of IT utilities in the transformation of academic libraries. *Palgrave Communication*, 2(16070), 1-10. <https://doi.org/10.1057/palcomms.2016.70>
- Ternenge, T. S., & Kashimana, F. (2019). *Availability, Accessibility, and Use of Electronic Information Resources for Research by Students in Francis Sulemanu Idachaba Library University of Agriculture, Makurdi*. <https://digitalcommons.unl.edu>
- Tetteh, E. O. A., & Baah, L. N. (2019). Library value through user satisfaction: The case of academic libraries in Ghana. *International Journal of Library and Information Science*, 11(5), 44-57. <https://doi.org/10.5897/IJLIS2019.0886>
- Thanuskodi, S. (2019). *Usage of social media among LIS students in India*. in *Literacy Skill Development for Library Science Professionals*. IGI Global.
- Tiemo, P.A., & Ateboh, B.A. (2016). Users' satisfaction with library information resources and services: A case study college of health sciences library Niger Delta University, Amssoma, Nigeria. *Journal of Education and practice*, 7(16), 54-59. <https://eric.ed.gov/?id=EJ1105267>
- Tlakula, T., & Fombad, M. (2017). The use of electronic resources by undergraduate students at the university of Venda South Africa. *The Electronic library*, 35(5), 861-881. <https://doi.org/10.1108/EL-06-2016-0140>.
- Tobar, M. B., Acurio, J. L., Cadena, A. D., & Diaz, P. M (2019). *Advances in emerging trends and technologies*. Springer.
- Trafimow, D. (2009). The Theory of Reasoned Action: A Case Study of Falsification in Psychology. *Theory & Psychology*, 19(4), 501–518. <https://doi.org/10.1177/0959354309336319>
- Vichea, L., Nazy, L., Sopanha, M., & Socheata, V. (2017). *The impact of library usage on UC students academic performance*. <https://uc.edu.kh/userfiles/image/2018/>
- Wagner, W., Halley, F., & Zaino, J. (2011). *Adventures in social research; Data analysis using IBM SPSS statistics (7th ed.)* Sage.
- Wangui, W.M (2018). *Perception and attitude of postgraduate students on institutional repositories: case of St. Pauls' university in Limuru, Kenya* [Master's thesis, Kenyatta University], Nairobi, Kenya. <https://ir->

library.ku.ac.ke/bitstream/handle/123456789/17746/Perception....pdf?sequence=3&isAllowed=y

- Weston, S. J., Ritchie, S. J., Rohrer, J. M., & Przybylski, A. K. (2019). Recommendations for increasing the transparency of analysis of preexisting data sets. *Advances in Methods and Practices in Psychological Science*, 2(3), 214–227. <https://doi.org/10.1177/2515245919848684>
- White, T., & Mcburney D. (2013). *Research methods*. <https://books.google.com>
- Wikipedia (2011). *Albert Bandura*. http://en.wikipedia.org/wiki/Albert_Bandura
- Wong, G. K.W. (2019). A tool for academic libraries to prioritize leadership competencies. *College and Research Libraries*, 80(5), 1-20. <https://doi.org/10.5860/crl.80.5.597>.
- Yan, W., Deng, S., & Zhang, Y. (2016). Factors influencing the intention to use information service mashups: an empirical study of digital libraries in China. *The Electronic Library*, 34(4), 696–716. <https://doi.org/10.1108/EL-05-2015-0082>
- Yusuf, F.O., & Iwun-James,J.(2010).Use of academic library: A case study of covenant University, Nigeria. *Chinese librarianship: an International electronic journal*, 12(2), 1-12. <http://www.white-clouds.com/iclc/cliej/cl30YL.pdf>
- Zhang, T., & Niu, X. (2016). The user experience of e-books in academic libraries: perception, discovery, and use. In Ward S., Freeman R., & Nixon J. (Eds.), *Academic E-Books: Publishers, Librarians, and Users* West Lafayette, Indiana: Purdue University Press. <https://doi.org/10.2307/j.ctt1wf4ds0.17>
- Zikmund, W., Babin, B., Carr, J., & Griffin, M. (2012). *Business research methods* (9th ed). Cengage Learning.ICES

Appendix I: Introductory Letter



KENYA METHODIST UNIVERSITY

P. O. Box 267 Meru - 60200, Kenya
Tel: 254-064-30301/31229/30367/31171

Fax: 254-64-30162
Email: info@kemu.ac.ke

June 17, 2020

Commission Secretary,
National Commission for Science, Technology and Innovations,
P.O. Box 30623-00100,
NAIROBI.

Dear sir/ Madam,

RE: CAROLINE KATHOMI MURITHI (ISK-3-9589-3/2018)

This is to confirm that the above named is a bona fide student of Kenya Methodist University, Department of Information Science undertaking a Degree of Master of Information Science. She is conducting research on, '**Contributory roles of Postgraduate Students' satisfaction with E-resources on Perception of Daystar University and Multimedia University Libraries**'.

