

**THE ROLE OF LIBRARY SERVICES IN THE RESEARCH OF POSTGRADUATE
STUDENTS AT THE UNIVERSITY EDUARDO MONDLANE, MOZAMBIQUE**

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**A mini-thesis submitted in partial fulfilment of the requirements for the degree of
Masters in Library and Information Science in the Department of Library and
Information Science, University of the Western Cape, Bellville**



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DECLARATION

I declare that this work *The role of library services in the research of postgraduate students at the University Eduardo Mondlane (UEM), Mozambique* is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references. It has not been previously submitted in a whole or in part for any degree.

Signed: *Democrite Mamyissa*

Date: *25.02.2015*



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ABSTRACT

More and more, research is becoming the core business of every university. There are a number of reasons as to why governments are encouraging their universities to make research activities a priority. Research leads to birth of new knowledge and theory of the world. Such new knowledge drives the economies of the world. In this regard, academic libraries have been able to provide the tools that guide clients through an avalanche of information and assist researchers to identify what meets their particular needs. However, academic libraries are facing some challenges as a result of various changes in scholarly communication as they are no longer regarded as the sole primary provider of information to researchers.

The aim of this study was to investigate the role of library services in the research of postgraduate students at the University Eduardo Mondlane (UEM) in Mozambique. The study looked at the services the library offered to postgraduate students, the sources of information most used by postgraduate students, the research information needs of postgraduate students, the ways the postgraduate students access research materials and the challenges that postgraduate students encounter when using the System of Libraries at the UEM.

The first research question was answered by reviewing the professional literature as well the empirical data obtained from the librarians via interviews. The rest of the questions were answered by the students via questionnaires as well as interviews with the library staff.

The researcher self-administered a questionnaire to 200 registered postgraduate students at the UEM and conducted interviews with seven librarians. The study adopted the Multiple Constituencies Model which each of its domains effectively helping in interpreting the results of the study. The study found that between 57 (32.3%) and 58 (33%) postgraduate students use the library to search for prescribed course materials and research related work. Furthermore, the study found that 152 (88.4%) students used the Internet to search for information. Although the study showed students used the library, the major challenges that students between 35(19.9%) and 96(54.5%) faced included poor English literacy skills, unstable Internet and outdated materials.

Keywords: library services, research, postgraduate students, academic library, Mozambique, University Eduardo Mondlane (UEM), Multiple Constituencies Model, postgraduate studies.



LIST OF ACRONYMS AND ABBREVIATIONS

ABU- Ahmadu Bello University

AJOL- African Journals Online

ASUNET-Ain Shams University Network

CPUT – Cape Peninsula University of Technology

CURL -Consortium of Research Libraries

DOI - Digital Object Identifier

GDP – Gross Domestic Product

ICT - Information and Communication Technology

ISI -Institute for Scientific Information (ISI)

ISRI -Instituto Superior de Relacoes Internacionais

ISSN- International Standard Serial Number

IT-Information Technology

LIS – Library and Information Services

MCM- Multiple Constituencies Model

MCT - Ministry of Science and Technology

NISER - Nigerian Institute for Social and Economic Research

NRF -National Research Foundation

NYU- New York University

OAU- Obafemi Awolowo University

OPAC-Online Public Access Catalogue



RIN - Research Information Network

RISC-Research Information Support Centre

RLUK - Research Libraries of United Kingdom

SABINET – South African Bibliographic Network

SIBUEM – System of Libraries of the University of Eduardo Mondlane

SDI - Selective Dissemination of Information

SPSS - Statistical Package for the Social Sciences

UEM - Universidade Eduardo Mondlane

UI - University of Ibadan

UIUC - University of Illinois Urbana-Champaign

UK - United Kingdom

UNAAB - University of Agriculture, Abeokuta

UNESCO - United Nations Educational, Scientific and Cultural Organization

UP – Universidade Pedagogica

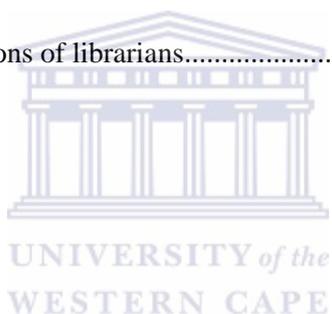
USA - United States of America

UW - University of Washington



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CHAPTER ONE: INTRODUCTION AND BACKGROUND

1.1 Introduction

It is a fact that most countries are putting more emphasis on research and development activities. There are a number of reasons why governments are encouraging their universities to make research activities a priority. This is because it is been proven that research creates new knowledge and innovation in the world. Such new knowledge is understood to drive the economies of the countries. As a result, universities across the world are taking postgraduate studies as a priority because they are the catalyst of new knowledge. A knowledge society is a learning society in which research is central. Research in science and technology contributes to sustainable development (UNESCO World Report, 2005: 99).

Research production in South Africa (for example) is measured according to the internationally accepted performance indicators of number and quality of peer-reviewed publications, throughput and quality of postgraduate students, income generated through grants and contracts, and the standing of researchers as evidenced in National Research Foundation ratings (Kleinveldt, 2009:3). According to the Mozambique Science, Technology and innovation Strategy (Republic of Mozambique, 2006:3) statistics on research results is sparse in Mozambique. This renders the measurement of research action difficult in the country. However, research and development in Mozambique is carried out in the context of both public and private universities and public research institutions. Public expenditure on research development amount to about 0.2% of GDP, which according to Republic of Mozambique (2006:3) is clearly not enough. The University Eduardo Mondlane (UEM) has more than 300 different research projects. Most university research activities are supported by their academic libraries.

1.2 Background information and research in Mozambique

The Republic of Mozambique is a country in Southeast Africa, bordered by Tanzania to the north, Malawi and Zambia to the northwest, Zimbabwe to the west and Swaziland and South Africa to the southwest. The eastern part of the country has a coastline along the Indian Ocean. In terms of socioeconomic status, Mozambique is one of the poorest countries in the world with very low development indicators (Infoplease, 2005).

Before independence, the illiteracy rate was alarmingly high and according to Gomes (1999:107) quoted by Zimba (2010) it was more than 90%. However, after independence in 1975, efforts have been made to increase the literacy rate by investing in the social, economic, cultural and political and education sectors. For example, according to the Instituto Nacional de Estatistical (2013: 44), there was an increase from 8% to 18 % of females who concluded secondary school in 2003 and 2011 respectively whereas the percentage of males who completed their secondary education rose from 16% in 2003 to 27% in 2011.

Since 2005, the Mozambican Government has created competitive funds for research managed by the Ministry of Science and Technology (MCT). For example, the Government has initiated a National Research Fund. There are additional funds for research like the Compete Fund and all the other research funds from the Government. MCT has created several National Research Councils in Water, Energy, Agriculture, Medicine, Ethnobotany and others. The recent establishment of a National Academy of Science is further evidence of a renewed “investment” in the field of Science and Technology in Mozambique (Mouton, 2007:125). Additionally, Zimba (2010:71) states that in recent years, the advancement of science and technology in Mozambique increased the rate of post-graduates studies both, public and private institutions of higher education. Some of the public universities include Instituto Superior de Relacoes Internacionais (ISRI), Universidade Pedagogica (UP) and Universidade Eduardo Mondlane (UEM). Most research activities are performed at these universities.

1.3 Brief literature review

Traditionally, the academic library's main role was to provide the necessary support for the process of research and education by helping clients to find the information and ascertain its value. In this regard, academic libraries have been able to provide the tools that guide clients through an avalanche of information and assist them to identify that relevant information that meets their particular needs (Law, 2008).

In modern times, academic libraries are becoming more and more proactive to effectively assist researchers in many ways with their research activities. Several broad functions can be identified according to Law (2008), Hart and Kleinveldt (2011:41) and the Association of Research Libraries (2006:22):

- *Broaden the catalogue of resources:* In their quest to provide a wide range of services to their clients, academic Library and Information Services (LIS) attempt to provide access to materials available in stock or obtain through partnerships with other libraries. For example, academic libraries try through their interlibrary loan service to help researchers to access materials available elsewhere.
- *Provision of materials beyond the library:* The academic library has become an agent of accessibility and integration linking researchers to a wide range of digital information available to user communities through licensing and agreements or other available means. Law (2008) notes that this is why universities are increasingly providing more budgetary allocations to academic libraries with the aim of making sure that payment to journals, databases and other materials available in digital form is made.
- *Creation of new reading areas in the library:* One of the most significant roles of the academic library is the provision of a special reading space for researchers. Hart and Kleinveldt (2011:41) refer to these special rooms as “research commons” which act as a “one-stop shop” for postgraduates and academic staff who need assistance with

research. These are special places set up in the library where researchers access services that are aligned towards their research activities. Services offered in knowledge commons include printing, computing, information literacy programmes, Information and Communication Technology (ICT) services and photocopying services.

- *Encouraging scholars and publishers to make their publications available through open access so that they can be easily and widely accessed* (Association of Research Libraries, 2006:22). These tools are needed to ensure that scholars involved in research know what their counterparts are doing elsewhere thus enhancing collaboration, sharing of knowledge and best practices. The idea of open access is being encouraged because it helps researchers to access and share knowledge created before it can be officially published in conventional forms such as leading journals and books. Advancements in social media such as blogs, Twitter and Facebook help researchers in communities of practice or in specific fields of study to interact and share relevant knowledge.

Despite all these efforts, academic libraries are facing some challenges as a result of various changes in scholarly communication. Academic libraries are no longer regarded as the sole provider of information to researchers. The Research Information Network (RIN) and Research Libraries UK (2007:3) report that this is especially pronounced in the new ways of communicating that have been described as the “democratization of informal scholarly communication”. For example, Rasul and Singh (2010:79) observe that researchers are turning to Google and specialized online research networks in growing numbers. Some studies conducted recently (for example Mutula, 2011:187) also reveal explicitly that researchers’ use of the Internet as a source of information is becoming greater compared to their use of academic library facilities.

1.4 Description of Universidade Eduardo Mondlane (UEM) and its libraries

UEM was founded in 1962 under the name of General University Studies of Mozambique. This was the first university in the country. (Universidade Eduardo Mondlane, 2013). The mission of the University is to produce and disseminate scientific knowledge and promote innovation through research as the foundation of the teaching-learning and extension processes, educating generations with humanistic values in order for them to face the current challenges for the development of society.

The university comprises several faculties through which it offers various undergraduate and postgraduate programmes. The faculties include Faculty of Agronomy and Forestry Engineering, Faculty of Sciences, Faculty of Law, Faculty of Education, Faculty of Economics, Faculty of Engineering, Faculty of Architecture, Faculty of Arts and Social Sciences, Faculty of Medicine and Faculty of Veterinary Sciences, School of Business and Entrepreneurship, School of Rural Development, School of Marine and Coastal Sciences, School of Hospitality and Tourism. These faculties are located in different locations and provinces across Mozambique. Table 1 provides details about the faculties, their locations and the programmes that are offered.

Table 1: Faculties, locations and programmes offered

Faculties, locations and programmes offered

Faculty / School	Location	Postgraduate programmes	Undergraduate programmes
Faculty of Agronomy and Forestry Engineering	Main campus	Agrarian Economics	Commercial agriculture
			Vegetal production
		Vegetal Production	Biology and Health
		Vegetal Protection	Applied biology
		Rural Development	Marine biology
		Management and Conservation of Biodiversity	Coast and Marine Biology
		Water and Soil Management	
		Biotechnology	

Faculty of Law	Main campus	Juridical Sciences	Law
		Juridical Politics Sciences	
		International Commerce Law	
		Human Law	
		Human Rights	
Faculty of Economics	Main campus	Economics of Development	Economy
		Business Administration	Commerce
		Policy Management	Management and leadership
			Finance
			Accountancy and Finance
Faculty of Arts and Social Sciences	Main Campus	Governing and Public Administration	Teaching of French language
		Linguistics	Teaching of Bantu languages
		Rural Sociology and Development Management	Teaching of Portuguese language
		History of Mozambique and Southern Africa	Linguistics
		Population and Development	Mozambican literature
			Translation
		PhD in Linguistics	Portuguese/French
			Translation
			Portuguese/English
			Politic Science
			History
			Philosophy
			Sociology
			Social Services
	Public Administration		
	Arqueology		
	Geography		
Faculty of Medicine	Polana	Public Health	Medicine
		Mental Healthy and Psycho-interventions	

		Epidemiology and Laboratory	
Faculty of Veterinary Sciences	Jardim	Animal Production	Food Security
		Food Security	Animal Production
School of Communication and Arts	Alto-Mae		Information Sciences
			Music
			Theatre
			Communication
School of Hospitality and Tourism	Inhambane Province		Management of Tourism Market
			Touristic animation
			Information on tourism
			Hospitality Management
Faculty of Architecture	Museu	Planning and Management of Informal settlements	Architecture and Physical Planning
Faculty of Engineering	Jardim	Hydraulic and Hydro Resources Engineering	Civil Engineering
		Technology of food	Electric engineering
		Petrol Engineering	Electronic engineering
			Chemistry engineering
			Mechanical engineering
			Water Engineering
			Industrial Management and Engineering
Faculty of Sciences	Main campus	Biotechnology,	Geology
		Coastal Ecosystems and Marine Biology,	Physics
		Management of Mineral Resources	Meteorology
		Information System	Mathematics
		Chemical and Local Resources Processing	Informatics engineering
		PhD in Science and Technology of energy	Chemistry
Faculty of Education	Main campus	Instructional and Curriculum Development	Development and Education of youth
		Adult Education	Organization and Management of Education
		Higher Education Studies and Development,	Psychology
		Family and Community Therapy	

1.4.1 The UEM Libraries

The System of Libraries of the UEM (SIBUEM) consists of the different campus libraries spread out in Maputo and other provinces such as Inhambane, Quelimane, Chibuto and Vilanculos. The SIBUEM was created in 1978 and is being overseen by the Division of Documentation of the university. Over time the Division of Documentation assumed other functions, including the centralization of the acquisition of bibliographic and non-bibliographic material; centralized cataloguing, organizing of the union catalogue, and coordination and support to find solutions related to the staff of the system. In 1991 these justified the name change to Directorate of Documentation Services, the current designation (Direccao dos Servicos de Documentacao, 2013).

The mission of SIBUEM is providing information resources necessary for teaching, research and extension at the UEM and the National System of Higher Education, enabling the innovation process and transfer of knowledge for sustainable development.

SIBUEM comprises the following branch libraries: Central Library Brazao Mazula, Library of the Faculty of Medicine, Library of the Faculty of Law, Library of the Faculty of Engineering, Library of the Faculty of Veterinary Sciences, Library of African Studies Centre and Library of the Faculty of Economics. All these libraries are centrally located in Maputo and are subordinate to and coordinated by the Directorate of the Documentation Services.

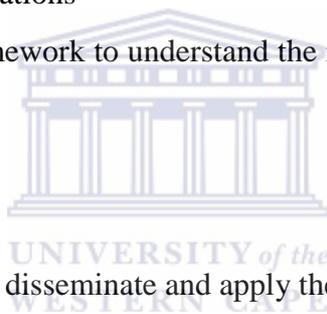
The SIBUEM has currently several services on offer to the public including postgraduate students. The services are: reference services, one on one consultation, normal loans, interlibrary loans, Internet access, library orientation and photocopying services. The Central Library Brazao Mazula also has a special room which holds a special collection of information resources specific and only addressed to postgraduate students of the Faculty of Economics. However, the researcher's experience in working in the UEM library since 1993 has revealed that this library does not have significant services for postgraduate students but rather for the general population.

1.5 Statement of the problem

It is important for universities to measure their research output as it allows universities to compete worldwide. The purpose of universities competing globally is to attract the best researchers and students (Kleinveldt, 2009:3). The research quality of any university is perceived in terms of among other criteria excellence of library facilities, quality of ICT infrastructure, availability of digitized local content, and, a functional institutional repository (Mutula, 2011:185).

As a result, the role of academic libraries is changing. They are increasingly promoting research activities in universities. Mutula (2011:185) summarises the importance of postgraduate research as follows:

- to test assumptions/observations
- to provide theoretical framework to understand the information reported by individual scholars
- to create new knowledge
- to carry a responsibility to disseminate and apply the results of a research activity



This research therefore investigated the current role of the SIBUEM in facilitating the research of postgraduate students at the University.

1.6 Aim of the study

The aim of this study was to investigate the role of library services in the research of postgraduate students at the UEM in Mozambique.

1.7 The objectives of the study

The study was carried out based on the following objectives:

- Establish the library services and resources to support postgraduate students
- Establish the sources of information used by postgraduate students
- To establish the research information needs of postgraduate students at the SIBUEM
- To notice the challenges that postgraduate students face when using the SIBUEM

1.8 Research questions

In trying to explore the problem the research relied on the four domains of the Multiple Constituencies Model: library resources, library services, access, and library/researcher interaction. It asked the following questions:

- What services are on offer to postgraduate students?
- Which sources of information are most used by postgraduate students at the SIBUEM?
- What are the research information needs of postgraduate students at the SIBUEM?
- How do postgraduate students at the SIBUEM access research materials?
- What are the challenges that postgraduate students face when using the SIBUEM?

1.9 Conceptual analysis

1.9.1 Academic library

An academic library is a library that is linked to a university. It serves the teaching, learning and research purposes of its users that are mainly students (undergraduates, graduates and postgraduates) and staff (lecturers, researchers, administrators.). This library supports the university's curriculum, and the research of the university faculty and students (Curzon & Quinonez-Skinner, 2009:11).

