Strategies for organising information resources at the University of Venda Library in South Africa: implications on access to information

BY

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Submitted in accordance with the requirements for the degree of

MASTERS

in

INFORMATION SCIENCE

at the

UNIVERSITY OF SOUTH AFRICA, PRETORIA

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ABSTRACT

Strategies for organising library information resources play an important role in a library's ability to deliver services to its clientele. If library materials are not properly organised, it can take a long time to retrieve information which impacts on service delivery to the patrons. While provision of quality and relevant information services to support teaching, learning and research remains a central objective of libraries in higher education worldwide, the librarians at the University of Venda faced with the challenge of optimising the management and organisation of hybrid information resources resulting from a lack of high-level information technology and technical skills. Higher learning standards require that all users have equitable and inclusive access to resources. Utilising the work system as a framework, this study sought to investigate the strategies adopted by the University of Venda's library to organise information resources and how this impacts on access to information. This quantitative study relied on a survey research design to collect data using questionnaire directed at 263 students, 196 academics and 35 librarians who were chosen through stratified sampling technique. The results were analysed using SPSS and shown in the form of tables and figures. The key finding revealed that the librarians at the University of Venda's library are faced with a challenge of optimising the management and organisation of hybrid information resources because ICTs have changed their roles and responsibilities when it comes to organising library information resources. As a result, factors such as a lack of professionally trained staff in cataloguing as well as a lack of cataloguing tools and resources were regarded as the main cause to cataloguing backlogs. The study concludes by demonstrating the importance of having regular in-service training, educational programme, outsourced training and inter-organisational congresses to all library staff so that they keep abreast of current technological developments. It is recommended that a broader user satisfaction survey be done on the provision of materials and services to facilitate access to materials and information.

Key terms: information; information resources; skills; cataloguing; cataloguing tools; backlogs; library user; information retrieval tools; access; use, classification, organising of information

DECLARATION

Name: RENDANI NEVONDO

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The title of the dissertation: **Strategies for organising information resources at the University of Venda in South Africa: implications on access to information**

I declare that the above dissertation/thesis 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.

_____ _____

SIGNATURE DATE

(Nevondo R)

DEDICATION

This dissertation is dedicated to the memory of my late mother, Phophi Elisa Sigodi, my late father, Radzilani David Muthikhitha and my late sister Nkhangweleni Virginia Nevondo who passed away during the course of my studies, not forgetting my siblings who were always there in times of need. I would also like to dedicate this dissertation to my husband Tshilidzi Enos Nevondo, my daughter Phophi Nevondo, my son Kone Nevondo and my Pastor, Bishop TA Nevondo for being the pillar of my strength during my years of studies.

ACKNOWLEDGEMENTS

I would like to thank my supervisor Professor Mpho Ngoepe and my co-supervisor Dr Maned Mhlongo for their professional advice in my academic journey. I am also indebted to Mr and Mrs Makhwanya, Dr Ndou N, Nyawedzeni Netshivha, Thiambi Nelwamondo and Rotondwa Fungisani for their professional and technical advice on the dissertation. I also wish to thank the Director of Library Services, Mrs A Mulaudzi, for granting me an opportunity to undertake a survey on investigating strategies used for organising library resources in her department. I also would like to thank Mulalo Nevondo for his assistance during the data collection process. I am indebted to all the UNIVEN, librarians, academics and students who completed and returned the questionnaire. Mrs BM Shaw also ensured quality through language editing. Finally, I would like to thank God Almighty for the knowledge and wisdom He provided.

To God be the Glory, AMEN!

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LIST OF ABBREVIATIONS AND ACRONYMS

AACR: Anglo-American Cataloguing Rules
ALA: American Library Association
CC: Colon Classification
DDC: Dewey Decimal Classification
FRAD: Functional requirements for authority data
FRBR: Functional requirements for bibliographic data
GUI: Graphical user interface
HTML: Hypertext Markup Language
ICT: Information and Communications Technology
IFLA: International Federation of Library Association and Institutions
IR Information retrieval
IT: Information Technology
KOS: Knowledge organisation systems
LC: Library of Congress
LCC: Library of Congress Classification
LCSH: Library of Congress Subject Headings
MARC: Machine Readable Cataloguing
NUC: National Union Catalogue
OCLC: Online Computer Library Catalogue
OPAC: Online Public Access Catalogue
RDA: Resource Description and Access
UDC: Universal Decimal Classification
UNISA: University of South Africa
Univen: University of Venda
WWW: World-Wide Web

CHAPTER ONE
OVERVIEW OF THE STUDY

1.1 Introduction and background to the study

Organisation of information resources plays an important role in a library's ability to deliver services to its clientele. If library materials are not properly organised, it can take time to retrieve information and thus impact on service delivery to the patrons. Onwuchekwa and Jegede (2011:108) state that "before the advent of information and communication technology (ICT), information was predominantly in print format and organisation and retrieval of library resources was also easy as library resources were few". In the past, cataloguers used library organising tools such as the Dewey Decimal Classification System (DDC) or Library of Congress Classification to organise library resources manually. As printed resources continued to increase, the problems of labelling these resources also increased.

Long and confusing notations make the organisation and allocation of library resources difficult and complicated. Modern library organising tools also make it difficult for the librarians to perform their duties. Today, libraries and other information centres are faced with the challenge of managing and organising hybrid resources which include print and electronic resources (Anunobi & Okoye 2008:1). For example, library information resources continue to increase in multiple forms and formats, that is, printed, audio-visual and electronic formats. If these resources are not properly organised, there can be a delay or no access to library information resources (Makhura & Ngoepe 2006:97).

Campbell (2006:17) argues that ICTs are recognised as "essential tools that enhance organisation of library information resources, coordination and efficiency of library services in terms of increasing access to quality library information by information users". Therefore, it has become increasingly important that librarians keep up with developments for organising library information resources due to ICT changes necessitated by new information packaging.

It is for this reason that librarians need to learn or upgrade their skills and knowledge of new technologies. These include the knowledge of Hypertext Mark-up Language (HTML), networking, scripting languages, the ability to deal with the back-end of the Online Public Access Catalogue (OPAC), the ability to translate library services into the online media and the ability to troubleshoot basic computer and printer problems (Ahmad & Yaseen 2009; Khan & Bhatti 2012).It is therefore important that librarians continue to analyse, investigate and

assess the information service needs of all stakeholders, have knowledge of policies, procedures, issues and standards, be acquainted with information sources and services and be committed to life-long learning (Ahmad & Yaseen 2009).