We confirm that her Research proposal has been defended and approved by the University.

In this regard, we are requesting your office to issue a permit to enable her collect data for her research.


Any assistance accorded to her will be appreciated.

Thank you,




Dr. John Muchiri, PHD.
Director Postgraduate Studies

Appendix II: NACOSTI Research Permit


REPUBLIC OF KENYA

Ref No: 135468

RESEARCH LICENSE




This is to Certify that Ms.. CAROLINE KATHOMI MURITHI of Kenya Methodist University, has been licensed to conduct research in Nairobi on the topic: **CONTRIBUTORY ROLES OF POSTGRADUATE STUDENTS' SATISFACTION WITH E-RESOURCES ON PERCEPTION OF DAYSTAR UNIVERSITY AND MULTIMEDIA UNIVERSITY LIBRARIES** for the period ending : 23/June/2021.


License No: NACOSTIP/20/5411

135468

Applicant Identification Number


Director General
NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION

Verification QR Code



NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is Guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014

CONDITIONS

1. The License is valid for the proposed research, location and specified period
2. The License any rights thereunder are non-transferable
3. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies
5. The License does not give authority to transfer research materials
6. NACOSTI may monitor and evaluate the licensed research project
7. The Licensee shall submit one hard copy and upload a soft copy of their final report (thesis) within one of completion of the research
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice

National Commission for Science, Technology and Innovation
off Waiyaki Way, Upper Kabete,
P. O. Box 30623, 00100 Nairobi, KENYA
Land line: 020 4007000, 020 2241349, 020 3310571, 020 8001077
Mobile: 0713 788 787 / 0735 404 245
E-mail: dg@nacosti.go.ke / registry@nacosti.go.ke
Website: www.nacosti.go.ke

Appendix III: Authorization letter

To the DVC academics

Daystar University / Multimedia University

Nairobi-Kenya.

RE: REQUEST TO CONDUCT A STUDY IN YOUR INSTITUTION

I am a student at the Kenya Methodist University pursuing Master of Science in Information Science. I am currently undertaking a research thesis on contributory roles of postgraduate students' satisfaction with e-resources on perception of Daystar University and Multimedia university libraries. I would therefore request to be authorized to conduct the study in your institution (Daystar / Multimedia).

The study will involve issuing questionnaires to postgraduate students and conduct an interview to library staff in charge of e-resources in the library. Confidentiality will be maintained and the data will be used only for academic purposes. I have attached both the questionnaire and the interview guide that will be used in the study for your perusal. Your help will be highly valued.

Yours Sincerely,

Caroline Murithi

Reg no: ISK-3-9589-3/2018

Mobile no:0720268189

Appendix IV: Introduction letter

Caroline Murithi

Mobile no: 0720268189

Email: caromurithi2010@gmail.com

Dear Respondent,

RE: INTRODUCTION LETTER TO ALL RESPONDENTS

I am a student at the Kenya Methodist University pursuing Master of Science in Information Science. I am currently undertaking a thesis on contributory roles of postgraduate students' satisfaction with e-resources on perception of Daystar University and Multimedia university libraries. You have been selected as one of the research respondents in this study.

The purpose of this questionnaire is to collect data that will be used for academic purpose only. I am requesting for your assistance in conducting this research by answering all the questions in this questionnaire. The information you give shall be treated as confidential. Your assistance will be highly appreciated.

Yours Sincerely,

Caroline Murithi
Reg no: ISK-3-9589-3/2018
Mobile no:0720268189

Appendix V: Questionnaire for post graduate students

Instructions

Please respond by ticking (✓) against your preferred response for questions with options.

For questions that require suggestions or comments, please use the provided space.

Part A: Demographic information

1. What is your gender?

- a) Male (...)
- b) Female (...)

2. Which course are you pursuing as a postgraduate student?

3. What course program are you pursuing?

- a) Masters (...)
- b) PhD (...)

4. Which level of studies are you currently?

- a) Course work level (...)
- b) Research level (...)

Part B: Support services on e-resources that are provided by library staff to postgraduate students

Kindly rate the following statement based on the kind of support services on electronic resources that are provided by library staff to postgraduate students. Use the following scale of Strongly Disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, Strongly Agree = 5.

Statement

The library is well stocked to support various types of
. electronic resources which are stored in both audio and
visual formats.

The library subscribes periodically to electronic
. resources that are readily available to students

The library has a system of training students on various
. e-resources which are scheduled in different convenient
times.

The library has a guideline manual given to
. postgraduate students on various services offered to

familiarize themselves with the services of the library

The library has adequate human resources to keep track
of the expiry dates of subscription of electronic resource
access

There are adequate Information Communication
Technology facilities in the library to access e-resources

Part C: Competencies of library staff who provide e-resource services to postgraduate students

Kindly rate the following statement on the competencies of library staff who provide electronic resource services to postgraduate students. Use the following scale of Strongly Disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, Strongly Agree = 5.