1.9.2 Academic library services

There are quite a number of services that libraries provide to the users. According to Research Information Network (RIN) and Research Libraries UK (2007), some of the services include data curation, loans, selective information dissemination, collection development and Internet services.

1.9.3 Research

Research in science and technology contributes to sustainable development, supports the growth of the economy and helps to strengthen social – economic development (UNESCO World Report, 2005: 99). Frascati (2002), as quoted by Hart and Kleinveldt (2011:38), defines research as a “creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications”.

1.9.4 Research culture

According to Evans (2007), cited by Holligan, Wilson and Humes (2011:713), research culture is a conjunction of shared values, assumptions, beliefs and other forms of behavior whose main focus is the acceptance and recognition of research practice and output as an important activity.

1.9.5 Researchers

A researcher is somebody who performs research, independently as a principal investigator, in the search for knowledge or in general undertakes any systematic investigation to establish facts. Researchers can work in academic, industrial, government, or private institutions. (The Free dictionary, 2013)



1.9.6 Post graduate studies.

Postgraduate programmes are considered conduits through which universities develop research capacity and also generate high level skills needed for a functional economy and in addressing complex issues such as global financial recessions, climate change, and poverty alleviation (Mutula, 2011:184). Consequently, postgraduate diplomas, master’s degree and PhDs are now commonly offered in tertiary education systems. More and more, research is becoming the core business of every university.

1.9.7 Postgraduate students

A postgraduate student is someone who has obtained a degree from a university, or any other institution of higher level education and is pursuing studies for a more advanced qualification (The Free dictionary, 2013).

1.10 Theoretical framework

The Multiple Constituencies Model (MCM) is the chosen frame for the proposed study. The model was developed and validated by Childers and Van House (1989 & 1990) by building on previous studies. Cullen and Calvert (1995:439) report that the model has been found to be a “sturdy and useful” model for assessing library organizational effectiveness. The model has been chosen for this study because it has been successfully used by other researchers (Ayob and Sendut, 2011) to study the role of academic libraries in support of researchers or postgraduate students. Childers and Van House (1989) identify four domains which include resources, services, and access and library/researcher interaction.

Domain One: Resources

Criteria to assess the comprehensiveness of library resources based on:

- the breadth and depth of the collection
- the ability to obtain needed materials

Domain Two: Services

Criteria to assess the effectiveness of library services such as:

- sufficiency of searching tools
- sufficiency of library opening hours
- availability of library staff assistance
- courtesy of library staff
- librarians’ professional knowledge
- the speed of acquisition of new materials
- the speed of provision of items through inter-library loan
- sufficient guidance and user training sessions
- sufficiency of book loan periods
- conducive spaces for research

Domain Three: Access

Criteria to assess the accessibility of library resources measured based on

- ease of use of the OPAC
- accessibility of the OPAC
- accessibility of Online Databases
- organization of materials

- frequency of use of the library resources and services

Domain Four: Library/Researchers Interaction

Criteria to assess the effectiveness of the interaction between library and researchers are based on:

- sufficiency of ways to interact with the library
- user awareness of the library resources and services
- information literacy education and training

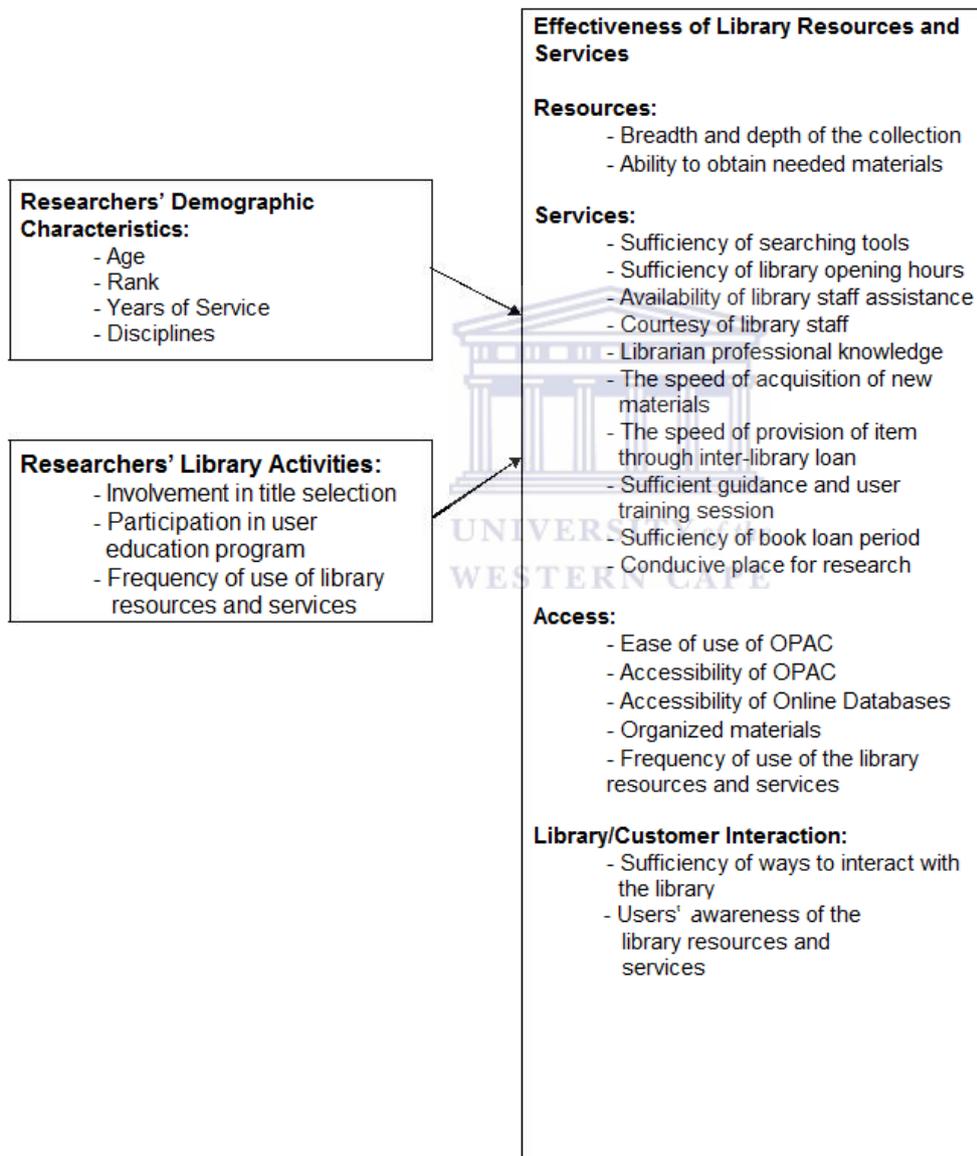


Figure 1: The Multiple Constituencies Model (MCM) (Ayob and Sendut, 2011:4)

1.11 Significance and limitations of the study

This research study established what type of services the postgraduate students of the UEM prefer. This could help to improve the library service provision for postgraduates at the University Eduardo Mondlane (UEM).

The study only focused on postgraduate students thus limiting the scope of the population in the study. At this university, there are researchers that are not students and have already achieved the postgraduate status. There are also staff members who are postgraduate students (for example some lecturers are doing their postgraduate studies at this university). Finally, there are full time researchers.

1.12 Ethics statement

In this study, I adhered to the ethical guidelines of the Research Committee of the University of the Western Cape. I respected the rights of participants. I obtained informed consent from my research participants based on the information on the project before the interviews. I ensured that the proper authority of the system of libraries of UEM was consulted, informed and that the approved permission was obtained. Written correspondence requesting for permission to conduct the research in Maputo province was forwarded to the Director of the Documentation Services of the University Eduardo Mondlane. By accepting and maintaining the responsibilities of anonymity and confidentiality, I ensured that the participants provided their personal information and that the findings will not be made available to any person not directly involved in the study. Furthermore, participation was voluntary and participants could withdraw at any time during the research process.

1.13 Thesis outline

Chapter 1 introduces the research project and explains the rationale behind the project. It undertakes a conceptual analysis of key concepts like academic library, library services,

research, research culture, researchers, and post-graduate students, and outlines the theoretical framework.

Chapter 2 analyses existing research and professional literature. It looks at both positive and negative factors that have impacted on the library services for the post-graduate students and outlines the theoretical framework.

Chapter 3 describes the research design and methodology. It describes the questionnaire and gives the interview protocol.

Chapter 4 presents and summarises data collected by both questionnaires and interviews.

Chapter 5 discusses research findings, presents conclusions and recommendations.



CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Academic libraries play a very important role by supporting the learning, teaching (curriculum), and research purposes of its users (Curzon & Quinonez-Skinner, 2009:11). These users are mainly students (undergraduates, graduates and post-graduates), academic staff (lecturers, educators, professors, facilitators and tutors), researchers and administrative staff.

This chapter reviews relevant literature related to the role of academic libraries in support of postgraduate students. The chapter identifies connections, contradictions and gaps in the literature with reference to the various roles that academic libraries fulfil to assist post graduate students to accomplish their research activities.

The academic library contributes to the information literacy training in the various faculty courses and also contributes to the research culture in the university (Curzon & Quinonez-Skinner, 2009:11). By examining studies related to the role of academic libraries in promoting research culture in universities around the world, the following themes have been identified:

- Library services and resources to support research
- Information needs and sources of information for research
- Specific roles of the library in support of postgraduate students
- Problems that postgraduate students face

2.2. Library services and resources in support of the research of postgraduate students

Several library services and resources have been identified as aiming at facilitating the research activities of postgraduate students. Brown and Swan (2007) conducted a study of researchers' use of the library in the UK. Using quantitative and qualitative methods of a survey, focus group discussion and interviews with 2,250 researchers and 300 librarians, their study revealed that Internet services such as the Wi-Fi, electronic information services such as e-journals were very important in the promotion of research culture. It appears there are

several key library resources that postgraduate students value most if the findings by Brown and Swan (2007) are to be taken seriously. They include: institutional library as convenient location for their research activities, a place to browse current issues of printed publications, a place to undertake quiet individual study and as an ideal place for accessing modern IT equipment and digital resources. The study concluded that many researchers do not understand the role of the library in their research activities. The study therefore recommends that the library needs to do something to promote and establish itself within the institution so that everybody is aware of its value. It is not apparent from the research article which theoretical framework the researchers used in this study.

The researchers, Rasul and Singh (2010), emphasize the need for “academic libraries to re-evaluate their resources and services for research activities thereby assisting libraries not only to improve on their services and launching new ones, but also avoiding consequent frustrations and difficulties faced in research activities”. Rasul and Singh (2010) found this when they distributed a paper based questionnaire survey method among 43 postgraduate students of four research universities of Malaysia. The researchers randomly selected respondents from the reading halls and Thesis sections of the main library. The study established that the majority of students mentioned several services which were very important in their research activities like: library opening hours during semester, Wi-Fi Internet speed, the library website to access the library resources and services, printing, photocopy, reference services, information skill sessions and training on bibliographic citations. The study concluded that academic libraries in the 4 main public universities of Malaysia play a significant role in student’s research activities. The study did not use any theoretical framework.

Hart and Kleinveldt (2011) conducted a study at Cape Peninsula University of Technology (CPUT) in Cape Town. The aim of the study was to find out the perception of the researchers towards the library in their research, what they expect and how their research expectations are met. The study started with an in-depth interview with the Manager of the Research Information Support Centre (RISC) followed by a questionnaire survey e-mailed to 602 academic staff who doubled as researchers. Findings of the study suggest that, academic libraries need to provide postgraduate students other important library service and resources

such as online journals, user friendly Online Public Access Catalogue (OPAC), well organized and easy access to library materials. Perhaps there is need for academic libraries to understand the services and resources that facilitate the research activities of postgraduate students, on-going updates on new information resources, maintaining research repositories and provision of database training sessions.

Library services and use had a direct impact on research productivity in a university setup. This was noted by Onuoha, Ikonne and Madukoma (2013:15) when they investigated the impact of library use on research productivity at Babcock University, Nigeria. Using a survey research method with self-designed questionnaires the study revealed that all the postgraduate students who participated in this study indicated having used the library. It suggested that provision of printed resources was ranked as the most important library service for postgraduate students, followed by Internet and electronic journals. Furthermore the respondents indicated their appreciation for the assistance of library staff. Despite the provision of Internet services by the university, the respondents lamented the instability of the Internet services and therefore recommended a more stable Internet service in the library. In addition respondents also recommended the provision of current materials in the library and provision of research consultancy. The study did not employ any theoretical framework.

In order to meet the changing needs of the present generation, libraries are changing and reorganizing themselves to align to those needs. It can be noted that users' preference of digital information is now widespread in academic libraries; hence libraries are now mostly acquiring their information in digital formats. Beard and Bawden (2012:444) to this end examined the library and information issues affecting postgraduate students undertaking research in three English universities of Southampton, Bournemouth and Queen Mary College, University of London. They used an online questionnaire with students complemented by face to face interviews with library staff. The study revealed that postgraduate students are not the same as undergraduate students, because they require quiet spaces for study, are good borrowers and have limited interest in social media while in the library. The study further found that these students have a strong requirement for digital resources and IT support and also do seek help from librarians. The results also suggest that, postgraduate students still value the physical space of the library as place for study. The

respondents preferred separate areas which have been set aside for post graduate use only in the library. The researchers did not use any theoretical framework in this study.

Libraries are being highly regarded as the heart of any academic institution by every postgraduate student, lecturer and researcher. Research Information Network (RIN) and Consortium of Research Libraries (CURL) (2007:22-28) undertook a study to find out how researchers are utilizing library services in the United Kingdom. The survey report noted five essential resources and services on offer by the library which were greatly valued by the postgraduate students namely convenient location, convenient opening hours, a place to browse current issues of printed publications, a place for quiet individual study and provision of modern IT equipment to access digital online resources. The report also revealed that there is an increase in the use of digital resources by postgraduate students because the postgraduate students were able to find most information they need in digital form. However, it also noted that postgraduate students in the Arts and Humanities still valued printed resources more than their colleagues in other disciplines. The study therefore recommended that time has come now that British university libraries should attend explicitly to the needs of their postgraduate students. The study did not use any theoretical framework.

The above study's findings seem to agree with what Covert-Vail and Collard (2012: 18) found in their study of new roles for library services for graduate students. They interviewed library staff at the University of Washington (UW), University of Guelph, Cornell University, Oregon State University, University of Illinois Urbana-Champaign (UIUC), New York University (NYU), University of Connecticut, Oklahoma State University, and Indiana University, Bloomington. The postgraduate students indicated that they require dedicated specialized services, library space e.g. research commons or scholarly commons and full time librarians to assist the graduate students in the research. The study explained that dedicated postgraduate student space helps to reduce competition for resources with the much larger undergraduate population.

There has been a noticeable increase in the number of off-campus research students in recent years due to lifelong learning and the greater need for higher education. MaCanley and McKnight (1998:100) in their report discuss how libraries can support these off-campus postgraduate students at Deakin University in Australia. The study proposes a model of

collaborative library-Academic Supervisor in which a librarian will be a co-supervisor to the postgraduate student. The collaboration being proposed and suggested will be between librarians, postgraduate students and their supervisor. The study further argues that the librarian will assume the role of co-supervisor and will mainly be concerned with assisting in the literature review so that it is comprehensive and relevant. The librarians can also ensure that the postgraduate students and their supervisors are kept abreast of new information resources and developments in the research field under study. The study suggested that, by adopting this model, there should be more and faster higher degree (HDR) completions, higher standards of research, an increase in research, supervisors' information literacy skills and reduced isolation for off-campus postgraduate students.

A similar study was done by Ayob and Sendut (2011) who assessed the effectiveness of University of Sains Malaysia library resources and services in supporting researchers' information needs. Using the Multiple Constituencies Model, the researchers distributed a questionnaire to 220 researchers from 17 schools (faculties) in the main campus of University Sains Malaysia and 108 of them responded. The study found that researchers were convinced of the effectiveness of the library services and resources as follows:

- Databases were easily accessible
- The OPAC was easier to use
- Ease of use of OPAC
- Library materials were well organized and easier to access

The researchers claim the Multiple Constituencies Model successfully helped them interpret results in regards to the strengths and the weaknesses of the library.

From the above review of studies it is clear that the following services can be offered to postgraduate students in academic libraries: book loans, interlibrary loans (ILL), dedicated space for study and reading, digital resources (electronic information services such as e-journals), stable Internet services and Wi-Fi internet speed, information skills training, database training, training on bibliographic citations, computing and information literacy programmes, research repositories, printing, photocopy, reference services, IT support,

convenient opening hours, printed sources and a proposed librarian as a co-supervisor, user-friendly OPAC service and Open Access (OA).

2.3 Information needs and sources for information for postgraduate students

There are several information needs and sources of information for post graduate students that can be identified from the literature. Information sources include both digital and print formats. Such information sources include: Google/Google Scholar, Live Search and Yahoo, Library online, while specialised databases include Science Direct, EBSCO and InterScience, subject specific databases, Wikipedia e-journals, e-books and the library printed materials (Du and Evans, 2011).

Saiti & Pokopiadou (2008:96) investigated choice of information source by postgraduate students for expanding their knowledge or completing their studies at University of Athens, Greece. A survey using questionnaires with 211 education postgraduate students was conducted. The choice to be made was between information technology, Internet and home institution libraries. When the respondents were asked to choose between library and Internet as their primary information source, the vast majority of respondents mentioned Internet (77.3%) followed by the library (22.7%). The study did not use any theoretical framework.