This study utilised a work system framework by Alter (2006) to investigate the strategies used for organising information resources at the University of Venda (UNIVEN) in South Africa with a view to assessing the implications for access to library resources. It is hoped that the study will stimulate debate and interest in the area of information organisation and retrieval.

The University of Venda, established in 1982, is located in Thohoyandou in the scenic Vhembe district of the Limpopo Province of South Africa. Since its establishment, it has experienced tremendous growth and change. From its early years, staff members were drawn from various backgrounds in South Africa but, by 1994, staff members were being increasingly recruited from different countries. The presence on campus of staff from diverse backgrounds has created a unique atmosphere, a fertile environment for new ideas and a capacity for change.

The University of Venda has an academic library which provides library information services to its students, staff and researchers. Library services at the University of Venda are coordinated by the Director of Library Services in the director's office (Dzaga 2012). Library facilities include computer workstations with internet access, printing and photocopying services. The library also offers study areas including cubicles for postgraduate students. Some of the services on offer are circulation, document delivery, information services and training in the use of the library and its resources. The library also offers reference services to post-graduates students where they are trained on how to search and locate library materials and scholarly peer reviewed articles. Services such as literature searches and "ask a librarian" are also offered to library users.

According to Dzaga (2012), the library's collection consists of books and journals in electronic and print formats. The library also provides access to electronic resources such as the library databases and reference works to post-graduate students through entries in the Online Public Access Catalogue (OPAC), subscribed databases via the library website and through a created database such as Institutional Repository. Although the library has automated or online cataloguing, it still maintains the traditional manual catalogues (card) for backup in case of problems with the online system.

The cataloguing section within the library is responsible for cataloguing and classification of library resources. According to Kim (2003:96-98), cataloguing systems entail the creation of an original bibliographic record and the verification of bibliographic information in existing records so that when library users search the catalogue, they find what they are looking for or at least something that will help them find an answer to their questions. Cataloguers in the University of Venda's library use cataloguing and classification tools, abstracting and indexing tools and various ICTs to describe and provide access points for library materials into the library's catalogue. Cataloguing tools that enhance the organisation and access of library resources include the Anglo-American Cataloguing Rules, Resource Description and Access (RDA), Functional Requirements for Bibliographic Records (FRBR) and Functional Requirements for Authority Data (FRAD).

Original and copy catalogue are used to process materials depending on the type of materials being catalogued as acknowledged by Hall-Ellis (2008). The types of materials catalogued affect the workflow in that some materials have less readily available copy and, if a copy is available, it requires more upgrading and it is harder to catalogue originally than other materials, for example, music and non-book materials. Non-book items are more difficult to catalogue than other material unless there is substantial customisation. Materials which are difficult to catalogue are put on hold and, in the process, these materials accumulate into backlogs.

Various classification systems separate entities into broad topic levels that provide a hierarchical arrangement of numeric or alphabetic notations to represent broad topics. For this reason, classification tools such as the Library of Congress Classification Schedules, the Dewey Decimal Classification, the Universal Decimal Classification and Colon Classification are used for organising library resources as they provide consistency in the assignment of classification numbers to library materials. The classification numbers play a major role in directing library users to specific subjects of the same or related subjects and where they are shelved in the library (Guenther 2002:120-131). The use of abstracting and indexing tools such as Sears list of subject headings enhance the provision of patterns and instructions for adding new headings required for making library collections as easily available as possible for library users.

1.2 Theoretical framework of the study

According to Tavallaei and Mansor (2010), a theoretical framework is viewed as "the lens through which a study is approached". In other words, the framework introduces and describes the theory which explains why the research problem exists. It gives a researcher focus and clarity of the research questions to ask, the literature to consult and the methods to employ. It determines the variables to be measured and the statistical relationships between those variables.

This study utilised the work system framework, as reflected in Figure 1.1, to determine strategies for organising information resources. According to Alter (2006:14), the work system framework "enhances human participants and machines to perform the work using information, technology, and other resources to produce products and services for internal or external customers".

Alter (2006) argues that the work system framework "provides a rich and broadly applicable model of how services operate and evolve". This is done by creating a platform for comparing service situations, identifying important special cases of services and describing service-design strategies. According to Alter (2006:14), the work system framework consists of nine elements of which four are internal and five are external. Of the nine elements, the first four elements are considered to be the basic components necessary for performing the work; these include "participants, information, processes and activities, and technologies". The remaining five are considered as external elements. They include "strategies used by the work system and the organisation, infrastructure shared with other work systems, environmental factors that surround the work system, products and services the work system produces, and customers for those products and services".

Alter (2006:14) describes customers as "people who receive, use or derive direct benefit from products and services that a work system produces". In this study, the customers include library users such as students, staff, management and employers who receive library services within the library, whereas "products and services" are viewed as the combination of physical elements, information and services that the work system produces for its various customers.

According to Alter (2006:15), activities and processes refer to "all the work practices within the work system". Alter (2006:15) further suggests that "these activities may combine

information processing, communication, decision-making, coordination, thinking, and physical actions". In this study, the major activities and processes include teaching and learning, which includes lectures, tutorials and assessments.

Alter (2006:15) defines participants as "people who perform the work". In this study, the work will be performed by cataloguing staff. The cataloguing staff renders institutional support. In this case, information includes codified and non-codified information used and created as participants perform their work.

Alter (2006:15) views technologies as "the tools that help people work more efficiently". In this study, technologies would refer to the technologies used by cataloguing staff to organise and make accessible the information resources. These include computers and software packages.

Alter (2006:15) mentions that "environment includes the organisational, cultural, competitive, technical, and regulatory environment within which the work system operates". Factors in the environment will affect system performance, even though the system does not rely directly on them in order to operate. This includes student unrest and political violence.

According to Alter (2006:16), infrastructure in the work system method "includes human, information and technical resources even though these resources are managed outside of the system and shared with other work systems". In this study, infrastructure includes academics, students and librarians while strategies are regarded as the guiding rationale and high-level choices within which a work system operates.