No.	Statement	1	2	3	4	5
1.	Librarians are knowledgeable on how to offer references					

services such
as APA
formats
amongst
others.

2. There is a
well-organized
lending
service
procedure
followed by
the librarians

3. Librarians
know how to
operate
computers and
can effectively
handle post
graduate
concerns on
electronic

resources.

4. There is orientation done by the librarians to postgraduate students on the type of electronic resources in the library and the library in general

5. Librarians offer bibliographic instructions such as searching for information on library database without strain.

6. Librarians
have searching
strategies
skills that are
required to
guide
postgraduate
students on
various
sections of the
database.

Part D: Satisfaction with e-resources by postgraduate students

Kindly rate the following statements based on how satisfied you are on with electronic resources as a postgraduate student. Use the following scale of Strongly Disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, Strongly Agree = 5.

No. Statement

The kinds of e-resources in the library repository are
. updated regularly and relevant with the course content
required by post graduate student courses.

- The file sizes of e-resources have low
- . megabytes which is economical to postgraduate students where one can download multiple files at convenient cost.

- Electronic resources in the library can be sent
- . and re-shared through common ways such as emails, and WhatsApp messages.

- Electronic resources are easy to access and download
- . by post graduate students who have basic computer skills

- The library environment and electronic resources are
- . user friendly and do not expose postgraduate students to any hazards such as too much volume on audio resources and too much light for e-books

- E-resources diverse huge volume has promoted more
- . knowledge impartation to postgraduate students.

7. What is your level of satisfaction with e-resources provided through the university?

- a) Excellent (...)
- b) Good (...)
- c) Fair (...)

- d) Poor (...)
- e) Very poor (...)

Part E: Perception of university libraries by postgraduate students

Kindly rate the following statements based on your perception of university libraries by postgraduate students. Use the following scale of Strongly Disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, Strongly Agree = 5.

No. Statement

- . The library structural conditions have enabled postgraduate students to spend time in the library.
- . Friendly attitude and professional communication skills among librarians has improved more consultations by postgraduate students in the library
- . Convenient convey of training dates has improved attendance by post graduate students in the library.
- . Timely orientation on various library databases at the commencement of postgraduate courses has advanced

knowledge of various library search engines options
available to post graduate students

Numerous stocks of library electronic resources have
. improved the frequency of use of a library.

Reliable internet facility in the library has boosted the
. time spent in the library accessing e-resources

My general perception of library is good

.

7. If you were asked to describe your library like a person, what descriptor adjective would you use? Kindly list three adjectives.

1) -----

-

2) -----

-

3) -----

-

VI: Interview guide for library staff in charge of e-resources.

1. Instructions

- a) Please answer the questions asked honestly to the best of your knowledge

Part A: Demographic information

1. What is your education level?
2. How long have you worked in the library?
3. How long have you been in charge of e-resources in the library.

Part B: Support services on e-resources that are provided by library staff to postgraduate students

1. What are the types of support services offered to postgraduate students in the library with regard to accessing e-resources?
2. Provide comment on access and utilization of e-resources by postgraduate students?
3. What challenges do you experience when providing support services to postgraduate students with regard to e-resources?

Part C: Competencies of library staff who provide e-resource services to postgraduate students

1. What special skills and competencies are required in order to provide effective services on e-resources?
2. What is the scope and frequency of refresher courses on e-resource management?

Part D: Satisfaction with e-resources by postgraduate students

1. How does your library determine satisfaction of postgraduate student with e-resources service?
2. What are the main issues that cause dissatisfaction among postgraduate students with regard to e-resources in your library?
3. Explain measures undertaken by your library in addressing the above issues?

Part E: Perception of university libraries by postgraduate students

1. What causes your library to be perceived negatively by postgraduate students?
2. What is your library known of by postgraduate students?
3. How do postgraduate students describe your library with reference to your e-resources?
4. With references to the nature of e-resources provided in your University, describe how you would like postgraduate students to perceive your library?

Appendix VII: Interview guide for Head of University Libraries

1. Kindly explain the kind of support that you provide to postgraduate students with regard to access to e-resources?
2. Comment on internet bandwidth to support availability and accessibility of e-resources by postgraduate students?
3. Explain how your library handles dissatisfaction raised by postgraduate students?
4. What skills and competencies do you consider critical for library staff to effectively support postgraduate students in accessing e-resources?
5. What is your library known of by postgraduate students?
6. Explain what causes your library to be perceived negatively by postgraduate students?
7. With reference to the nature of e-resources provided in your University, describe how you would like postgraduate students to perceive your library?
8. What are some of the measures that your library has implemented to curb the negative perception of the library by postgraduate students?