Fidzani's (1998) study explored graduate student's information-seeking behavior and their awareness of library resources at the University of Botswana, Botswana. The study used a survey method using open and close ended questionnaire administered to 223 graduate students. Based on the findings, Fidzani noted many graduate students lacked basic skills in effective use of the library and its resources. The study however revealed that the main information sources preferred by the graduate students were books and lecture notes. From the findings the researcher recommends that the university library takes a holistic approach to reorganize their information literacy programmes so that it encompasses all the problems that were noted in the study. No theoretical framework is noted in this study.

Another study which sought to determine the factors that are instrumental in distance education students' decision in selecting and using their information sources was one by Lin

& Yang (2004:25). The study findings totally agree with the findings of the above study. The study also found that almost half (49.7%) chose the Internet as their primary information source. The respondents cited timely and easy retrieval of Internet information as the reason they chose it over the physical information source. This study was undertaken at Texas A&M University, USA.

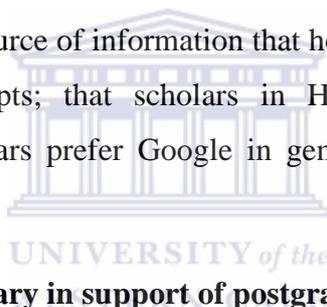
There are observable differences in information source preference by disciplines, some are stereotype and some have been proven. Barret (2005: 329) observed that Humanity scholars often build up considerable private collections which they rely on during research. In general it was confirmed that postgraduate students in the humanities preferred books more than serials and take a keen interest in original source manuscripts. This study also disputed the stereotypical idea that humanities scholars fear technology as it did have little grounding in the present sample.

Haglund and Olsson (2008:55) conducted an observational study to understand the information needs of postgraduate students at three universities in Stockholm, Sweden. Participant observation was used in this study, including complementary interviews. At each university, eight researchers were observed for about eight hours each followed by a shorter interview. It was revealed that the postgraduate students use a limited amount of sources as they had little contact with the library and no knowledge of the value librarians could add to their information seeking. However, they had confidence that they could manage on their own. The study revealed that many researchers in the sciences were using Google as the first choice of all information they required. The use of Google has even motivated other researchers to abandon subject specific databases completely in favour of Google. Additionally, very few of these researchers had knowledge of Google scholar. This study did not employ any theoretical framework.

Mutula (2011) says that libraries should be encouraged to provide access to its resources for postgraduate researchers in new and flexible formats. Postgraduate students would want to freely access hundreds of scientific and professional journals, papers, documents, encyclopaedias, reports, presentations and lectures from such services as African Journals Online (AJOL). Consequently, several bibliographic networks or digital libraries such as South African Bibliographic Network (SABINET) (Southern Africa), Ain Shams University

Network (ASUNET) in Egypt, African digital library, African online digital library and Rhodes University in South Africa have made possible access to resources such as digitized theses and dissertations, e-books and databases (Mutula, 2011:189). Overall, digital educational content is increasingly being generated in Africa as many tertiary institutions, especially universities, turn to e-learning. Libraries are also transforming their print collections into electronic formats through digitization or subscription to e-journals with or without print alternatives as a strategy to make them more accessible and to enhance resource sharing (Association of Research Libraries, 2006:22). Such process is what is called data curation in the field of Library and Information Science. These digital curations contribute to the growth of knowledge creation and enhance quick access to new knowledge because postgraduate students are no longer restricted to the physical libraries.

It is evident from the above discussion that postgraduate students place high value on digital information through the Internet as well as data curation. However, it has also been noted that they also value the library as a source of information that holds books, journals, lecture notes, journals and original manuscripts; that scholars in Humanities rely on their private collections, whilst science scholars prefer Google in general, not being aware of Google Scholar.



2.4 Specific roles of the library in support of postgraduate students

Over the years, libraries have been playing important roles in their quest to support research activities. A review of the literature reveals that there is not much difference in terms of such roles. For example, Schonfeld and Housewright (2010) identify three major specific roles of the library in support of postgraduate students. Firstly, they say a library is seen as a starting point for locating information for research. This is noticeable even at a workplace of the researcher. This is probably because academic libraries are regarded as the main source of information in universities. Secondly, the library should also pay for resources that postgraduate students need in the form of academic journals and electronic databases. This role of an academic library is becoming increasingly important in most academic libraries as more and more of them are responsible for making subscriptions to online databases such as Emerald, LISTA and others. Finally, the library is also responsible for maintaining

repositories of resources i.e. archiving, preserving and keeping track of resources that postgraduate students need. It appears that postgraduate students are increasingly appreciating these roles played by librarians because they usually ask the librarians for help to access the resources.

The RIN and CLUK report (2011) gives an insight of some important roles that libraries can do for postgraduate and researchers in general as follows:

- helping institutions to recruit and retain top researchers
- helping postgraduate students win research grants and contracts
- promoting and exploiting new technologies for postgraduate students
- maintaining institutional repositories to raise institutions' research profiles
- providing specialist staff work in partnership with academic departments
- providing dedicated spaces and a better work environment for postgraduate students
- connecting with postgraduate students enhancing the value of the library's services

Parker (2012) investigated the scope for libraries to commit to developing new customer focused services for postgraduate students that ensure the importance of the academic library to institutional research, while taking into account stakeholder needs and organizational expectations. The paper identified the following vital roles:

- Access to high-quality research materials: This is achieved by making sure that research services are adequately resourced. Hence there is a need for academic libraries to ensure that their postgraduate students have access to first-rate research material through interlibrary loan services. Such sentiments are confirmed by Garner (2006) who says that academic libraries can significantly contribute to research activities for post graduate students by providing high quality resources, supporting research processes; facilitating scholarly communication and promoting research output
- Support for disseminating results after publication: for example, Parker (2012:10) reports that the Swinburne University has an institutional repository and the library staff has been following the sourcing content from researchers and copyright to use the said content which have been a successful strategy. Not only does this provide a comprehensive collection of Swinburne-authored material: it also saves postgraduate

students time by allowing them to report their publications only once and then have the data automatically distributed to a variety of channels

- Help with publishing results in scholarly journals: for example, Swinburne University repository managers have increasingly taken on the responsibility of submitting the output on behalf of the postgraduate students. Among others, the Swinburne library model offers its research community the important publishing services such as technical infrastructure using the Open Journals Software; assistance with search engine optimisation to increase the discoverability of publications; help with copyright and open access policies, and author guidelines; a Digital Object Identifier (DOI) minting service; allocation of International Standard Serial Number (ISSNs), and International Standard Book Number (ISBNs) for one-off monograph editions; subscriptions management where necessary; advice on entry into abstracting and indexing services; and support for engagement with the ERA process to increase the visibility and prestige of Swinburne journals. This paper did not use any of theoretical frameworks

Walker (2009: 5) and Kaniki (2008) highlight new areas in the research environment in South Africa in which research librarians should become informed and proactively engaged:

- Issues related to international research competitiveness, reflected in Institute for Scientific Information (ISI) citation ranking, analysis and interpretation; measuring and providing evidence of progress and/or regression in international competitiveness;
- Use of ISI Web of Knowledge and Scopus for collection and interpretation of indicators, including citation metrics that are discipline specific
- Provision of support for the National Research Foundation (NRF) application processes - researcher rating system & grant applications
- Provision of information and guidance on who is involved in the system - nationally and internationally
- Identification of potential reviewers for National Research Foundation (NRF) rating of postgraduate students and grant proposals
- Establishing a liaison with institutional Research Offices
- Engaging with pre-evaluation of research outputs – especially books (checking accuracy of data reported, especially bibliographic information)

- Facilitation of appropriately completed submissions for the Department of Education research publication subsidies
- Assisting postgraduate students with research integrity – data sources; references inter alia
- Becoming engaged in the field of scientific data preservation and management

One may therefore explicitly state that the afore-mentioned studies seem to suggest that the common roles of academic libraries in support of postgraduate students include:

- Provision of access to and location of high-quality research materials, including electronic resources
- Dissemination of research findings
- Provision of dedicated spaces and a better work environment for postgraduate students
- Assistance with publishing of research results in scholarly journals
- Aiding postgraduate students to obtain research grants and contracts
- Maintenance of institutional repositories to raise institutions' research profiles
- Collaboration with academic departments
- Assist the university to recruit researchers, including postgraduate students by establishing a liaison with the institutional Research Offices
- Becoming engaged in the field of scientific data preservation and management

2.5 Problems faced by postgraduate students in their research efforts

In Africa, postgraduate students are facing some problems which are very common in developing countries as noted in the literature. A study was conducted by Byrne (2011) who set out to investigate postgraduate students' use of the University of Botswana Library. Supplemented by intertwining school research coordinators, he did an online survey of the University of Botswana research community which ran for a three week period via the library website (21 September to 11 October). Although 69.3% of the respondents indicated positive overall satisfaction with library research support, the study found out that inadequate

collection of resources, and in particular insufficient journal subscriptions, was the main source of frustration for postgraduate students. The study was conducted with the hope that the outcomes would help in improving, perfecting and mapping the role of the University of Botswana Library in its quest to support research activities for its research clients.

Similarly, Rhoe, Oboh and Shelton (2010) set out to assess the role of libraries in supporting agricultural research policy in selected university and research institute libraries in Nigeria which included the University of Ibadan (UI); Obafemi Awolowo University (OAU), Ile Ife; University of Agriculture, Abeokuta (UNAAB); Nigerian Institute for Social and Economic Research (NISER), Ibadan, Southwestern Nigeria; and Ahmadu Bello University (ABU), Zaria and the University of Agriculture, Makurdi. The study found that lack of current and up-to-date books and journals, poor infrastructure (especially electricity) and unfriendly staff were some of the frustrations that researchers faced when using the Nigerian libraries to support their research activities. The study further revealed that additional challenges that researchers encountered included shortage of trained librarians which hindered the establishment of some faculty and center libraries, lack of recent versions of the journals and an ineffective Inter-library loan system.

Still in Nigeria, Chiemeké, Longe, Kumar and Shaib (2007) researched the perceptions of users on the use of academic libraries and on online facilities for research purposes in Nigeria. They targeted scientists, medical doctors, engineers, undergraduate, and post graduate students at the University of Benin and the Federal Polytechnic in Nigeria. Of the 250 questionnaires that were distributed, 223 were successfully returned. One of the objectives of the study was to find out the effectiveness of libraries and Internet cafés. Users' complaints indicated that library environments were more serene than cafés environments, Internet cafes were more rowdy and very noisy, unlike the libraries where there is silence, and Internet facilities were expensive in cafés as opposed to libraries.

Raju and Schoombee (2014) observe that despite Stellenbosch University being one of the leading universities in Africa, it has some clear deficiencies in the provision of the services to postgraduate students. By examining research support through the lens of the transformation of academic library services, the two researchers recommended some aspects needing urgent redress if the library has to satisfy the needs of postgraduate students.

“Some of these aspects include having a comprehensive research support charter; having a clear, concise and differentiated service model to optimize expertise in publication matters and bibliometrics; having a clear definition for (or framework for demarcating) research support; and resolving the differentiation between the needs of different categories of researchers and postgraduates. Attention must also be given to improving researcher visibility, researcher profiling and unique author identification” (Raju and Schoombee (2014: 36).

This means that such aspects are missing at this university library hence their urgent attention.

Majinge and Stilwell (2014) have researched one of the areas which seem to have been neglected by most researchers as regards to the challenges that researchers face. The study used the social model of disability of Oliver. They set out to find out library services provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania by focusing on access to the information resources available and the layout of library buildings in five universities in Tanzania. Quantitative and qualitative methods were used to conduct a survey and observational-based research. The findings indicated that there is a lot to be done if Tanzanian academic libraries are to effectively and satisfactorily meet the needs of visually impaired clients, of which some of them are researchers. For example, the findings reveal that though academic libraries provide services to people with visual impairments and in wheelchairs, these services are not inclusive or universal. The two researchers then recommend that academic libraries in Tanzania should provide inclusive services to all users including people with disabilities. It is mooted that this could be made possible by formulating a policy regarding provision of library services to people with disabilities, providing adequate budgets and staff training. Practical measures needed include constructing library buildings with ramps and maintaining working lifts, acquiring Braille and large print information resources, as well as providing assistive equipment.

The literature reveals some of the common problems that postgraduate students face as they seek information in the libraries. It includes the following:

- inadequate collection of resources, particularly insufficient journal subscriptions (Byrne, 2011:23)

- lack of expertise, overload and time pressure
- lack of incentives on the part of postgraduate students by university administrators (Holligan, Wilson and Humes, 2011)

Other challenges that are widely reported in the literature include:

- lack of current and up-to-date books and journals
- poor infrastructure (especially electricity)
- perceived unfriendly staff
- lack of recent versions of the journal
- shortage of trained librarians and ineffective Inter-library loan system (Rhoe, Oboh and Shelton, 2010)

From the reviewed studies, it is clear that the major challenges that postgraduate students face in their research activities include;

- unfriendly staff
- poor internet facilities
- noisy readings spaces
- out-dated journals and other information resources
- insufficient journal subscriptions
- lack of proper working lifts and ramps for wheel chair bound researchers
- Lack of Braille and large print for people with visual impairment



2.6 Summary of the chapter

From the above literature review it is apparent that most of the studies did not utilize any theoretical framework. The Multiple Constituencies Model was adopted for this study following its successful application in a similar study, namely that of Ayob and Sendut (2011).

This chapter reviewed relevant literature related to the role of academic libraries in support of postgraduate students. The major themes covered included the library services and resources to support research, information needs and sources of information for research, specific roles of the library in support of postgraduate students and problems that postgraduate students face.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

In this chapter, the researcher discusses the research methodology used in tackling the research problem. Brewerton and Millward (2001) define a research methodology as a process by which research questions are realised into actions and measured to achieve the overall research aim and objectives. This chapter therefore highlights the research questions, the research design and the methods employed. It provides details about the study: how the questionnaire was developed, how the sample was established and how the data was gathered. The chapter also explains the qualitative portion of the study, namely how the interviews were conducted. The analysis of both quantitative and qualitative data is elaborated. Finally, the chapter discusses how the ethical issues were addressed.

The general aim of the study was focused on investigating the role of library services in support of postgraduate students at the University Eduardo Mondlane in Mozambique. Newman and Carolyn (1998:31) underline the importance of formulating realistic research questions in any study. One may argue that the quality of research findings depends on the ability to come up with good research questions. Newman and Carolyn (1998:31) argue that the decision about which research method to use rests on the purpose and assumptions of the research questions which guide the research methods not vice versa. Therefore, following this logic, the researcher formulated five key research questions that guided the study in achieving its overall objective as follows:

- What services are on offer to postgraduate students?
- Which sources of information are most used by postgraduate students at the System of Libraries of the University Eduardo Mondlane?
- What are the research information needs of postgraduate students at the System of Libraries of the University Eduardo Mondlane?
- How do postgraduate students at the System of Libraries of the University Eduardo Mondlane access research materials?
- What are the challenges that postgraduate students face when using the System of Libraries of the University Eduardo Mondlane?

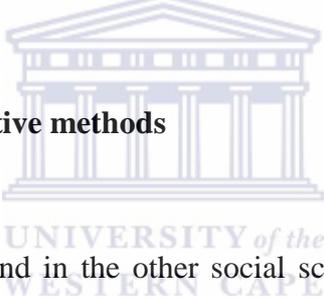
3.2 Research design and methodology

3.2.1 Research design

The study was based on a case study of a university in Mozambique. A case study invariably includes in its definition elements that indicate that it is a study of a single research class, phenomenon or entity, within a defined period and the fact that it employs a variety of data collection instruments (Flyvbjerg, 2006:2220). The issue of generalizability has been raised as a disadvantage by some authors, while others feel that it may be appropriate for pilot studies. (Flyvbjerg, 2006: 219).

A key aspect of case study research is to understand the context in which particular processes are taking place (Hartley, 2004:331). Therefore, by employing this design, the researcher was able to gain a detailed understanding about the role of the library in support of postgraduate students at UEM.

3.2.2 Quantitative and qualitative methods



Research methods in education and in the other social sciences are often divided into two main types: quantitative and qualitative methods (Muijs, 2010:1). Quantitative research is defined by Aliaga and Gunderson (2000:3) as a research which involves “explaining phenomena by collecting numerical data that are analysed using mathematically based methods (in particular statistics)”. One of the advantages of quantitative research according to Matveev (2002:61) is that it clearly and accurately identifies both the independent and the dependent variables under investigation and it leads to a more objective conclusions because it eliminates or reduces the subjectivity of judgement. However, Matveev (2002:61) criticizes the method because the researcher does not control the environment in which the participants provide answers to the questions in the study.

Qualitative research is defined by Patton (1990:22) as a research which is characterized by its aims, which relate to understanding some aspect of social life, and its methods which (in general) generate words, rather than numbers, as data for analysis. The advantage of

qualitative research is that it helps the research to explore more details about the topic being studied. However, this approach is criticized because according to Matveev (2002), different conclusions can be made on the same data or information meaning it can be subjective.

As discussed above, each type of the research methods has its own strengths and weaknesses. Therefore, the researcher decided to use both methods in this study. Greene, Caracelli and Graham (1989:256) define mixed designs as “as those that include at least one quantitative method (designed to collect numbers) and one qualitative method (designed to collect words)”. Teddlie and Tashakkori (2006:15) add that mixed methods is simply the combination of qualitative and quantitative approaches in the methodology of study. In this study, the researcher applied a quantitative approach to postgraduate students administering questionnaires predominantly comprised of closed questions and some few open ended questions. For qualitative approach, the researcher conducted semi-structured interviews with some library staff.