This theory informed the objectives of study. The constructs used include:

1.2.1 Strategies: Assessing the effectiveness of the strategies for organising library information sources.

1.2.2 Technologies: Determining the skills of librarians in applying the tools and technologies for organising information resources.

1.2.3 Processes and activities: Assessing the implications of library organising tools on access to information resources.

1.2.4 Products and services: Assessing the effectiveness of the tools, techniques,

technologies and skills in providing access to information.

1.2.5 Customers: Identifying the barriers and enablers experienced by library patrons when it comes to accessing library information resources.

This framework was applied to determine various strategies that can be used to improve organisation of library resources at the University of Venda.

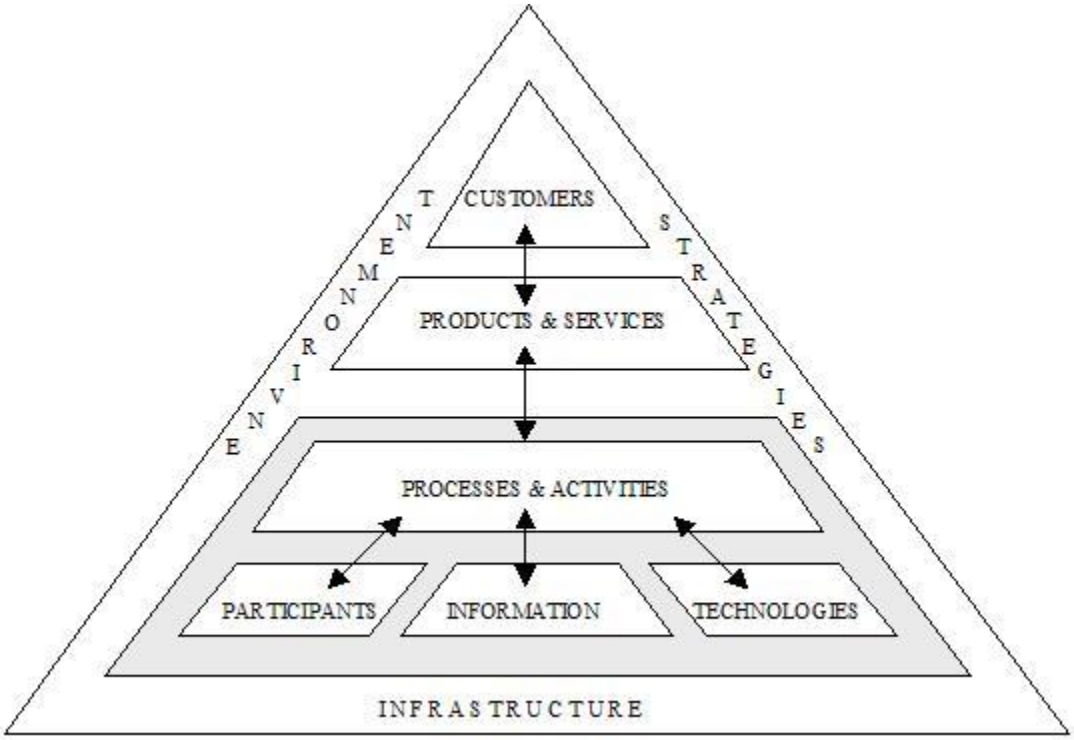

Figure 1.1: The Work System Framework (Alter2006)

1.3 Statement of the problem

Polit and Beck (2008:73) define a problem statement as "an expression of the dilemma or disturbing situation that needs investigation for the purposes of providing understanding and direction". It identifies the nature of the problem that is being addressed in the study and, typically, its context and significance (The editorial in Library and Information Science Research 2007:307-309).

Ngoepe (2009) points out that currently there is an ever-increasing flood of information

generated by an ever-growing variety of information communication technologies (ICTs) such as computers. ICTs have changed the roles and responsibilities of librarians when it comes to organising library information resources. Yet, librarians are faced with the challenge of optimising the management and organisation of hybrid information resources resulting from a lack of high level information technology and technical skills (Makhura & Ngoepe 2006:97). As a result, information users such as students and academics are also faced with challenges when it comes to the access and retrieval of both printed and electronic library information resources relevant to their field of study since they lack sufficient skills, techniques and knowledge of utilising tools available at the library (Milne 2007:8). This situation motivated the researcher to investigate the use of tools, techniques, technologies and skills for organising and retrieval of library information resources. Insight gained from such a study would be useful for quality organisation and retrieval of library resources.

1.4 Purpose and objectives of the study

The statement of purpose, according to Polit and Beck (2008:74), "captures the essence of the study usually in one or two clear sentences. It establishes the general direction of the inquiry". The purpose of this study was to investigate the strategies adopted by the University of Venda's library to organise information resources and how this impacts on access to information.

According to Burns (2011:156), objectives are "clear, concise, declarative statements expressed in the present tense with only one or two variables for clarity". The objectives of the study were:

- To assess the effectiveness of the tools for organising library information sources at the University of Venda.
- To determine the skills of librarians in applying the tools and technologies for organising information resources at the University of Venda.
- To identify the barriers and enablers experienced by library patrons when it comes to accessing library information resources at the University of Venda.
- To assess the implications of library organising tools on access to information resources at the University of Venda.
- To make recommendations on the strategies that can be utilised for the effective organisation of library resources.

1.5 Research questions

According to Polit and Beck (2008:77), research questions are "direct rewordings of statements of purpose, phrased interrogatively rather than declaratively". In order to attain the purpose of the study, which was to determine the strategies for organising resources at the University of Venda in South Africa with a view to assessing their implications for access to library resources, the following research questions were formulated:

- How effective are the tools in organising library information sources?
- What skills do librarians have for organising information resources?
- What are the barriers and enablers experienced by library patrons when it comes to accessing library information resources?
- What are the implications of library organising tools on access to information resources?
- What measures could be put in place to improve the effectiveness of the organisation of library information resources at the University of Venda?

1.6 Significance of the study

According to Marshall and Rossman (2011:68), the significance of the study should contribute a meaningful body of scientific knowledge. The results of this study could be used to foster quality library services and to determine strategies that can be used to improve the organisation and retrieval of library resources at the University of Venda.

The study could also determine the gap that exists between traditional and modern methods of organising library information resources. It could provide clarity on how ICTs and other internet-related technologies are bridging the gap when it comes to the organisation of library information resources at the University of Venda. Conducting this research could add to the existing body of knowledge regarding the understanding of how various tools and technologies can be used to organise library information sources.

1.7 Scope and delimitations of the study

According to Hofstee (2010:87), delimitations explain "the limits of the researcher's responsibility for examining and detailing data, whereas the scope of the study confines it to the conclusions that are applicable in certain circumstances". The study was confined to the Department of Library Services at the University of Venda in South Africa. The population of

the study was limited to the librarians within various library sections as they are responsible for organising library resources, as well as students and academics as library users at the University of Venda in South Africa.

1.8 Definitions of terms

Yusof and Chell (1998:96) view the definition of terminology in research as "the most crucial aspect necessary for dispelling confusion and for better understanding for people who are new to the subject and for those who are also familiar with the subject". The key terms and concepts "organising", "access", "strategies", "cataloguing tools" and "retrieval tools" are explained in this section to provide the context in which they are used.

1.8.1 Organising

According to Glushko (2013), organising is a common activity of creating capabilities by intentionally imposing order and structure in discipline such as library and information science. This discipline has limited agreement on how an intentionally arranged collection of library resources and the interactions they support are organised. For the purpose of the study, these include all librarians who are responsible for organising of library resources to enhance their availability and accessibility to library users at the University of Venda.

1.8.2 Access

Jaeger and Burnett's (2005:465) define of access as "the presence of a robust system through which information is made available to citizens and others". Such a system is a combination of physical, intellectual, and social components that affect the availability of information to individuals. Borgman (2000:79) views access to information as "connectivity to a computer network and to available content, such that the technology is usable, the user has the requisite skills and knowledge, and the content itself is in a usable and useful form". International Federation of Library Associations and Institutions (IFLA) (2008) offers that access as a term has many connotations, it is the freedom or ability to make use of a resource.

In libraries, the concept is stretched somehow as it can be used to refer to different aspects of library work such as library lending services; information retrieval from all types of collections. IFLA (2006) stipulates that libraries and information services have a responsibility to facilitate and promote public access to quality information and communication. For the purpose of the

study, library users should be assisted with the necessary skills and a suitable environment in which to use their chosen information sources and services freely and confidently in order to provide maximum intellectual and physical accessibility to the library and its resources. Access to library resources should be provided in a timely and orderly fashion. Library collections and the catalogue for accessing them should be organized using national bibliographic standards.

1.8.3 Cataloguing tools

Miksa (2005:1050) defines a cataloguing tool as "any device or document (print-based or electronic) that assists in the creation of original bibliographic information in existing records". In this study, such tools will include the Anglo American Cataloguing Rules, 2nd edition (AACR2), MARC21 and cataloguing software. For the purpose of this study, librarians working in a cataloguing section need to understand the cataloguing process to enhance the preparation of library materials for the purpose of shelving.

1.8.4 Classification tools

Classification tools entail "all devices that assist in the processes of the assignment of a call number which consist of class, designation and main entry representation and locating the item in its library setting and in the realm of knowledge" (Farlex 2014, sv 'Classification tools'; Opaleke, Olayemi & Aina 2006). In this study, classification tools include Dewey Decimal Classification (DDC), Library of Congress Classification (LCC) schedules and Universal Decimal Classification (UDC) used for assigning classification numbers to enhance access and retrieval of library resources.

1.9 Research methodology

According to Brink, Van der Walt and Van Rensburg (2005:191), research methodology entails "the methods that the researcher used to explore the research problem or to answer the research question". This section gives an outline or a brief description of research approaches, research design, population, sampling, data collection tools, data analysis and ethical considerations.

For the purpose of the study, the researcher adopted a quantitative approach to convey numerically the findings of the research. A survey research design was employed so that the researcher was able to obtain a large amount of information relatively quickly from various groups of people.

The target population for this study comprised library users, that is, 9000 students and 700 academics as well as 39 library team members involved in the provision of library services in various library sections at the University of Venda because all library staff in all sections are responsible for making sure that library resources are available and accessible to library users. Probability sampling was adopted for this purpose. Students, academics and librarians were therefore stratified according to the proportion of their stratum and a simple random sampling technique was chosen in order to select units from the sampling frame.

A questionnaire was used as a technique for collecting data. The questionnaire enabled the researcher to collect a large amount of accurate findings across a greater spectrum of respondents within a short space of time, to make generalisations from the sample being studied and to convey numerically what was seen in the research. This was done to enable the researcher to arrive at specific and observable conclusions. However, detailed information regarding research approaches, research design, population, sampling, data collection tools, data analysis and ethical considerations are discussed in the methodology chapter.

1.10 Ethical considerations

According to Wysocki (2008:228), ethics are "guidelines for research that enable a researcher to ensure that all respondents participate voluntarily and are not harmed". Ethics in research, according to Wysocki (2008:228), tend to involve "doing what is right and good during research and application of ethical principles to the realm of research". However, detailed discussions regarding ethical issues which included permission to conduct the study, coercion, recruitment, informed consent, violation of privacy, confidentiality and protection from harm (Burns & Grove 2005:195) will be dealt with in the research methodology chapter (refer to Chapter Three, section 3.8).

1.11 Outline of the study

The outline below represents the six chapters covered in this study:

Chapter One: Orientation to the study

Chapter One is an introductory chapter. It sets the stage by giving a general background, theoretical framework, problem statement, research questions, objectives as well as the significance of the study. The research methodology, terminology used in the study and the

outline of the research report are also presented.

Chapter Two: Literature Review

This chapter discusses the literature review related to the topic on the exploration of strategies for organising information resources at the University of Venda with the view to assessing the implications of access to information.

This chapter examines the literature related to the strategies for organising library information resources. Areas of best practice with regard to the effectiveness of the tools for organising library resources, the skills of librarians for organising library information resources, barriers and enablers experienced in accessing information resources, recommendations for improving the effectiveness of the organisation of library information resources as well as the measures that could be put in place to improve the effectiveness of the organisation of library information resources are also presented.