3.3 Description of research participants



According to Welman, Kruger and Mitchell (2005:52) a population is a study object and consists of individuals, groups, organisations, human products and events. The participants of this study were postgraduate students and library staff. Postgraduate students at this university include Masters students, who study for a minimum period of two years, and PhD students who study for a minimum period of three years. In order to accomplish their academic work, the majority of postgraduate students depend on the information resources which are supposed to be provided by system of libraries of University Eduardo Mondlane.

Below is the table summarising the faculties which have postgraduate programmes and all of them are located in Maputo. Postgraduate studies at Universidade Eduardo Mondlane are undertaken after three to four years of honours programmes.

Table 2: Master's students by faculty

Faculty	Total
Faculty of Agronomy and Forestry Engineering	36
Faculty of Sciences	75
Faculty of Law	19
Faculty of Education	29
Faculty of Economics	66
Faculty of Engineering	65
Faculty of Architecture	34
Faculty of Arts and Social Sciences	71
Faculty of Medicine	71
Faculty of Veterinary Sciences	22
Total	488

Source: Universidade Eduardo Mondlane (2013)

Table 3: PhD students by faculty

Faculty	Total
Faculty of Arts	5
Faculty of Sciences	8
Faculty of Law	16
Total	29

Source: Universidade Eduardo Mondlane (2013)

Table 4: Postgraduate student by course and gender

Study type	Gender		Total	Grand total
	Male(s)	Female		
Master	300	188	488	517
PhD	21	8	29	

Source: Universidade Eduardo Mondlane (2013)

Table 5: Population of library staff (librarians) by gender

Gender		Total
Male(s)	Female(s)	
9	13	22

Source: Direccao dos Servicos de Documentacao (2013)

3.3.4 Sampling Technique

In case study designs, researchers are often required to use purposive samples (Oliver, 2006). It is a form of non-probability sampling in which decisions concerning the individuals to be included in the sample are taken by the researcher, based upon a variety of criteria which may include specialist knowledge of the research issue, or capacity and willingness to participate in the research (Oliver, 2006:5). Purposive sampling is also called judgmental sampling perhaps because Cohen, Manion and Morrison (2000:103) suggest that in purposive sampling, the researcher selects the cases to be included in the sample based on his/her judgment.

Following this line of thought, the researcher used several criteria to select the participants. The researcher included all postgraduate students in their second year of study totalling 517. Welman, Kruger and Mitchell (2005:71) stipulate that for a population of over 500 one should use 200 participants as a sample size. The researcher was interested in respondents who could provide information about the role of the library in support of postgraduate students. Thus, the researcher was convinced that the postgraduate students themselves and the librarians who were responsible for the provision of information to postgraduate could provide this information. The researcher purposively targeted second year postgraduate students from the university because this group was currently doing research most having completed the coursework and hence appropriate for this study. Based on his knowledge and

experience, the researcher also included seven heads of departments of the libraries that support postgraduate students. These heads of departments were also selected because they are responsible for supervising the staff that deals directly with the information needs of postgraduate students.

3.4 Data collection tools and methods

As stated in the previous section, the researcher collected data using two instruments which included a questionnaire and semi-structured interviews.

3.4.1 Questionnaire

Connaway and Powell (2004:146) define a questionnaire as a form containing a set of questions to be completed by a research participant. A questionnaire has several advantages over other data collections tools. As observed by and Connway and Powell (2010: 146) a questionnaire is a better instrument for collecting data because of the following advantages:

- Questionnaires can encourage frank answers because of the absence of the researcher
- Responses cannot be influenced by the researcher thereby avoiding interviewer bias
- Quantitative data are easy to collect and analyse
- Questionnaires can facilitate the collection of large amounts of data in a short time

However, questionnaires are not short of pitfalls and according to Matveev (2002), the following are some of the disadvantages:

- Questionnaires eliminate personal contact between the researcher and the respondent
- Ambiguous questions in the questionnaire cannot be clarified or explained
- Questionnaires may be difficult for the uneducated participants to complete
- Non-responsive rates can be high

In this study, questionnaire was employed because the advantages outweighed its disadvantages. The researcher self-administered a questionnaire (See Appendix C) to all these postgraduate students. The questionnaire comprised four sections as follows:

Section A (question 1-6): Questions in this section gathered data on participants' personal information such as gender, programme of study, level of study, type of registration, campus where the student belong and level of proficiency in English.

Sections B (questions 7-9): It was assumed that post graduate students are indeed users of the library. Therefore, this section concentrated on gaining the views of respondents on the services that they utilise their research activities. The use of the library and services by the postgraduate students was measured as follows:

- Reasons for using the library
- Frequency of use
- Satisfaction of use
- Evaluation of library support

Section C (questions 10-13): this section focused on the information needs and sources of the postgraduate students during their research activities.

Section D (question 14): this section collected data on challenges that post graduate students face when using the library.

3.4.1.1. Translation of the questionnaire and interview guide

Harkness and Schoua-Glusberg (1998) say that it is important to translate questionnaires and interviews to be able to enable the study population with a different language to understand the questions. In this study the questionnaire questions and interview guide (See Appendices D and F respectively) were translated from English to Portuguese as the population in study are Portuguese language speakers. The translations to Portuguese language were performed by the researcher and then they were proofread by two linguistics professionals from Mozambique. Portuguese is the official language in Mozambique; this enabled the population

to understand the questions. After capturing the data, the answers from the postgraduate students presented in the questionnaires were translated into English.

3.4.2 Interviews

Interviews have been used by researchers for a long time as a tool for collecting detailed information concerning a topic or subject (Wilkinson and Birmingham, 2003). The advantage with the interview approach is that the interviewer can clarify any questions that seem obscure and also can ask the respondent to expand on the answers that are particularly important or revealing (Fraenkel and Wallen, 2006:120).

However, other researchers (Wilkinson and Birmingham, 2003:44) have argued that using interviewing requires a lot of time and it is therefore not suitable for collecting data from large population. In this study, the researcher conducted in semi-structured interviews with seven Heads of Departments of library: the Reference Department of the Central Library Brazao Mazula, Department of Thesis and Special collections of the Central Library Brazao Mazula, Library of the Faculty of Law, Library of the Faculty of Engineering, Library of the Faculty of Medicine, Library of the Faculty of Veterinary Sciences, and Library of the Centre for African Studies. The interview guide (see Appendix B) comprising a set of open ended questions was used to solicit data from the participants. These interviews were captured on a tape recorder with the consent of the interviewers. The researcher transcribed all the responses into English.

3.5. Data collection exercise

Prior to data collection the researcher sought permission to conduct research in all the faculties on postgraduate students from the Rector and the Director of the Documentation Services which coordinates the system of libraries of the University Eduardo Mondlane.

E-mails regarding data collection by the researcher was written to Directors of Faculties and all heads of departments concerned arranging for times of interviews. Questionnaires and letters of consent were handed to the postgraduate students who were still attending classes.

The researcher explained briefly about the study to the students. In some cases questionnaires and letters of consent were handed to the secretaries of post-graduate programmes, and they were responsible for distributing to the students not present at the time and collecting the filled questionnaires from the students. The researcher agreed with the secretary when he could go and collect them from.

The researcher asked the postgraduate coordinators to send a collective email to the students not attending classes, and to include him in the email. Students had to return the filled questions directly to the researcher. A few responses were obtained in this fashion.

Table 6 provides a summary of how data was collected using each of the data collection tools discussed in the previous section.

Table 6: Data gathering methods

Theoretical Framework	Research questions	Data-gathering methods	
		Students	Staff
The Multiple Constituencies Model	What services are on offer to postgraduate students?	Questionnaire	Semi -structured interview
	Which sources of information are most used by postgraduate students at the System of Libraries of the University Eduardo Mondlane?	Questionnaire	Semi -structured interview
	What are the research information needs of postgraduate students at the System of Libraries of the University Eduardo Mondlane?	Questionnaire	Semi -structured interview
	How do postgraduate		

	students at the System of Libraries of the University Eduardo Mondlane access research materials?	Questionnaire	Semi -structured interview
	What are the challenges that postgraduate students face when using the System of Libraries of the University Eduardo Mondlane?	Questionnaire	Semi -structured interview

3.6 Summary of the Chapter

In this chapter, the researcher described the research design (a case study) employed in this study to provide answers to the research questions formulated in Chapter One. In particular, the chapter highlighted the objective of the study and research questions, research designs and the methods (a questionnaire for the students and interviews for the library staff members) employed. It also provided details about the study: the structure of questionnaire, how the participants were identified and how the data was gathered. The chapter also described procedures which were followed in data collection.

The next chapter analyses and interprets the data obtained from the respondents in this study.

CHAPTER FOUR: PRESENTATION AND ANALYSIS OF RESULTS

4.1 Introduction

The aim of this chapter is to report the results of the case study done (as explained in Chapter Three) in support of postgraduate students at the University Eduardo Mondlane in Mozambique. A questionnaire was distributed to 200 students and 176 (88%) replied to the questionnaire. The researcher conducted interviews with seven library staff, one from each faculty. The raw data was analysed using Statistical Package for the Social Sciences (SPSS). The interviews were translated and transcribed by the researcher who identified themes.

The data is presented in order of questions in the questionnaire sections A, B, C and D plus Interviews.

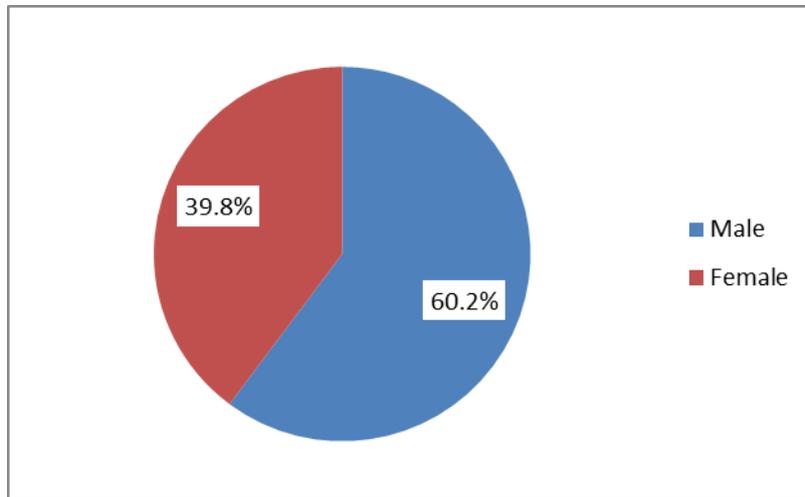
4.2 Questionnaire Section A: Personal Data of postgraduate students.

The first section of the questionnaire aimed at establishing the personal data of the respondents i.e. gender, faculty of study, campus of study, programme of study and their English language proficiency. This section covers the researchers' demographic characteristics albeit different than that of the theoretical framework. Age was not measured; rank was handled for the postgraduate students as their programme of study and years of services was made applicable to staff only. The disciplines were equated to the Faculties of study.

4.2.1 Gender of respondents

Question 1 asked the postgraduate students to indicate their gender. The responses are illustrated in the figure 2 below.

Figure 2: Respondents by Gender



(N=176)

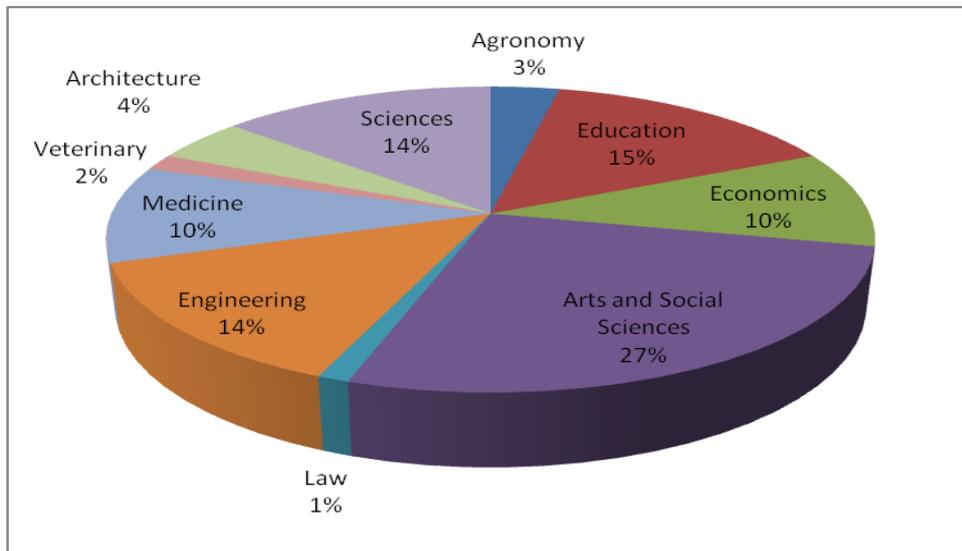
Results in Figure 2 show that there were more male respondents, 106 (60.2%) than female respondents, 70 (39.8%) in this study out of the total of 176 postgraduate students.

According to Instituto Nacional de Estatística (2013: 44) the number of girls enrolled in schools in Mozambique is less than boys. So this enrolment phenomenon persists in the higher levels of the educational sector, including the university. Historically, females in Mozambique have adopted the social roles of being mothers and housewives implying that their priority is to get married rather than going to school. The results in this study in this regard thus mirror societal gender trends (Silva, 2006: 55).

4.2.2 Faculty of respondents

The second question of the questionnaire sought data about the faculties in which students are enrolled and the data is displayed in figure 3. The question represents the disciplines of the researchers in the MCM.

Figure 3: Faculties and percentage of postgraduate students



(N=176)

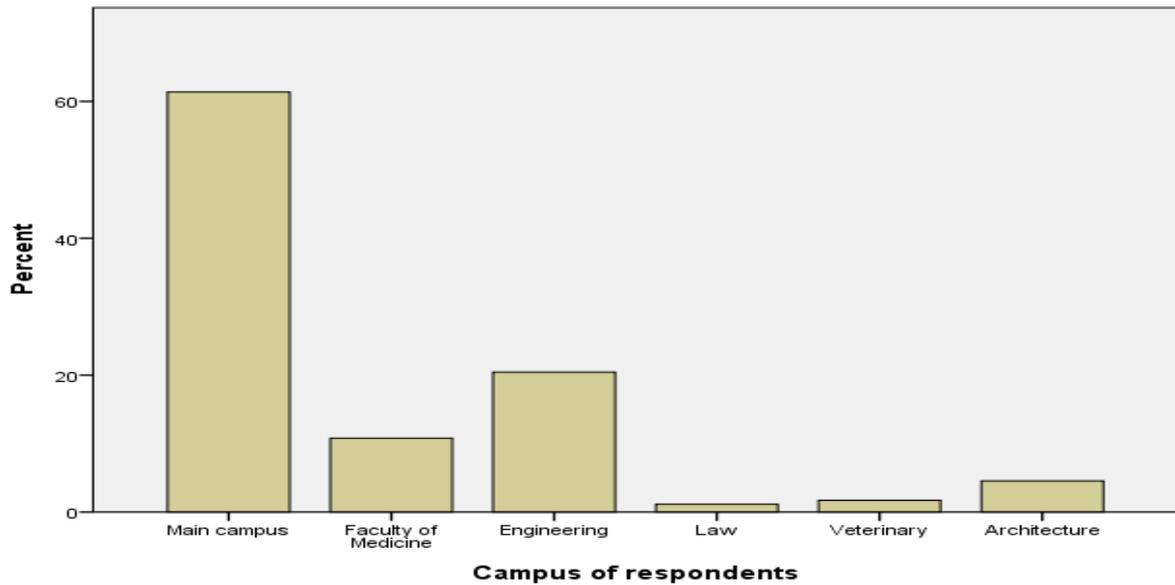


4.2.3 Campus of study

Question 3 of the questionnaire requested the respondents to indicate the campus to which they belonged. The aim was to note the campuses which had more respondents. The findings in figure 4 reveal that the majority of the respondents were from the main campus with 108 (61.4%), by the Engineering campus with 36 (20.5%), Faculty of Medicine 19 (10.8%), Architecture campus with 8 (4.5%), 3 (1.7%) Veterinary Sciences campus and lastly law campus had 2 (1.1%).

The main campus comprises many faculties such as arts and social sciences, education, economy, sciences and agronomy.