Chapter Three: Research Methodology

An overview of the methodology used in the study is presented. This chapter describes the research design, population, sampling and data collection used in the study. Ethical considerations and measures to provide trustworthiness are also discussed.

Chapter Four: Data Analysis

This chapter presents the findings of the study which were received during data collection. The findings were analysed by a computer making use of SPSS programme and also manually using master sheets, cross tabulations, dummy tables and figures.

Chapter Five: Interpretation and Discussion

The chapter presented the findings which were interpreted, discussed and controlled through the literature.

Chapter Six: Recommendations and Conclusion

This chapter presents the conclusion, strengths and limitations of the research findings. Recommendations generated from the study are also presented.

1.12 Summary

Chapter One introduced the study and provided the motivation for embarking on this study. It mainly focused on the investigation of strategies and skills for organising library information resources. This chapter presented a description of the background to the study. It emphasised that the ultimate goal of the study was to investigate the strategies adopted by the University of Venda's library to organise information resources and how this impacts on access to information. The chapter identified the objective of the study, as well as the accompanying research questions, and justified the fact that the research taken was worth the effort and time taken. The chapter also provides the definitions of concepts used in the research study as well as an outline of the research design and methodology. The study is important because the literature produced will be of significant relevance to other libraries.

The following chapter presents a literature on the aspects related to the strategies and skills for organising library information resources. The focus will be on the literature related to the tools, techniques, technologies and skills for organising library information resources, barriers and enablers experienced in accessing information resources as well as the measures that could be put in place to improve the effectiveness of the organisation of library information resources.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

Chapter One put the current study in context by giving a description of the background to the study, research problem, purpose, research objectives, research questions, its significance to the study, definitions of concepts used in the research study and outline of the research design and methodology.

In this chapter, the literature review is presented. Creswell (2014:116) postulates that the review of relevant literature identifies what is already known about the topic so that duplication is avoided. Creswell (2014:116) further contends that gaps in the topic previously researched can be identified while recommendations made in various studies can be used as research topics. Furthermore, the literature review is also conducted in order to demonstrate that the investigator is aware of other research in the field of study, that there is a theoretical basis for the work proposed to be investigated, how the work fits in with what has already been done, that the work to be investigated is significant and that the work will lead to new knowledge on the organisation of library resources.

Creswell (2003:30) advocates that a literature review gives the results of other studies that are closely related to the current study, fills in gaps and extends prior studies while providing a framework for establishing the importance of the study, as well as acting as a benchmark for comparing the results with other findings. Furthermore, Creswell (2003:30) also asserts that a literature review is integral to the success of academic research as it assesses whether the topic is researchable before proper research commences.

Leedy and Ormrod (2013:51) stress that a literature review shows command of the subject area and understanding of the problem, and justifies the research topic, design, methodology and the application of approaches used by a researcher. They further assert that a literature review ascertains whether other researchers have already addressed and answered the research problem that the researcher intends to study. Furthermore, a literature review enables the researcher to interpret and make sense of the findings and to bring together writings on diverse matters related to the phenomenon being studied.

Stake (2010:109) also posits that literature reviews are undertaken to explore the field

containing the research question and to maximise the broad and complex conceptual standing of the research question. Furthermore, a literature review is aimed at supporting research arguments as well as summarising and synthesising the ideas that others have already put forward.

It is against this background that this chapter examines the literature related to the tools, techniques, technologies and skills for organising library information resources. Since the research and literature on this topic is continuously developing, literature review conducted is for the period up to 2015. Areas of best practice will be discussed with regard to:

- The effectiveness of the tools for organising library resources
- The skills of librarians for organising library information resources
- Barriers and enablers experienced in accessing information resources
- Measures that could be put in place to improve the effectiveness of the organisation of library information resources

2.2 Tools for organising library information resources

Kauffman (2005:12) notes that academic libraries are striving to use corporate technologies, products and processes or develop new models and strategies of developing and implementing new services quickly because library information resources appear in various forms and formats that include printed and electronic resources. Sales (2005:18) also remarks that the organisation of library resources is important because each record or item of information is organised for effective use, dissemination, maintenance and disposition. Each record is therefore placed within a larger framework and its context is defined within the organisation's overall information landscape that allows electronic and traditional systems to deal with each individual record.

This study sought answers to a number of issues about how librarians and cataloguers use various tools for cataloguing, classification, indexing of library resources and how various information and communication technologies (ICTs) enhance organisation, access and retrieval of library resources.

2.2.1 Cataloguing tools

The organisation of information about library materials has long been the work of cataloguers.

Omekwu (2007:20) remarks that cataloguing tools, in a shared environment, are important for both location and co-location purposes. The cataloguing process enhances the preparation of library materials for the purpose of shelving. The process of introducing electronic resources such as e-books and e-journals to libraries is not a simple one. The usual systems used for collection, organisation, and preservation that are suitable for print collections are being challenged by the introduction of electronic material (Zhao & Zhao 2010:94).

Zhao and Zhao (2010:95) proclaim that many libraries do not have comprehensive policies in place when it comes to managing their electronic resources. In addition, they note that standards for records have not yet been set which could be the reason policies have not yet been established (Zhao & Zhao 2010:96). According to Gardiner and Musto (2010:166), the reason the CD-ROM lost its appeal for libraries which led to publishers discontinuing their wide use is that libraries did not know how to catalogue them. While MARC records are provided with many electronic resources, there is no standard as to their extensiveness (Zhao & Zhao 2010:97; Schell 2011:91). Setting electronic resources cataloguing standards should be a priority (Zhao & Zhao 2010:102).

Libraries provide access to electronic resources through entries in the Online Public Access Catalogue (OPAC) or through providing access to subscribed databases through the library websites or through a created database such as Institutional Repository where access is provided in an organised manner. A big issue for cataloguers in this regard is that of inventory control because an electronic resource can relatively easily be withdrawn from a library's collection for whatever reason. Zhao and Zhao (2010:100) maintain that electronic collections are not stable which adds to the difficulty of cataloguing them. A catalogue entry for an electronic resource does not disappear once access to the electronic resource is withdrawn, so keeping an up-to-date catalogue is a near-impossibility. For this reason, e-journals and e-books have their own discovery tool separate from the catalogue. For Vasileiou, Rowley and Hartley (2012:285), the fact that there is no single discovery tool able to meet the needs of all resources in the library is problematic. It does not only scatter the catalogue function, but is confusing for users.