Figure 4: Campus of study



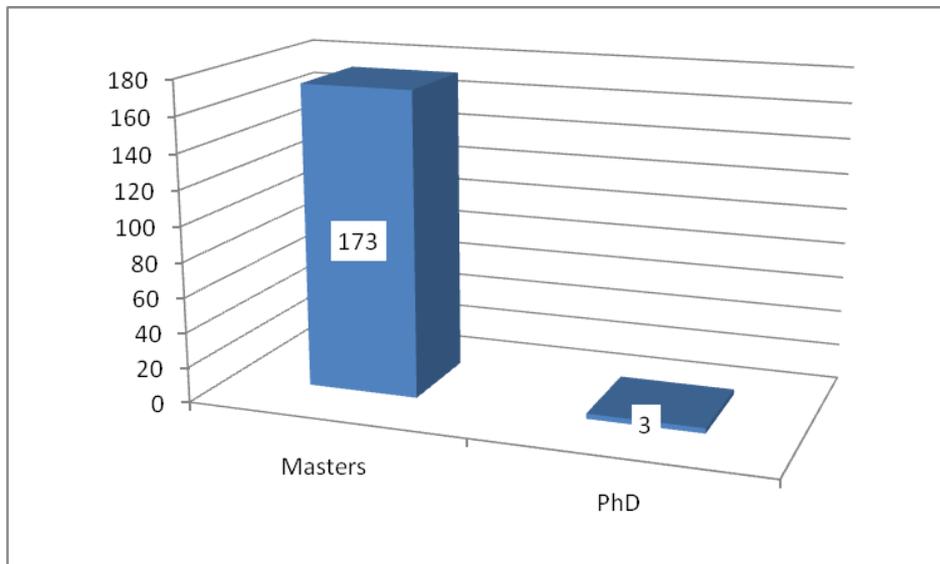
N=176

4.2.4 Program of study



Question 4 on the questionnaire in this study requested respondents to indicate programme of study that they were pursuing. In figure 5, results displayed clearly indicate that the majority of respondents, 173 (98.3%) out of the 176 were pursuing their master's programme and only 3 (1.7%) respondents indicated pursuing PhDs programs. Unlike the masters programs which have been running for many years, the PhD program has been recently introduced at the UEM. This explains why there are more masters' students who responded to the questionnaire.

Figure 5: Programme of study



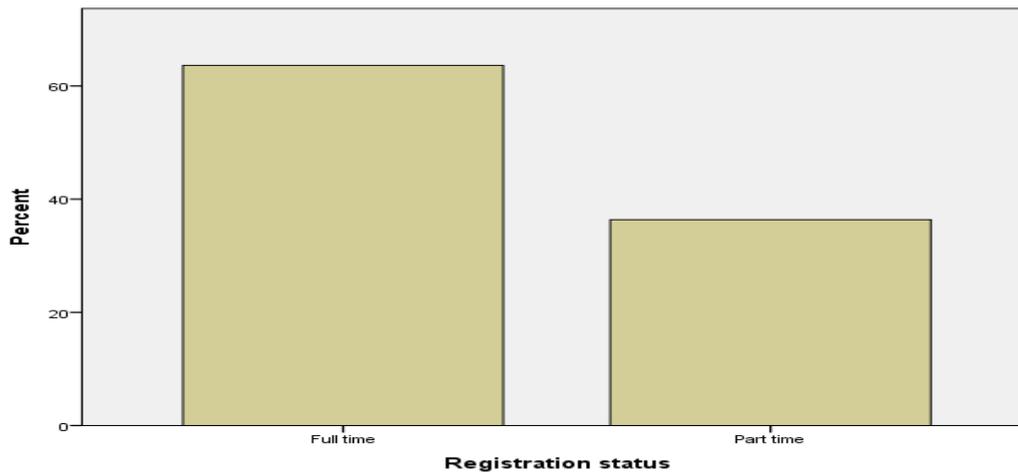
N=176



4.2.5 Mode of study

Question 5 on the questionnaire asked the postgraduate students to indicate whether they were registered on full time or part time basis. Results displayed in Figure 6 below indicate that there were 112 (63.6%) full time students and only 64 (36.4%) part time students. Those students who indicated part time are mainly working students.

Figure 6: Mode of study



(N=176)

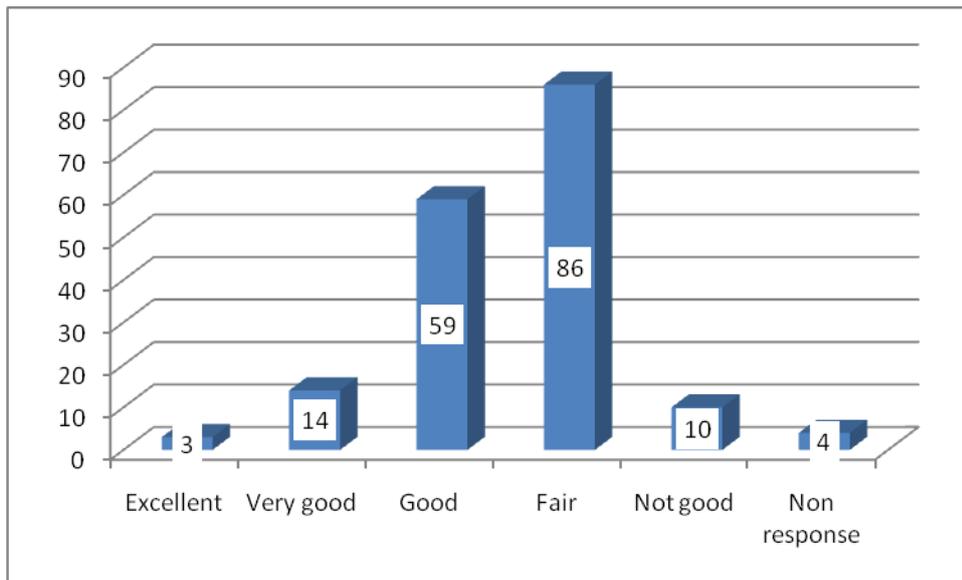
4.2.6 English literacy of students

Question 6 in Section A of the questionnaire asked the respondents to state their English literacy competence level in regards to speaking, writing, reading and comprehension. This question was asked taking into account that the official national language in Mozambique is Portuguese. It was therefore important to find out if students were conversant with English as most scientific information resources worldwide are produced in English. Out of the 176 students, 172 respondents replied to this question with 4 non respondents.

4.2.6.1 English literacy-Speaking

Results in Figure 7 illustrate that most of the postgraduate students, 86 (48.9%) out of the total 172 respondents indicated fair in the competence of the English language speaking, 59 (33.5%) respondents indicated being good, 14 (8.0%) respondents indicated being very good, 10 (5.7%) respondents indicated not good and only 3 (1.7%) respondents selected excellent and 4 (2,2%) did not respond (not included in graph). These results clearly suggest that most of the students are not that good in speaking English language.

Figure 7: English literacy–Speaking



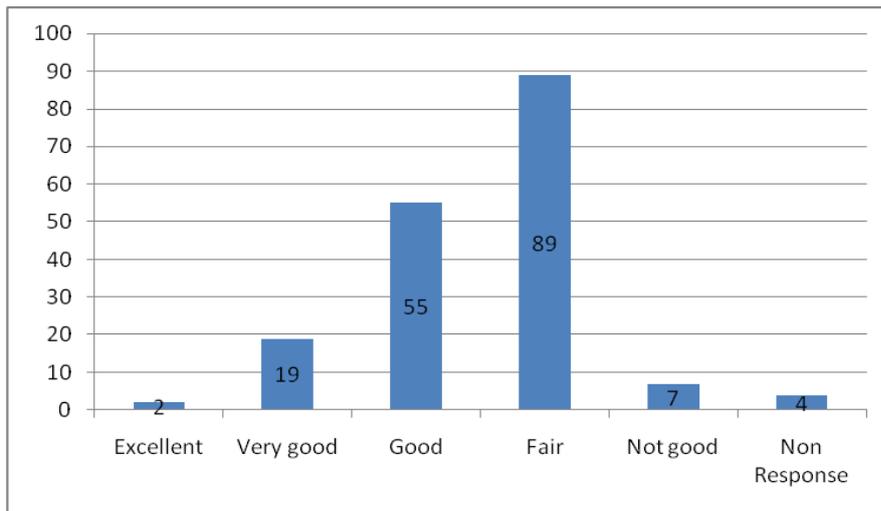
(N=176)

4.2.6.2 English literacy-Writing.

The students were also asked to indicate their competency in writing English. As can be seen in figure 8 below, most of the respondents 89 (50.6%) indicated fair to the suggestion of English literacy competency in terms of writing, 55 (31.3%) respondents chose good, 19 (10.7%) respondents indicated very good, 7 (4%) students responded as being not good and only 2 (1.1%) selected excellent. There were 4 (2.3%) students who did not respond.

Since 89 (50.6%) indicated that they can fairly write English, it means that students are less competent in writing English than in speaking because in section 4.2.6.1 above, it was noted that 86 (48.9%) could speak English fairly. It is clear that the gap between those who can write excellently and those who can speak fairly is just too big, hence a conclusion that most students have poor communication and speaking English skills.

Figure 8: English literacy-Writing



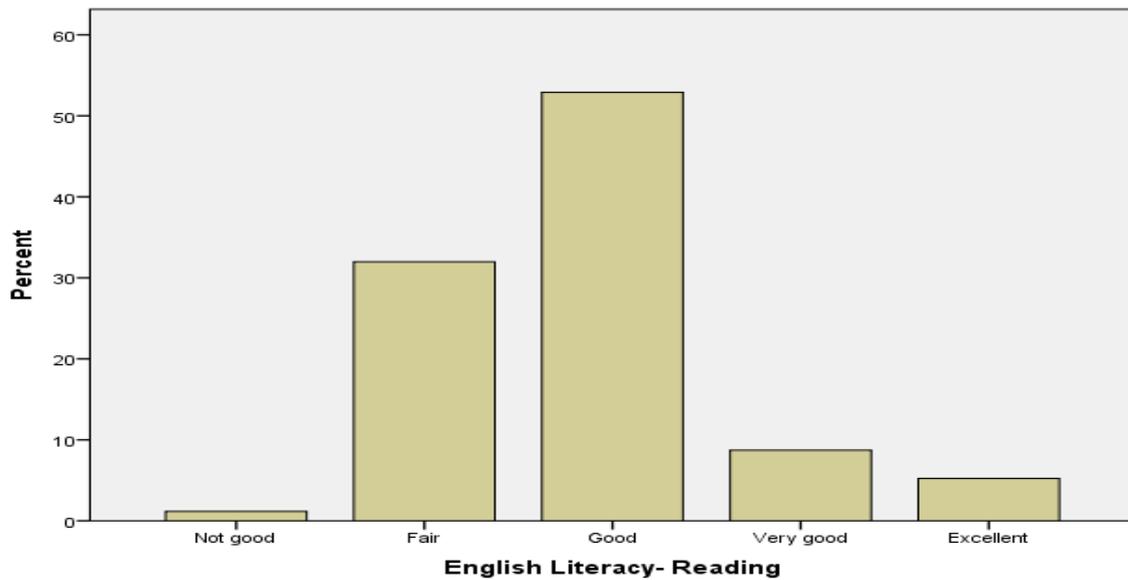
(N=176)

4.2.6.3 English literacy-Reading

In terms of English literacy reading, results displayed in figure 9 below indicate that 91 (52.9%) respondents indicate being good in reading English, 55 (32%) respondents indicate fair, 15 (8.7%) indicated very good, 9 (5.2%) indicated excellent and 2 (1.2%) indicated not being good.

It was reported in section 4.2.6.2 that most students could write English better than speaking. Results in this section show that 55 (32%) students can read English better than writing and speaking. Many are usually interested in acquiring English reading skills as most scientific information resources worldwide are produced in English.

Figure 9: English literacy-Reading



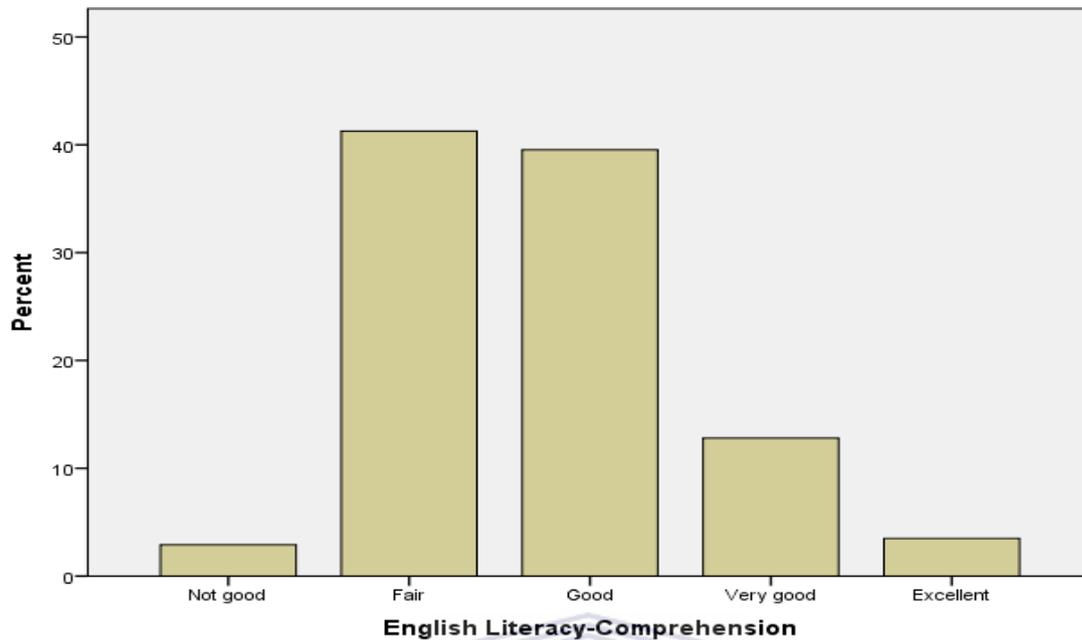
N=176

4.2.6.4 English literacy-Comprehension



In the figure 10, results show that 71 (41.3%) respondents out of 172 respondents indicated being fair in English comprehension, 68 (39.5%) respondents indicated good, 22 (12.8%) respondents indicated being very good, 6 (3.5%) respondents indicated being excellent and 5 (2.9%) respondents indicated that they were not good at comprehension of the English language.

Figure 10: English literacy- Comprehension



N=176



The typical postgraduate student in this study at UEM is a full time male Masters student, who can read, write, speak and comprehend English fairly well, in the Arts and Social Sciences Faculty attending classes on the main campus.

4.3 Questionnaire Section B: Library services and resources in support of postgraduate students

There were three questions in this section of the questionnaire which gathered data about the library services and resources which are in place specifically to support the postgraduate students in their studies and research activities. The data gathered was about reasons for use of the library, frequency of use of the library and satisfaction with the type of services currently on offer.

4.3.1 Reasons for use of library

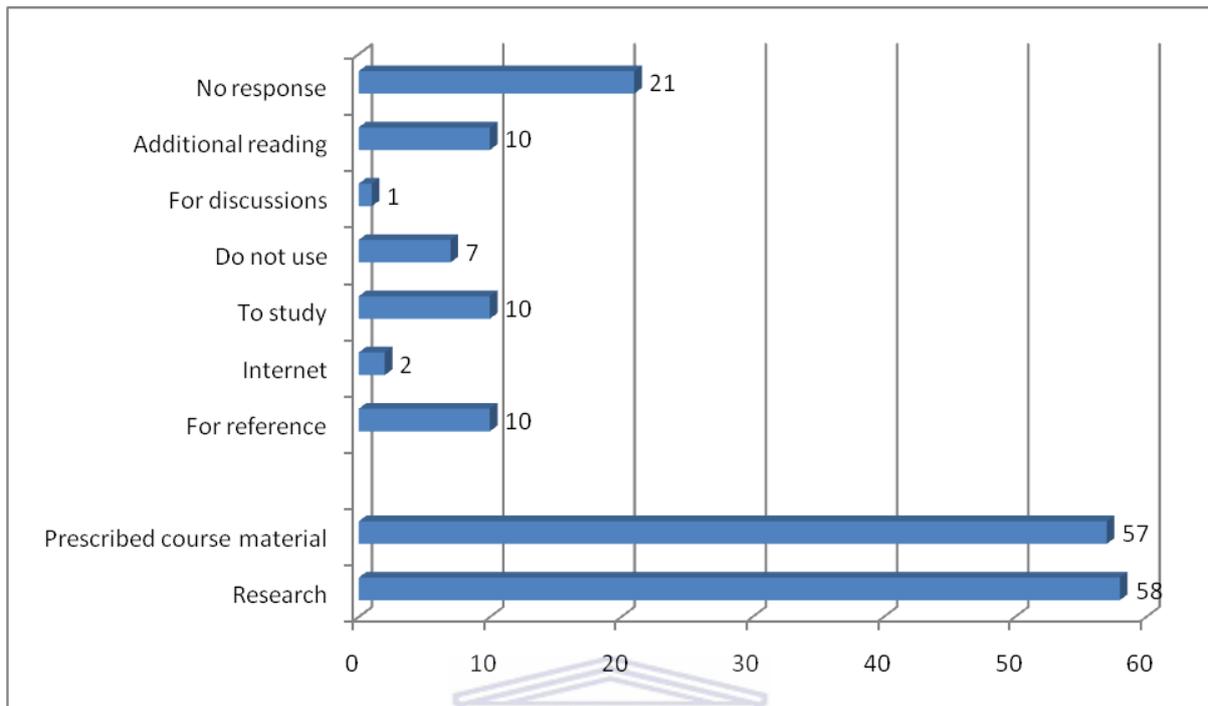
Question number 7 which was an open-ended aimed at finding out from the respondents their reasons for using the library. The various responses were grouped into the categories as displayed in Figure 11 below.

The results in figure 11 show that the majority of the students, 57 (32.3%) do use the library to search for prescribed course material, 58 (33%) for research and research related work, 10 (5.7%) for study, 10 (5.7%), for reference, only 2 (1.1%) use it to access Internet, 10 (5.7%) for additional reading, and 1 (0.6%) indicated using it for discussions, 7 (4%), indicated that they do not use the library and 21 (11.9%) postgraduate students did not respond to the question.

From the above results it can be noted that most of the students use the library to fulfil their academic needs through prescribed course materials and to do their research. Lack of course material information in the library was indicated as the major reason for not using the library. This is in line with the MCM model which emphasises the need for effective library services. For example it is stipulated in the model that effectiveness of the library is determined by its the breadth and depth of the collection and ability of users to find the needed materials. Thus, according to the model the weakness of the library collection resulted in the students not using the library.

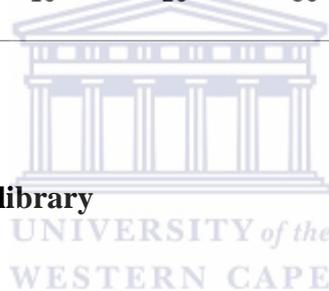
They also indicated that the room reserved for the master's students is not conducive for study. This is echoed by Onuoha, Ikonne and Madukoma (2013:15) in their study which found that all postgraduate students who had participated in their study had used the library and managed to have at least one publication but complained about the spaces for reading. Similarly, Nwagwu (2012:67) investigated the differences in the pattern use of information sources by postgraduate students in arts/humanities and engineering at the University of Ibadan Nigeria and a similar problem was noted. This clearly indicates the value that library has been on research of which postgraduate students do embark on though the readings rooms have not been appealing and conducive. With reference to the library under study, it could have been better if these postgraduate students had a special dedicated space as observed by Beard and Bawden (2012: 444) who noted that postgraduate students require silent spaces.

Figure 11: Reasons for use of library



(N=176)

4.3.2 Frequency of use of the library

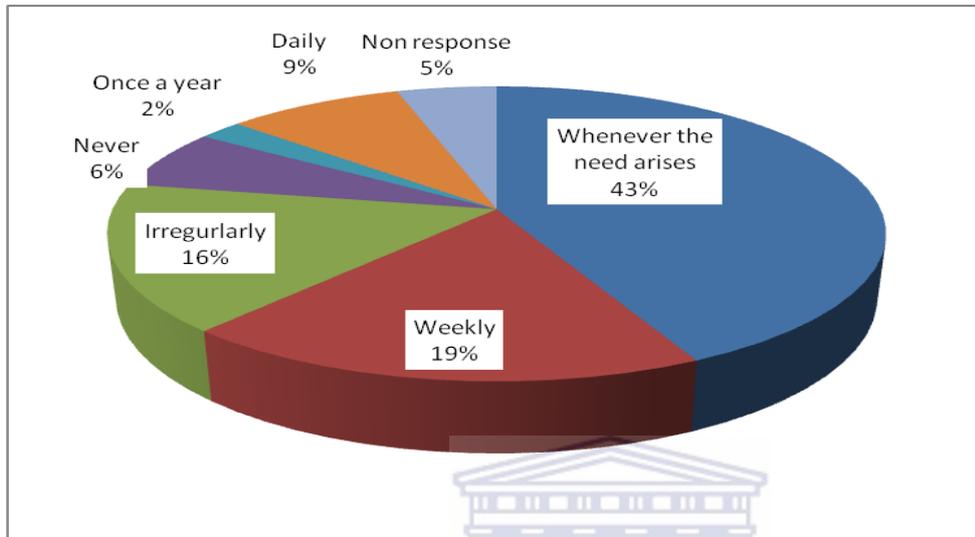


Question 8 of the questionnaire solicited data about the frequency which the postgraduate students used the library. The question was asked in order to measure the importance of the library for postgraduate students. Findings presented in Figure 12 reveal that only (9%) indicated using daily, (43%) of the respondents used the library whenever the need arises, (19%) used the library weekly and (16%) of the respondents indicated they use the library irregularly, (2%) indicated only used once a year. Only (6%) of the respondents said they never used the library and 5% students did not respond to this question.

These findings reflect that most of the postgraduate students do frequent the library by using it every day. The nature of the Master's program in which most of them are enrolled require them to do course work and research at the same time which needs them to frequent the library.

Question 8 was an open ended question which wanted to solicit data about how frequently the respondents accessed and used the library.

Figure 12: Frequency of use of Library



(N=176)

4.3.3 Satisfaction with the library services currently on offer

According to the MCM, the effectiveness of the library resources and services are vital for the use the library. Thus question 9 sought perceptions of the respondents if they were satisfied with the kind of services being offered to them as postgraduate students. The results are presented in table 7 below.

Table 6 shows that majority of respondents 110 (62.5%) out of 176 are satisfied with the library services currently being offered to postgraduate students while 64 (36.4%) respondents indicate that they were not satisfied at all and only 2 (1.1%) postgraduate students did not respond to the question.

Table 7: Level of satisfaction with library services

Level of satisfaction	Frequency	Per cent
Satisfied	110	62.5
Not satisfied	64	36.4
No response	2	1.1
Total	176	100

4.3.3.1 Reasons for satisfaction

A follow-up open-ended question wanted to find out the reasons for being satisfied or not satisfied. As can be seen in figure 13, a total of 139 responded to this follow up question. Results of findings indicate that 91 (65.5%) gave reasons of why they are satisfied and 48 (34.5%) indicated reasons why they are not satisfied with the library services.

The findings displayed in figure 12 show the results of why the students were satisfied with the library service. The results show that most of the students, 37 (21%) were attracted to the library because of the availability of the information that they sought, both print and electronic. Twenty seven (15.3%) students cited the helpful library staff as the reason, 11(6.3%) students indicate the conducive environment of the library, 9 (5.1%) students indicate well organised and automated library, 5 (2.8%) students indicate because of the internet service in the library and only 2 (1.1%) indicate because of the easy accessibility of the library. 85 (48.4%) postgraduate students did not respond to this question.

Some of the selected reasons reported in verbatim for being satisfied are:

“The environment is inviting”

“I easily find the articles and books I search for”

“Because I can find the recommended books”

“The way it is organised makes it easy to identify what we look for “

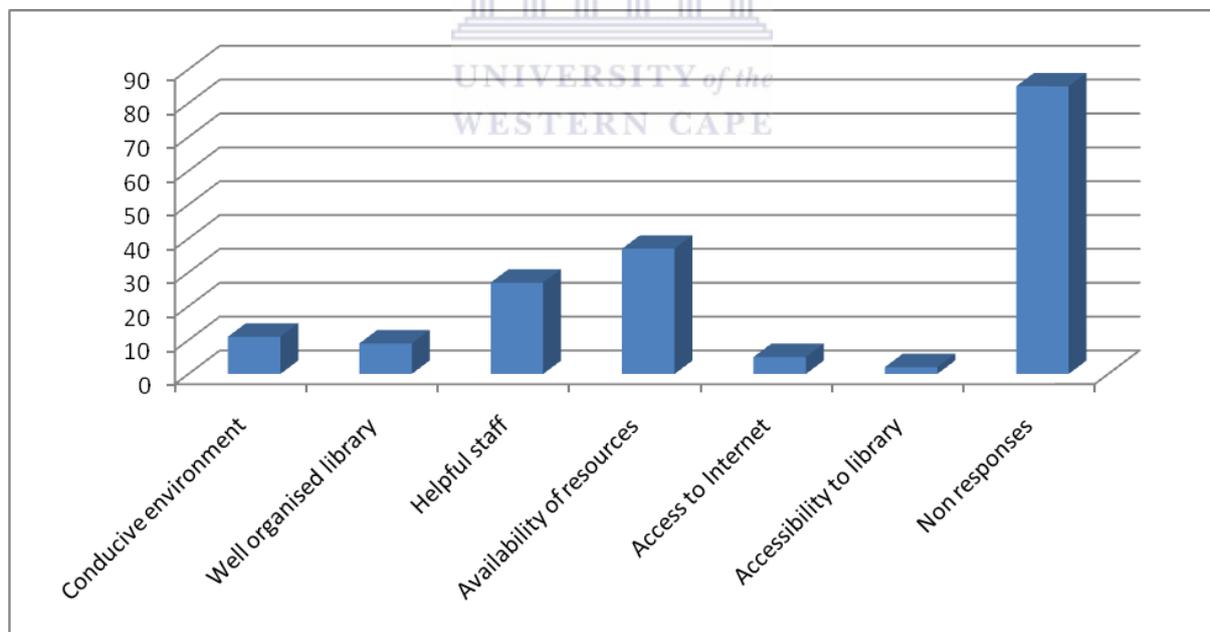
“One of the reasons is the fact that the library has a diversified provision of academic literature to meet the needs of the students”

“The last time I was there, there was no delay in the assistance”

“They assist quickly and efficiently”

Fifty eight of the students indicated not being satisfied with the library services and below are the reasons and frequency in a table. Since the response rate is a bit lower, it is somehow difficult to conclude whether students are satisfied or not satisfied with the services. However, from the few responses realised, it clear from responses that the students are satisfied with the services that they get from the library. The major responses include helpful library, availability of information resources (both in print and electronic format). Again, the responses mirror the elements of the MCM which states that users are likely to use the library if the library staff is friendly and if they are able to find the information resources that they need.

Figure 13: Reasons for satisfaction with library services



(N=176)

4.3.3.2 Non-satisfaction

As noted in section 4.3.3, 64 (36.4%) students indicated that they are not satisfied with the library services and were therefore required to state the reasons for the dissatisfaction. Results displayed in table 8 show that most of the students, 33 (57%) gave lack of recommended books in their subject area as the reason for not being satisfied, 11(19%) students indicated that the library is not organised, 6(10.3%) students indicated lack of enough resources, 5(8.6%) students indicated unconducive environment for study and only 3 (5.1%) indicated lack of space to study.

Some of the statements which the students said to indicate their dissatisfaction include:

“Lack of updated books, I did not manage to find the information I looked for”

“The room reserved for the Masters does not qualify the desired conditions nor bibliographic materials”

“Lack of dignified space for Masters Students”

“Lack of guides to assist in the location of materials”

“There are no relevant materials for my programme”

In the theoretical framework under Services most of these elements are listed. It is thus apparent that the postgraduate students at UEM mentioned some of the reasons presented by the MCM such as disorganised materials, irrelevant materials and unconducive place for research. However, reasons such as speed of item delivery, loan periods and OPAC are elements of the MCM not mentioned by students.

Table 8: Reasons for non-satisfaction

Lack of recommended and up to date materials	Library not organised	Unconducive environment	Lack of enough resources	Lack of space	Total
33 (57%)	11(19%)	5(8.6)	6 (10.3%)	3 (5.1%)	58 (100)

(N=58)

4.4 Questionnaire Section C: Information needs and sources for postgraduate students

There were four closed-ended questions in this section of the questionnaire which solicited data about the information needs of the postgraduate students, the research project needs of the postgraduate students, the tools used for searching information and the sources used by the students to obtain information.

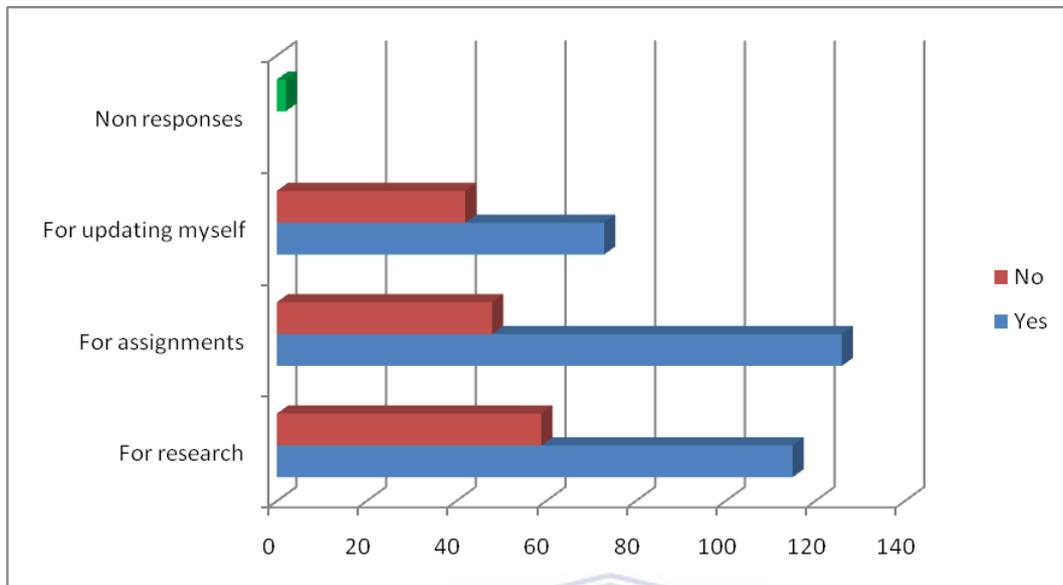
4.4.1 Information needs of postgraduate students

Question number 10 was a closed-ended one which established respondents' information needs. They were given the following to choose from, 1- For my research projects, 2-For writing assignments 3-To update myself my field 4- Other. The responses have been presented in figure 14 below.

As can be seen in figure 14, data displayed reveals that majority of the respondents, 126 (72.4%) out of the total 174, indicated yes to need information for writing their assignments and 48 indicated no. Furthermore, 115 (66.1%) respondents indicated yes to needing information for their research projects and 59 indicated no, 101 (58%) respondents indicated not needing information for updating themselves while 73 indicated yes to updating themselves. Two postgraduate students did not respond.

So it is clear that the main information needs of postgraduate students include writing assignments and research purposes. Although most postgraduate students do their programmes by research, the study programmes at UEM require that students combine course work and the research in a form of a min-thesis. This is the reason why most students indicated that they use information mainly for assignments followed by research.

Figure 14: Information needs of postgraduate students



(N=176)

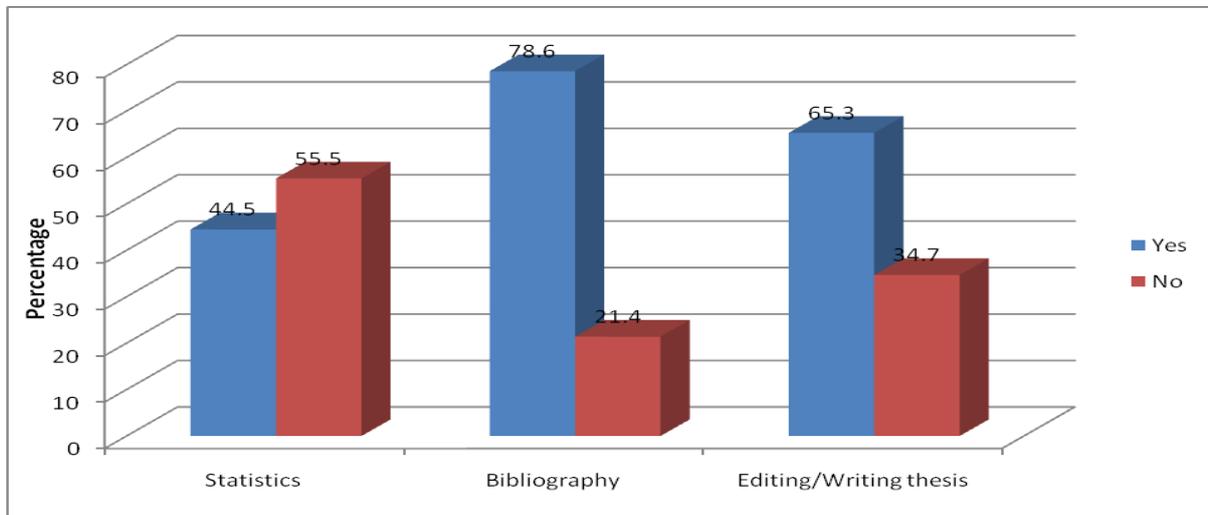


4.4.2 Research project needs

The researcher asked the respondents further about their specific research project needs. They were asked to select from the following research needs, 1-Statistics 2- Bibliography 3. Editing/writing the thesis and 4-Other. Results from this question are presented in a figure 15 below.

Results figure 15 indicate that the majority of the respondents, 136 (78.6%) out of 173, indicated yes that their research project needs is for bibliography and 37 (21.4%) respondents indicated no. The same figure also shows that 77 (44.5%) respondents indicated that their project research needs are for statistics and 96 (55.5%) indicated no. Additionally, 113 (65.3%) respondents indicated no to research project needs of editing/writing thesis while 60 (34.7%) indicated yes.

Figure 15: Research project needs



(N=176)



4.4.3 Tools used for searching information

Question number 12 sought to solicit data about the tools that they used to search for information. As can be seen in table 9, respondents were provided with a list of the tools namely, 1- Internet, 2- Search engine, 3-OPAC, 4 Databases and 5-Institutional repository from where they were required to choose. The question allowed for multiple responses and the results are listed in a ranked order.

Table 9 shows that the majority of the respondents, 152 (88.4%) out of 172 indicated use of Internet as a tool for searching information and 20 (11.6%) indicated no. The same table also reveals that 30 (17.4%) respondents indicated yes to search engine as a tool for searching information while majority 142 (82.6%) indicated no. In terms of OPAC, 36 (20.9%) respondents indicated yes and 136 (79.1%) indicated no. The results also indicate that 38 (22.1%) respondents indicated yes to databases while 134 (77.9%) indicated no and lastly 53 (30.8%) indicated yes to institutional repository and 119 (69.2%) indicated no. 4 (2.3%) postgraduate students did not respond to this question.

Table 9: Tools for searching information

	Internet		Search engine		OPAC		Database		Institutional repository		Non Responses	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Yes	152	88.4	30	17.4	36	20.9	38	22.1	53	30.8	4	1.1%
No	20	11.6	142	82.6	136	79.1	134	77.9	119	69.2		
Total	172	100	172	100	172	100	172	100	172	100		

(N=176)

4.4.4 Sources of information

This item required respondents to state the sources of information that they used most. As can be seen in Figure 16 below, the majority of respondents used the Internet 150 (82.5%), the library 118 (67%), own books 92 (52.3%), lecture notes 90 (51.1%) and colleagues 51(29%). The least used source of information was colleagues with only 17(27%).