Miksa (2005:1-12) postulates that, when cataloguers engage in the process of cataloguing resources, they enter information about a book or any other item into the library's catalogue so that, when users search the catalogue, they find what they are looking for or at least something

that will help them find answers to their questions. Library materials are therefore catalogued in a careful and complete manner to enhance access to all sources of information on a particular topic or in a particular format with certain standards applied. Carstens (2000:47-50) also postulates that library materials are organised according to a structured set of rules and information technology requirements which prescribe the ways in which the records and information will be stored and handled so that the library and information users can efficiently survey a library's holdings and determine where items are located. For the purpose of the study, cataloguing tools that enhance the organisation and access of library resources include Anglo-American Cataloguing Rules, Resource Description and Access (RDA), Functional Requirements for Bibliographic Records (FRBR) and Functional Requirements for Authority Data (FRAD).

The first cataloguing rules were produced in United Kingdom (UK) in 1841 for the British Museum's library catalogue (Stephens 2010). In the United States of America (USA), the cataloguing rules were first published in 1876 (Dunsire 2007). But from 1902 to 1949, the UK and the USA decided to develop separate sets of rules. The consideration for developing international standardisation in cataloguing came in 1961 with the formulation of the Paris Principles of cataloguing that were endorsed during the International Conference on Cataloguing organised by the International Federation of Library Associations (IFLA) (Tillett & Cristan 2009).

This led to the collaboration between the National Cataloguing Agencies from the UK and North America to produce the Anglo-American Cataloguing Rules in 1967 with the intention of eradicating the differences that now existed within cataloguing rules (Anglo-American Cataloguing Rules 1967). Despite that, some differences were still left unresolved within the cataloguing rules. The pressure to eliminate the remaining differences resulted in the development of a more internationally uniform content standard called the Second Edition of the Anglo-American Cataloguing Rules (AACR2) in 1978 (Joint Steering Committee for Revision of AACR 1986). At that time, computers were not commonly used and the World Wide Web was not yet invented (Stephens 2010). The information world then was basically composed of print resources (books) and the rules were designed around creating catalogue cards (Blythe, Gunther & Spurgin 2013). Since 1978, there has been a continuous improvement in the rules in accordance with the Paris Principles to meet the needs of the cataloguing community in providing information for library resources for the users' information

requirements.

By the mid-1990s, it became obvious that there were substantial problems with AACR2, hence the increase in calls for fundamental revisions of this cataloguing standard (Stephens 2010). The above concern focused on how the libraries will continue to maintain their relevance in providing appropriate cataloguing records for all types of library information resources for easy access and retrieval by patrons and in facilitating the management of those resources. This led the Joint Steering Committee (JSC) to host the International Conference on the "Principles and Future Development of AACR" in Toronto, Canada in 1997 (Weihs 1998).

At the conference, the Joint Steering Committee addressed numerous cataloguing issues with the emphasis on the present and future trends in information resources and their management. After the deliberations, it was agreed that the fundamental principles and structure of AACR2 should be analysed. The recommendations made at the conference led to some amendments to AACR2, but, in 2002, it was discovered that, in order to overcome AACR2's limitations, there was a need for an extensive re-organisation of at least Part I of AACR2, if not every part of the standard (Joint Steering Committee for Revision of AACR 1986).According to Degrasse (2009), in spite of the limitations deliberated at the meeting, Anglo-American Cataloguing Rules 2nd revision was still recognised as a standardised way to describe an item for categorising and cataloguing purposes. This is because AACR2 helps the cataloguers to find what they need to know about an item, describe it and categorise it well enough so that other people can access it.

The Joint Steering Committee for Revision of AACR (1986) describes AARC2 as a cataloguing system which is designed for use in the construction of catalogues and other lists in general libraries of all sizes. The rules cover the description and the provision of access points for all library materials commonly collected at the present time. AACR2 is available in print versions as well as an online version. Print versions are available from the publishers. The online version is available only via Cataloguer's Desktop from the Library of Congress. The Joint Steering Committee for Revision of AACR (1986) further explains that Part I of the AACR2 deals with the provision of information describing the item being catalogued, whereas Part II deals with the determination and establishment of headings (access points) under which the descriptive information is to be presented to catalogue users, and with the making of references to those headings. In both parts, the rules proceed from the general to the specific.

In 2004, the JSC and its governing body, the Committee of Principals (CoP), decided to produce the third edition of AACR called AACR3. They started with an extensive reorganisation of Part I to give a greater emphasis to content and allow more flexibility with regard to format as the rules had to align with the concepts and terminology used in Functional Requirements for Bibliographic Records (FRBR), a new model developed by IFLA in the 1990s (Gorman 1998). However, the responses to the first draft of AACR3 indicated that the underlying AACR structure did not allow for changes that could fully address the challenges posed by digital resources. From there, it became obvious that a completely new approach was needed. So, in 2005, it was decided that the structure of AACR3 be abandoned and a new code that has a direct alignment with FRBR be made. As a result, the JSC decided to develop an entirely new standard that provides proper structure and guidelines to cataloguers so that the bibliographic records they produce can meet the challenges posed by digital information resources. The newly developed standard is referred to as Resource Description and Access (RDA) (Gorman 1998).

Wong (2014) defines RDA as "a web-based tool which is designed for the digital world and which is built on the foundations established by AACR2". RDA was designed as a content standard for the digital world to replace AACR2 which was mainly meant for the print environment (Association, et al. 2010). RDA was developed so that cataloguers could better describe and provide access to various types of content and media. The Joint Steering Committee for the Development of RDA (JSC) (2014) view RDA as "a package of data elements, guidelines and instructions for creating library and cultural heritage resource metadata that are well-formed according to international models for user-focused linked data applications". These guidelines and instructions govern resource description and choice and form of both authorised and variant access points. RDA is a package of data elements, guidelines, and instructions for creating library and cultural heritage resource metadata that are well-formed according to international models for user-focused linked data applications (JSC 2014).