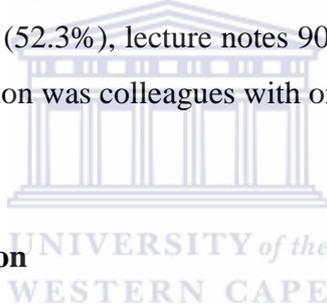
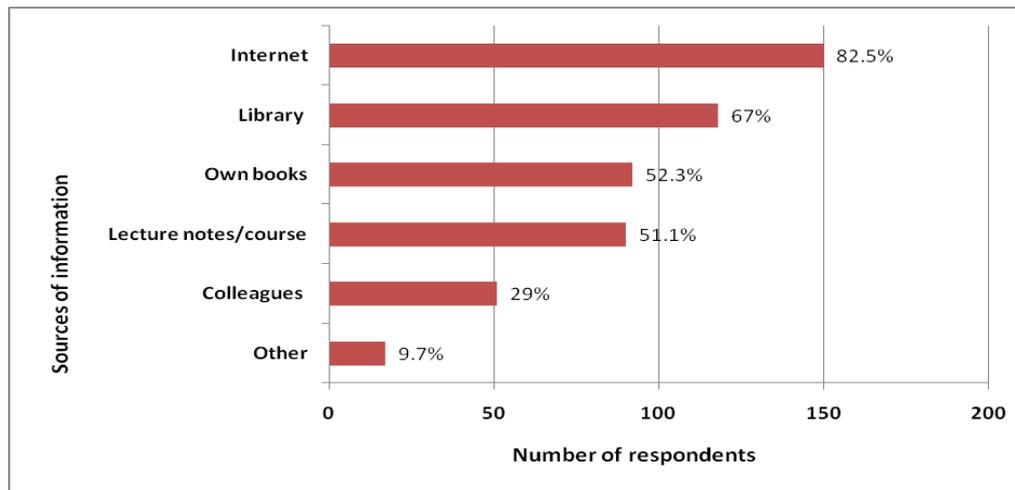


Figure 16: Sources of information



(N=176)

4.5 Questionnaire Section D: Challenges faced by postgraduate students

A closed-ended question collected data about the challenges that postgraduate students faced when using the library. Most of the challenges were informed by the MCM such as unfriendly staff, opening hours, retrieval system (OPAC) and out-dated materials.

Findings presented in Figure 17 reveal that 96 (54.5%) respondents had problems with English literacy, 77 (43.8%) mentioned poor Internet, 59 (33.5%) said materials were out-dated, 35 (19.9%) mentioned library opening hours and 34 (19.3%) mentioned of poor information retrieval system. Only 14 (8%) and 27 (15.3%) complained about unfriendly staff and lack of assistance respectively.

It is not surprising that those students complained about English as a barrier as Portuguese is the official language in Mozambique.

The fact that only 27 (15.3%) complained about unfriendly staff means that according to the MCM, there was a good interaction between librarians and students (Library customer interaction).

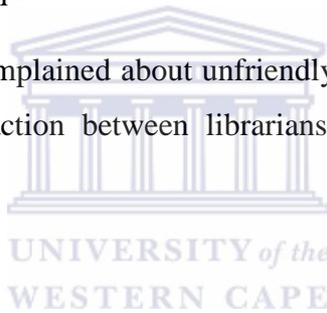
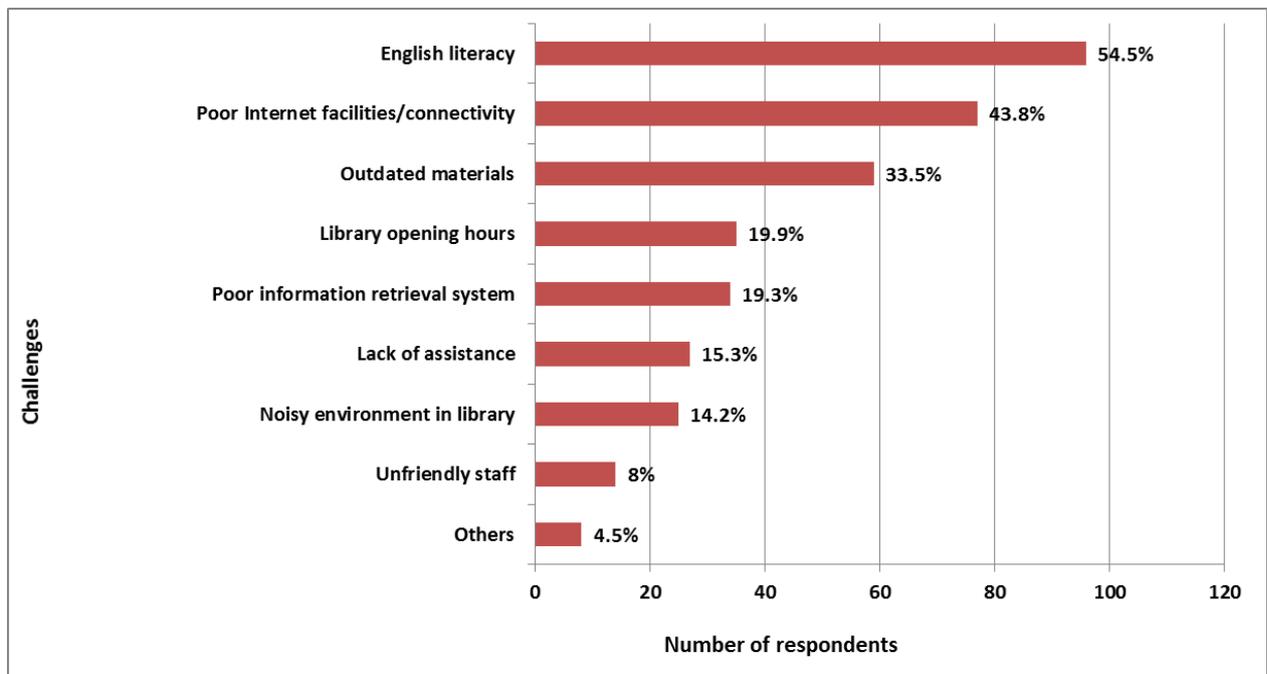


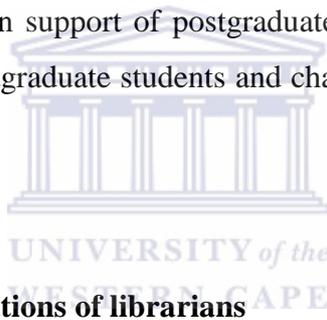
Figure 17: Challenges faced



(N=176)

4.6 Data collected using Interviews

As stated in Chapter Three, the researcher conducted interviews with some library staff. The aim was to compare the responses with those provided by the students. Interviews were conducted with librarians working in Faculty of Veterinary Sciences Library, Faculty of Engineering, Faculty of Medicine, Faculty of Law, Department of Thesis and special collections, Reference Department of the Library of the Documentation Services and the Centre for African Studies. The faculties were chosen because they are the ones that provide information services to postgraduate students. The questions asked included experience and qualifications, special services offered, major information sources used by postgraduate students, the role of the library in support of postgraduate students' research, new services required to be introduced for postgraduate students and challenges that postgraduate students face when using the library.



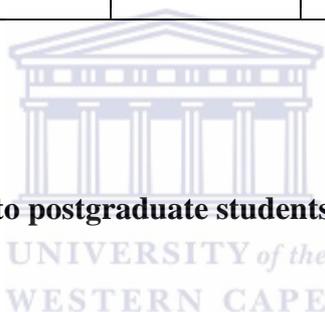
4.6.1 Experience and qualifications of librarians

The researcher asked librarians to state the years they have been working as librarians and the qualifications they held. The question was asked to find out if library staff had necessary library skills to enable them work in the library. Table 10 below summarises this data.

It is clear from table 10 below that of the seven librarians, six have worked in the library for over 13 years whereas only one has worked for five years. In terms of qualifications, six librarians are in possession of Honours qualification, one with a masters and one with a PhD. Many library staff members have honours qualification because in Mozambique, there are no library science schools offering masters and PhD. All these qualifications were obtained in Brazil.

Table 10: Experience and qualifications of librarians

Name of Library	Experience (in years)	Highest qualification
Department of the Library of the Documentation Services (Brazao Mazula Library)	21	Masters in LIS
Department of Thesis and special collections (Brazao Mazula Library)	23	Honours in History
Centre for African Studies	17	PhD in LIS
Faculty of Law	21	Honours in LIS
Faculty of Medicine	5	Honours in History
Faculty of Veterinary Library	13	Honours in Management of Education
Faculty of Engineering	21	Honours in LIS



4.6.2 Special services offered to postgraduate students

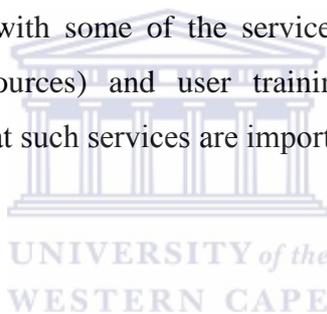
This question was also asked to post graduate students with the aim to find out if the responses correlated or not.

In terms of special services that are offered to postgraduate students, librarians cited several of them as follows;

- “We have information resources in this library which are intended for the postgraduate programmes of the Faculty of Economy” (Librarian 1)
- “In this library we already have a collection for in the field of Economy. This collection is for postgraduate students of the Faculty of Economy” (Librarian 2)
- “Consultation services” (Librarian 1)
- “Individualised user training on INASP e-resources, e-books, databases like Hinari and Agora”(Librarian 1)

- “Thesis and Special Collections various fields of study such Linguistics, Sociology, Economy, Geography and Agronomy”. (Librarian 2)
- “We have materials regarding Development, Communal Villages, and Independent Mozambique, speeches about Samora Machel, Agriculture, and education”. (Librarian 3)
- “Internet services” (Librarian 4)
- “Selective information dissemination through the use of Twitter, Facebook and email” (Librarian 4)
- “special opening hours which is from 20 to 23 o’clock is deemed a special service to postgraduates” (Librarian 5)
- “We have a secretariat of Masters, a space to hold a library for postgraduate students, some acquisitions were done already”(Librarian 6)

The responses correspond well with some of the services provided in the MCM such as online services (internet, e-resources) and user training sessions (individualized user training). The MCM stipulates that such services are important for user’s satisfaction.



4.6.2.1 Library opening hours as a special service

Monday to Friday				
Librarian	Name of library	Opening hour	Closing hours	Holidays (closing)
Librarian 1		08:00	20.00	13:30 or 17:00
Librarian 2		08:00	20.00	13:30 or 17:30
Librarian 3		08:00	15:30	-

Librarian 4		07:30	21:30	-
Librarian 5		07:30	23.00	-
Librarian 6		07:30	20.00	-
Librarian 7		07:30	18.00	
Saturdays				
Librarian 1		08:00	14:00	-
Librarian 2		08:00	14:00	-
Librarian 4	-	08.30	14:00	-
Librarian 6		07:30	13:00	-
Librarian 7		08:00	12:00 mid-day	-

Some verbatim responses from librarians

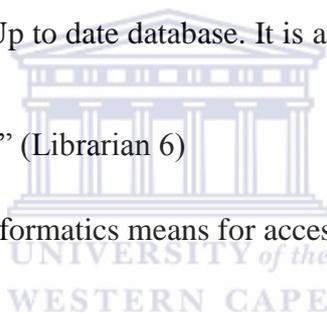
- “During holidays, we reduce the timetable according to the needs e.g., we reduce till 17 o’clock or till 15.30” (Librarian 1, Librarian 2)
- “We have other special opening hours from 20 o’clock to 23 o’clock. These opening hours are managed by the students. What we provide is the space and books. This is a service that was requested by the students” (Librarian 5)
- “On Sundays and holidays we do not open the library” (Librarian 7)
- “When there are no classes, we reduce the timetable from 7.30 till 15.30 (Librarian 7)

Opening hours are some of the services stipulated in the MCM and they are important towards the satisfaction of the users.

4.6.3 Information needs of postgraduate students

When asked to mention the information needs of postgraduate students as perceived by them, librarians were not clear about what information needs were. After clarifying the concept to them they responded as follows:

- “Searching for information” (Librarians 3)
- The needs of postgraduates are related to the type of research. They need more journals” (Librarian 6)
- “Locating information resources” (Librarian 1)
- “The main information needs are online articles” (Librarian 4)
- “The Postgraduates seek more e-journals. In this case I’m talking about Health Inter Network Access to Research Initiative (HINARI). They seek in specific journals. And now we have as well the Up to date database. It is a journal or database in the field of Health” (Librarian 5)
- “They need more Journals” (Librarian 6)
- “I think they need more informatics means for access to e-resources” (Librarian 7)



4.6.4 Major information source that is mostly used by postgraduate students

This item required the librarians to mention the information sources that were mostly used by postgraduate students. Librarians mentioned the following:

- The most used sources are print materials (Librarian 1)
- “Brazilian people for example want about gender, women, culture of Mozambique, prostitution etc. Religion is an issue that they seek for as well. The material they seek is in print form” (Librarian 3)
- “The articles from journals are the most used. In this case I’m referring to online journals” (Librarian 4)

- E-books (Librarian 1)
- “Many users when they visit the library they usually ask for speeches of Samora Machel” (Librarian 3)
- History materials (Librarian 3)
- Students from Brazilian for example are interested about gender, women, culture of Mozambique, prostitution etc. (Librarian 3)
- Internet based resources (Librarians 4)
- “HINARI, PubMed...This databases are mostly used, because its access is free of charge. I think that is the reason why they use them a lot”(Librarian 5)
- “...We see that the seeking of print materials has reduced, and the conclusion that we take is that internet is the reason of reduction of the seeking for print materials”(Librarian 6)
- “I think they use more the Internet and print Journals and print books. They use as well e-journals” (Librarian 7)



4.6.5 The role of the library system in supporting postgraduate students

Librarians indicated that there were several roles that the library played in support of postgraduate students. The following were the main roles mentioned:

- “To orient the students in the use of library” (Librarian 1)
- “Put available the resources to all users attached to the university even in print or electronic form” (Librarians 1)
- Even with a lot of private universities in the country, I have to say that the public universities are the ones that have more information resources comparing with the other libraries. And the postgraduate programmes of UEM are supported almost 80% by this resources (Librarian 4)
- “What I think is that the system right now is trying to put together on a portal all the e-journals for easy access” (Librarian 5)

- “This is important because in the trainings they say and show that these resources are available and tell the group that this resources must be used”(Librarian 5)
- “The role of the Department of Information and Library of the Faculty of Engineering is to support all programmes that run in the faculty in terms of information. Provide technical support and coordinate it”. (Librarian 7)

Responses suggest that most librarians are of the view that the main role of the library is to provide students with information sources especially, print, online journals and internet. These roles are further highlighted by the MCM which mentions resources (comprising breadth and depth of the collection, and ability to obtain the required material).

4.6.6 New services that can be introduced to support postgraduate students

The researcher asked librarians to cite other services that needed to be introduced in order to serve the postgraduate students efficiently. Only two major services were mentioned and they included repositories of materials published in other countries and extension of Book loans for postgraduate students. Book loans are one of the services that according the MCM make the library effective in services.

4.6.7 Challenges libraries face in supporting postgraduate students

The last question in the interview schedule sought data about the challenges that libraries face in the process of supporting postgraduate students. The challenges that emerged included the following:

- Lack of funding to meet the needs of the students. (Librarian 1)
- Lack of consultation by the academic staff when they intend to introduce new postgraduate programmes (Librarian 1)
- Failure to provide students with up to date materials (Librarians 3, 6)
- Limited opening hours of the library (Librarian 4)
- Lack of special space and reading rooms dedicated to postgraduate students
- Students’ unwilling to attend library trainings (Librarian 5)

- Use of English in the databases is a barrier to students (Librarian 5)

It is clear the library is facing several challenges in its quest to support postgraduate students and most of the challenges corroborate student's responses. For example, it noted in question six that students complained of English as a barrier.

4.7. Summary of the Chapter

This chapter had 4 sections with 14 questions. The chapter presented and interpreted data which was collected from students using a questionnaire. It has also presented data collected from library staff using interviews.

The next chapter will discuss the results.



CHAPTER FIVE: INTERPRETATION OF RESULTS, RECOMMENDATIONS AND CONCLUSION

5.1 INTRODUCTION

Chapter four presented the results of the study on the role of library services in the research of postgraduate students at the university Eduardo Mondlane (UEM), Mozambique. In this chapter the study findings will be interpreted, discussed, conclusions will be drawn and in the end recommendations will be made. This study aimed at finding out the role of library services in support of postgraduate students at the University Eduardo Mondlane in Mozambique. It aimed to answer the following research questions:

- What services are on offer to postgraduate students?
- Which sources of information are most used by postgraduate students at the System of libraries of the university Eduardo Mondlane?
- What are the research information needs of postgraduate students at the System of libraries of the University Eduardo Mondlane?
- How do postgraduate students at the System of libraries of the University Eduardo Mondlane access research materials?
- What are the challenges that postgraduate students face when using the System of libraries of the University Eduardo Mondlane?

The findings of the study will be dealt with by answering these questions below.

5.2 What services are on offer to postgraduate students?

This question was answered by the literature review (to get a world perspective) and the empirical data collected (to get the local view). The latter data was collected from librarians and postgraduate students at a specific tertiary institution (UEM) in Mozambique.