The way forward to finding a viable means of organising RDA as a working tool began to emerge in the first draft of what at the time was designated as Part I of RDA (RDA 2005). At the broader level of organising RDA as a whole, the initial plan was to continue with the high-level structure that had been outlined in 2004 for the new edition of AACR. RDA was to be divided into three parts: Part I would cover description; Part II would cover the choice of access

points; and Part III would cover the form of access points. Essentially, the proposed structure mirrored that of AACR2, the rationale for which had been that it followed the sequence of cataloguers' operations: describing the item in hand, then determining and establishing the headings under which the description would be entered in the catalogue.

After the initial draft of RDA Part I was issued at the end of 2005, it became apparent that basing its parameters on those of AACR2 Part I was problematic with respect to alignment with the FRBR model, primarily because the AACR2 distinction between description and access points blurred the lines between entity attributes and entity relationships in the FRBR model. After reviewing the constituency comments on the draft of RDA Part I at the April 2006 meeting of the Joint Steering Committee, a decision was made to realign the overall structure of RDA by combining what had been planned as Parts I and II into a single part (to be designated as Part A) covering both description and the choice of access points (JSCAACR 2006). The form of access points would be covered in a separate part, as originally planned, but now to be designated as Part B. The rationale for the shift to the new structure – over and above the need to address the artificial split in the handling of FRBR relationships – was that the proposed two-part structure, essentially paralleling the established division between bibliographic records and authority records in library practice, would also serve to align RDA more closely with practice in other resource description communities (JSCAACR 2006).

According to JSCRDA (2007), the plan to restructure RDA into Parts A and B, however, was never fully realized. A first draft of the chapters on the choice of access points to be incorporated into Part A was distributed for constituency review in June 2006, and by September the RDA editor had produced a draft of Part B for review by the Joint Steering Committee. Discussion of those drafts stretched out over the October 2006 and April 2007 meetings, and into the October 2007 meeting, but by the time the discussions were concluded the Joint Steering Committee had decided to take yet another tack on the overall organisation of RDA. The new and final plan was to organize RDA into ten sections, the first four to cover recording attributes of the FRBR and FRAD entities, and the last six to cover recording relationships between those entities. In retrospect, the plan to align RDA with the division between bibliographic records (covered by Part A) and authority records (covered by Part B) was seen to be too closely oriented toward database structures that had been in place for decades, while the strategic focus of RDA was oriented toward emerging database structures. Organising the standard around the division between attributes and relationships paralleling the

structure of entity-relationship and object-oriented databases was seen to be more forward looking. The new plan would also serve to align RDA more directly with the FRBR and FRAD models, not only as a resource description language but as a working and training tool as well (JSCRDA 2007).

Within the new two-part structure for RDA, each section would cover a specific set of entities, and each chapter within a section would focus on a specific user task in relation to one or more of those entities. The order in which the entities were covered followed, in general, the order in which they were presented in the FRBR and FRAD models, but the ordering of the FRBR Group 1 entities was altered slightly, so that the attributes of manifestation and item were dealt with first (in Section 1), followed by the attributes of work and expression (in Section 2). The rationale behind that ordering was that it reflected the typical workflow involved in resource description, in which the attributes of the more concrete entities (manifestation and item) would be recorded before proceeding to the more abstract entities (work and expression). Within each section, the focus on a specific user task in each chapter served to emphasise function over form, again in an effort to facilitate the use of RDA as a working tool in a wider range of contexts. The ordering of sections within each of the two major divisions of the overall structure, and the ordering of chapters within each section were also intended to parallel, in broad outline, increasing levels of adding value through the resource description process, moving from the relatively straightforward identification of the resource as an object, through a more in-depth description of its content, to an articulation of its relationships with other entities (JSCRDA 2007).

JSCRDA (2009) maintains that as the new standard was being developed, guidelines and instructions for recording RDA were subject to significant refinement, driven both by the goal of improving precision and consistency, and by the strategic aim of attaining an effective level of alignment with metadata standards used in other resource description communities. The analysis of the RDA element set in addition to its use in structuring RDA as a resource description language played a key part in the refinement of RDA guidelines and instructions vis-à-vis the improved alignment of the new standard with metadata practices in the broader resource description community. Shortly after the development of RDA had been initiated in 2005, the Joint Steering Committee established a General Material Designation (GMD) and the Specific Material Designation (SMD) Working Group to identify and provide definitions for terms to indicate type and form of content and type and form of carrier. Concurrently, the

Joint Steering Committee began discussions with representatives of the publishing industry in the United Kingdom, who were grappling with similar issues in the work they were doing on the ONIX metadata standard.

As a follow-up to those discussions, a joint initiative was launched that resulted in the release of the RDA/ONIX Framework for Resource Categorisation (2006). Based on the lists of terms proposed by the GMD/SMD Working Group, modified to align them with the RDA/ONIX framework, the RDA editor produced a draft set of instructions and terms for three new RDA elements for categorizing resources by content, media, and carrier (RDA Categorisation of Content and Carrier 2006). The vocabularies that were produced as a result of the collaborative effort between the developers of RDA and of ONIX served not only to provide solutions to complex metadata issues faced by both groups, but also to produce a key tool to support metadata interoperability.

The development of instructions for RDA elements corresponding to the generic attribute type defined in the indecs framework as role involved complexities of a different kind (Rust and Bide 2000:17). The alignment of the RDA element set with the FRBR and FRAD models had resulted in several sets of relationship elements being defined in RDA: one set to reflect the primary relationships defined in FRBR to express the inherent relationships between a work, its expression, its manifestation, and an item; another set to reflect relationships between the Group 1 (work, expression, manifestation, and item) and Group 2 (person, family, and corporate body) entities in the FRBR and FRAD models; a third set to reflect relationships between different instances of the Group 1 entities (work-to-work); and a fourth set to reflect relationships between different instances of the Group 2 entities (person-to-person). The guidelines and instructions for recording those relationship elements were developed somewhat differently for each set. The complex sets of options for recording the various relationship elements in RDA were the direct result of the need to accommodate conventions used in all three types of database structures that had been outlined in the RDA database implementation scenarios (JSCRDA 2007). It is important to note that all of those conventions are dealt with in RDA as options for recording data within a relationship element, not as elements in their own right.