From the literature review the following array of services can be offered to postgraduate students in academic libraries: book loans, interlibrary loans (ILL), dedicated space for study and reading – referred to as either a knowledge or research commons with various other services offered in this space, digital resources (electronic information services such as e-journals), stable Internet services and Wi-Fi internet speed, information skills training, database training, training on bibliographic citations, computing and information literacy programmes, research repositories, printing, photocopy, reference services, IT support, convenient opening hours, printed sources and a proposed librarian as a co-supervisor, user-friendly OPAC service and Open Access (OA).

The librarians at UEM have indicated that they offer the following: a special section in the library with information resources for the postgraduate students of Economics, electronic resources of INASP, Institutional repository (Repositorio Saber), training in the use of electronic resources, special collections, use of Internet, Selective Dissemination of Information (SDI). The library is providing flexible opening hours as a special service to students to meet their research needs. The interviews with the librarians revealed that the libraries are open on Monday to Friday and Saturdays. The library offers a wide range of services, but it does not offer a special space known as research commons to postgraduate students.

These findings are not unique to this university library as the results have been reported in UK as well. Research Information Network (RIN) and Consortium of Research Libraries (CURL) (2007:22-28) undertook a study to find out how researchers are utilizing library services in the United Kingdom. The survey report noted five essential resources and services on offer by the library which were greatly valued by the postgraduate students namely; convenient location, convenient opening hours and a place to browse current issues of printed publication.

This study's findings revealed that postgraduate students do use the UEM library frequently as indicated that 16 (9%) use the library daily, 79 (45%) use it occasionally when needed, 35

(20%) use it many times a week. This finding tends to agree with those of Brown and Swan (2007) who found the library was a convenient location for student's research activities.

However, this is contrast to the findings of Onifade, Ogbuiyi and Omeluzor (2013:293) who found that postgraduate students do not maximise the use of the library resources because they do not use the library on a regular basis. They also prefer Internet sources to print sources.

Library services are provided to satisfy the needs of the users. In this study, findings indicate that the majority of the postgraduate students, 110 (62.5%), are satisfied with services being offered by the library to the postgraduate students. The students indicated that they are satisfied because resources are available, 37 out of 91, and that the staff members are very helpful. This finding is in agreement with the findings of Doraswamy (2010:7) who investigated information use patterns of postgraduate students at Siddhartha College of Arts and Sciences, India. The study found that majority of the respondents (78.8%) is satisfied while 21.15% are not satisfied with the library services and facilities.

Although most of the postgraduate students indicated being satisfied with the library services, some of the postgraduate students indicated not being satisfied. They cited lack of recommended books in their subject as the reason for not being satisfied, that the library is not organised. Some of the verbatim statements are: "lack of updated books, I did not manage to find the information I looked for "; "The room reserved for the Masters students does not qualify the desired conditions nor bibliographic materials." These statements agree with the recommendations put forward by Beard and Bawden (2012: 444) who noted that postgraduate students require silent and dedicated spaces without the presence of undergraduate students.

5.3 Which sources of information are most used by postgraduate students at the System of libraries of the university Eduardo Mondlane?

The study found that the most used sources of information by postgraduate students included the Internet, the library, books and lecture notes. The Internet was used primarily because it provides students with rich, current and diverse and cost effective information for their

research activities. Also, the fact that the university offers Wi-Fi facilities means that students are able to use the Internet to access vital databases to which the library has subscribed without necessarily physically visiting the library. These findings are aligned with those reported by Saiti & Pokopiadou (2008:96) who found that when postgraduate students were asked to choose between library and Internet as their primary information source, the vast majority of respondents mentioned Internet (77.3%) followed by the library (22.7%) out of the 211 respondents. Regarding the use of lecture notes, most postgraduate students attend a module on research methodology and they usually refer to such notes in their course of doing research. In line with these findings are those reported by Fidzani (1998) who found that postgraduate student at University of Botswana mostly used books and lecture notes as their information sources. It is surprising that the least used source of information was colleagues because the researcher's expectation was that students can easily discuss with colleagues on issues to do with research.

5.4 What are the research information needs of postgraduate students at the System of libraries of the university Eduardo Mondlane?

Studying information needs of students has become the only way of finding a better way to meet information needs of students. The main information needs of postgraduate students include writing assignments and research. Despite these information needs, postgraduate students do have specific research project need. These are in form of statistical figures and analysing data, bibliography writing and editing and writing thesis.

5.5 How do students access research materials at the System of libraries of the university Eduardo Mondlane?

Postgraduate students use tools to access the research information. Findings indicate that the majority of the postgraduate students use the Internet to access research information. Others use Institutional repository to access research information and the Online Public Access catalogue (OPAC). This section is linked to the access domain of the effectiveness of library resources and services in the MCM. In USA, Lin & Yang (2004:25) also found that almost half of the students chose the Internet as their primary information source. The respondents

cited timely and easy retrieval of Internet information as the reason they chose it over the physical information source.

5.6 What are some of the challenges that postgraduate students face when using the system of libraries of the UEM?

The study established that postgraduate students were facing quite a number of challenges. Major challenges included English literacy, poor internet connectivity and out-dated information materials. The official language of Mozambique is Portuguese therefore very few Mozambicans can write, read and speak English fluently. The fact that most of the information databases and books are written in English is the reason why these students found English as a challenge.

Again, Mozambique is one of the developing countries struggling to improve its IT and electricity infrastructure. As much as the universities are seen as championing the provision of IT and Internet services, the status for these services remains poor compared to developed countries because IT services are costly. In terms of out-dated materials, the university libraries do not have enough funds to acquire current materials such as books and journals because there is lack of funds. As revealed in the previous Chapter, librarian 1 said that “there is lack of funding to meet the needs of the students”. These findings are similar to those reported by Rhoe, Oboh and Shelton (2010) who found that lack of current and up-to-date books and journals and poor infrastructure (especially electricity) were some of the frustrations that postgraduate students faced when using the Nigerian libraries to support their research activities.

Therefore, according to the MCM, the libraries of the UEM are not effective in that they are not able to provide the required resources to satisfy the users. During the interviews with the librarians they complained that academic staff members do not consult them when they are introducing new courses.

These interviews also revealed that students lacked research skills.

Most postgraduate students did not complain about unfriendly staff and lack of assistance. The university emphasises the importance of the library staff to act professionally and

ethically when dealing with clients. This finding makes sense because librarian 1 indicated that “we offer consultation services” implying postgraduate students are provided all the necessary support that they need. This finding corresponds directly to the Multiple Constituencies model identifies the importance of good interaction between library staff and clients and in this case, postgraduate students. That is to say students were encouraged to use the library because the library was friendly and provided the necessary assistance.

Although interviews conducted with librarians revealed that one of the major challenges was inadequate opening hours, the postgraduate students themselves did not cite this as a problem. The Multiple Constituencies model identifies the importance of sufficiently-long library opening hours.

5.7 Suggested directions for future research

This research focused on postgraduate students only. All university students are doing research in some form or another for assessment activities, be it a project or assignment. The academic library will be in a position to study the information needs of the various user groups and in the process be able to serve them effectively. It is therefore suggested that a similar study needs to be conducted with a focus on:

- Undergraduates – these students should be prepared for the research process in their undergraduate studies. Information literacy should be embedded in their courses
- Researchers who are not students but use the university library
- Academics – in studying this group the academic library will be able to gauge their unique curricular needs and interests
- Evaluation of the library collection. This will enable the library to assess the coverage thereof in an attempt to satisfy the information needs of the various user groups

5.8 Recommendations

Based on the findings of this study, the following recommendations are suggested to improve the present status quo.

- Creation of a dedicated space for postgraduate students – similar to the research commons mentioned in the professional literature. This can be implemented in every campus.
- Improvement of the Internet connectivity. This should be done by increasing the bandwidths and expanding the coverage of Wi-Fi in all campuses.
- Introduction of English lessons for postgraduate students to improve their use of English-based databases and other information materials. This can either be done by the language department in collaboration with the library as part of the Information Literacy training programme as well as Postgraduate Co-ordinators.
- Improvement of the communication system amongst some libraries and the teaching staff within the university.
- Extension of the opening hours for the libraries. The opening hours could be extended until midnight. This will enable the postgraduate student to utilize the quiet spaces for longer periods after hours.
- Increased funding from the university management for the library for sourcing up-to-date information resources.



5.9 Conclusion

This study investigated the role of library services in the research of postgraduate students at the UEM in Mozambique. These 176 postgraduate students completed questionnaires and the 7 librarians were interviewed on the research questions. Their responses were analyzed against the theoretical framework of the MCM.

The study has indeed succeeded in answering the research questions by means of a literature review; using the SPSS to analyze the quantitative data and the transcription of the interviews.

The study found that the typical male working postgraduate student in the Arts and Social Sciences Faculty used the UEM library frequently and that he is fairly satisfied with service delivery. The postgraduate students predominantly used the library and the Internet for course

related materials and research purposes. However, they complained about unstable internet connectivity, lack of suitable academic materials and a dedicated space in the library for them. These students experience difficulty with English.

The academic library at UEM offers a wide range of services, but lack some in comparison to those found in the literature review.

The researcher hopes that this case study of a limited section of the academic population at UEM will contribute to a better understanding of the services that can be rendered to postgraduate students. Further, that this research will inspire future research and motivate the library to heed some of the recommendations to improve service delivery so that more voices can echo the following sentiment from a respondent:

“...the environment is inviting”



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APPENDIX A: INFORMATION LETTER

The Department of Library and Information Science

Dear Participant,

My name is Democrito Adolfo da Natividade Manyissa, a Masters student in the Department of Library and Information Science at University of the Western Cape, in Cape Town, South Africa.

I am conducting a study on the library services in the research of postgraduate students focusing on Mozambique. The objective of the study is to investigate the role of library services in the research of postgraduate students at University of Eduardo Mondlane (UEM).

Attached to this letter is a brief questionnaire that consists of a variety of questions about the role of library services in the research of postgraduate students.

Your assistance in answering the questions will be highly appreciated

If you have any questions or concerns or wish to know more about this study, please contact Mrs S Witbooi, a Library and Information Science lecturer at University of the Western Cape on (021) 959 2437 or on email at switbooi@uwc.ac.za or myself on democritom@yahoo.com

UNIVERSITY of the
WESTERN CAPE

Thanks in advance for your co-operation.

APPENDIX B: LETTER OF CONSENT

University of the Western Cape

Department of Library and Information Science

Dear participant,

My name is Democrito Adolfo da Natividade Manyissa a Masters student in the Department of Library and Information Science at University of the Western Cape, in Cape Town, South Africa.

I am conducting a study on the library services in the research of postgraduate students focusing on Mozambique. The objective of the study is to investigate the role of library services in the research of postgraduate students at University of Eduardo Mondlane (UEM).

Enclosed in this letter is a brief questionnaire that takes a variety of questions about the role of library services in the research of postgraduate students. Your assistance in answering the questions will be highly appreciated

If you have any questions or concerns or wish to know more about this study, please contact Professor G. Hart, a Library and Information Science lecturer at University of the Western Cape on ghart@uwc.ac.za

If you agree to voluntarily take part in the above research, please, tick below:

- I confirm that I have read and understood the information in the sheet and agree to take part in this research.
- I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
- I understand my participation is voluntary and I am free to withdrawal at anytime without giving any reason and that I do not have to answer every question.

Signature:..... Date: /...../...../2014.

APPENDIX C: Questionnaire for postgraduate students

Section A: Personal Data

1. Gender

Male	
Female	

2. Please indicate your faculty

Agronomy & Forestry Engineering	
Economics	
Arts & Social Sciences	
Law	
Engineering	
Medicine	
Veterinary	
Sciences	
Education	
Architecture	

3. Please indicate your campus

Main campus	
Faculty of Medicine	
Faculty of Engineering	
Faculty of Law	
Faculty of Veterinary	
Faculty of Architecture	

4. Programme of study

Masters	
PhD	

5. Mode of study

Full time	
Part time	

6. How good is your English literacy in terms of reading, writing and speaking?

	Not good	Fair	Good	Very Good	Excellent
Speaking					
Writing					
Reading					
Comprehension					

Section B: Library services and resources in support to post-graduate students

7. For what reasons do you use the library?

8. How often do you use the library?

9. Are you satisfied with the library services?

Yes	
No	

If YES, please indicate why

If NO, specify

Section C: Information needs and sources for postgraduate students

10. What do you need information for?

For my research project	
For writing assignments	
To update myself in my field	
Other (please specify)	

11. What are your research project needs?

Statistics	
Bibliography	
Editing/writing the thesis	
Other (Please specify)	

12. Which of the following do you use to search for information?

Internet	
Search engines	
Library website/OPACs	
Databases	
Institutional repositories	
Other (Please specify)	

13. What are your most likely sources you obtain information from?

Library	
Colleagues	
Lecture notes/courses	
Buy own books	
Internet	
Other (Please specify)	



Section D: challenges that postgraduate students face

14. What are the challenges that you face in your research activities?

English literacy	
Library opening hours	
Noisy environment in the library	
Poor internet facilities/connectivity	
Poor information retrieval system	
Outdated material	
Unfriendly staff	
Lack of assistance from librarians	
Others, specify:	

APPENDIX D: Questionário para estudantes de pós-graduação

Secção A: Dados Pessoais

1. Género

Masculino	
Feminino	

2. Por favor indique a sua Faculdade

Agronomia e Engenharia Florestal	
Economia	
Letras e Ciências Sociais	
Direito	
Engenharia	
Medicina	
Veterinária	
Educacao	
Ciências	
Arquitectura	

3. Por favor indique o seu campus universitário

Campus principal	
Faculdade de Medicina	
Engenharias	
Direito	
Veterinária	
Arquitectura	

4. Programa de Estudos

Mestrado	
Doutoramento	

5. Regime de matrícula:

Tempo inteiro	
Tempo Parcial	

6. Qual e a sua competência linguística na língua inglesa em termos de leitura, escrita, fala e compreensão?

	Mau	Razoável	Bom	Muito bom	Excelente
Fala					
Escrita					
Leitura					
Compreensão					

Secção B: Serviços e recursos da biblioteca para suporte ao estudante de pós-graduação

7. Indique as razões que o leva a usar a biblioteca

8. Qual é a sua frequência de uso da biblioteca?

9. Está satisfeito com os serviços prestados pela biblioteca?

Sim	
Não	

Se sim, por favor indique as razões

Se não especifique:

Secção C: Fontes e necessidades de informação dos estudantes de pós-graduação

10. Indique o uso da informação

Para o meu projecto de pesquisa	
Para trabalhos do curso	
Para me actualizar na area	
Outro (por favor especifique)	

11. Quais são as necessidades do seu projecto de pesquisa?

Dados estatísticos	
Referencias	
Edição / escrita da tese	
Outro (especifique)	

12. Qual destes usa para a busca da informação?

Internet	
----------	--

Engenhos de busca	
Website da biblioteca / OPACS	
Bases de dados	
Repositórios institucionais (Repositório Saber)	
Outro (por favor especifique)	

13. Em que fontes busca a informação?

Biblioteca	
Colegas	
Apontamentos do curso	
Livros próprios	
Internet	
Outro (por favor especifique)	

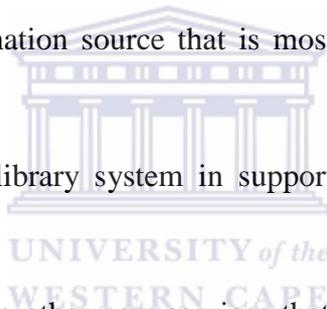
Secção D: Desafios que os estudantes de pós-graduação enfrentam

14. Quais são os desafios que encara nas suas actividades de pesquisa?

Domínio do ingles	
Horário de funcionamento da biblioteca	
Ambiente barulhento na biblioteca	
Fraca conexão da Internet	
Frac sistema de recuperação da informação	
Material não actualizado	
Mau atendimento pelos funcionários	
Falta de apoio dos bibliotecários	
Outros (por favor especifique)	

APPENDIX E: Interview schedule for library staff

1. Name of the library-----
2. How long have you been working in the library?
3. What is your highest qualification?
4. What special library services and resources does your library offer to postgraduate students?
5. From your experience in the library what are the main information needs of postgraduate students?
6. What is the major information source that is mostly used by postgraduate students conducting research?
7. What is the role of the library system in supporting the research of postgraduate students?
8. What do you think are the other new services that can be introduced to support the research activities of postgraduate students?
9. What challenges does the library face in supporting postgraduate students?



APPÊNDICE F: Guia de entrevista para os funcionarios da biblioteca

Guia de entrevista para os funcionarios da biblioteca

1. Qual eh o nome da biblioteca?
2. A quanto tempo trabalha nesta biblioteca?
3. Qual eh o seu nivel de qualificacao mais alto?
4. Que servicos especiais e recursos a biblioteca oferece aos estudantes de posgraduacao?
5. Pela sua experiencia na biblioteca , quais sao as principais necessidades de informacao dos estudantes de posgraduacao?
6. Quais sao as fontes de informacao mais usadas pelos estudantes de posgraduacao?
7. Qual eh o papel do sistema das bibliotecas no apoio aos estudantes de posgraduacao?
8. Quais sao os outros servicos que pensa que podem ser introduzidos para apoio as actividades de pesquisa dos estudantes de posgraduacao?
9. Que desafios a biblioteca enfrenta no apoio aos estudantes de posgraduacao?