The initial release of RDA in 2010 did not mark the end of its development. When that work was first begun in 2005, the FRAD model itself was still under development, and a third model

centred on functional requirements for subject authority data was just at the initial stage of development (IFLA-FRSAR 2011). Since 2011, the IFLA FRBR Review Group has been working toward a consolidation of the three models, and a world-wide review of the consolidated model is scheduled for early in 2016. Judging from the broad outlines of the consolidated model that were presented at the IFLA World Library and Information Congress in 2015 (Riva and Žumer), the consolidated model could have significant implications for the ongoing development of the RDA element set, particularly with respect to the subject entities that had been mapped into the RDA element set as placeholders (concept, object, and event), as well as the partially developed entity place. There could also be implications for the RDA entity family. Maintaining the direct alignment of RDA with the IFLA model could pose some challenges.

Collaboration with the Dublin Core Metadata Initiative (DCMI) community to develop an open registry of the RDA element set and vocabularies is continuing, and reached an important milestone in 2014 with the publication of the RDA elements, relationship designators, and value vocabularies in the RDA Registry. A significant feature of the registry is that it includes an overlay of unconstrained elements that parallel the RDA elements but are detached from the entities in the underlying FRBR and FRAD models. That effectively allows other resource description communities to make use of a dumb-down version of the RDA element set in application profiles that are not based on the FRBR and FRAD models. As such, it represents a furthering of the strategic commitment to an effective level of alignment with metadata standards used in other resource description communities.

In 2014, the Joint Steering Committee established an RDA/ONIX Framework Working Group to review the application of the RDA/ONIX Framework in RDA and to make recommendations for the development of RDA in the area of resource categorization (JSCRDA 2014). In addition, the working group was tasked with developing a proposal for registering the RDA/ONIX Framework elements and vocabularies, and the results of that effort have now been published as part of the RDA Registry. The registration of the RDA/ONIX elements and vocabularies is a significant step forward in facilitating the use of the framework by other resource description communities. Perhaps even more importantly the registration of those elements and vocabularies has the potential to serve as a hub through which Web applications will be able to map category data from one metadata schema to their equivalent in another schema, thereby supporting semantic interoperability.

Hart (2010) attests that RDA aids in simplifying cataloguing rules and transforming cataloguing by bringing it in line with 21stcentury web technologies. It is therefore the main goal of RDA to provide the opportunity for all librarians to be involved in the evolution of cataloguing practice, especially in terms of who does the cataloguing and how it is done. Maxwell (2009) and Horowitz and Bothmann (2013) note that the global use of RDA has an important effect on union catalogues as it enhances and supports the creation of consistent metadata content among metadata organisations and library consortia responsible for sharing cataloguing services, copying local metadata to a central catalogue, harvesting metadata from local repositories and defines who can contribute cataloguing to union catalogues. This is because RDA provides instructions and guidelines for descriptive catalogue records that meet the needs of centres that provide any kind of resource cataloguing, whether locally or internationally. Understanding the basic RDA rules is essential because RDA reaches beyond the earlier cataloguing codes by providing guidelines for cataloguing digital resources and puts more emphasis on helping patrons find, identify, select and obtain the information they need.

Oliver (2010) posits that the fact that RDA is meant to support the creation of well-formed data that can be managed using both current technologies and technologies of the future shows the importance of this tool for cataloguing library resources of any kind. In addition, it also defines the elements needed for description and access and provides the instructions on how to formulate the data that is recorded on each element. Burger and Du Preez (2008) also recommend that RDA can be used for the description of both the traditional and non-traditional, analogue and digital resources within or outside library collections. RDA records can be encoded using existing schema such as MARC21, Dublin Core and Metadata Object Description Schema (MODS). They can also be mapped to another schema current or future, which makes RDA a powerful cataloguing standard that every library in this technological era, including libraries in Africa, would like to implement. Oliver (2010) postulates that RDA is not a standalone metadata standard but it is cataloguing tool which is based on the foundations established by AACR2, which is the standard for bibliographic metadata content around the world. RDA contains a set of practical instructions based on FRBR (Functional Requirement for Bibliographic Records) and FRAD (Functional Requirements for Authority Data) conceptual models (JSC 2010).

RDA guidance and instructions are maintained and adjusted by the RDA Steering Committee (RSC) through formal, community-initiated processes and are published in RDA Toolkit four times per year. RDA Reference data for RDA elements and values are maintained in the Open Metadata Registry and imported into the system as a linked data application of the RDA Registry. RDA Reference data are continuously maintained and is published through GitHub in coordination with Toolkit releases (JSC 2014).

Atilgan and Ozel (2014) contend that RDA assists in the creation of efficient metadata that will support resource discovery in linked-data environments. In this case, RDA rules provide instructions and guidelines on formulating data for resource description and discovery. This standard is unique because it is carefully modelled on FRBR and uses most of its vocabulary. RDA is structured to match the arrangement of FRBR entities, attributes and sub-attributes.

Atilgan and Ozel (2014) further postulate that the elements of RDA are related to the FRBR user tasks of finding, identifying, selecting and obtaining intellectual and artistic works, realisations of those works (expressions), embodiments of those realisations (manifestations), and exemplars of those embodiments (items). Furthermore, Tillett (2014) points out that RDA intends to have a great impact on the design of catalogues and other information discovery tools by developing metadata content standards. The rules enable library users to find a substantial improvement in the consistency and coherence of the content of the catalogue records and greater efficiency in searching for related resources.

Jin and Bouthillier (2012:2) define FRBR as "a conceptual model of the bibliographic universe that assists in connecting user tasks of access and retrieval of resources to the elements and relationships of resource description". Burger and Du Preez (2008) believe that FRBR is responsible for describing the entities in the bibliographic universe, their relationships and their attributes to be included in the national bibliographic record. They further claim that FRBR describes user tasks that serve as criteria to determine which attributes and relationships are important in a bibliographic description. FRBR illustrates a framework for accessing and retrieving records from bibliographic databases. Jin and Bouthillier (2012:2) also contend that FRBR enables database designers to consider the functions a catalogue should fulfil, hence, taking advantage of the capabilities of digital technology by allowing for a better arrangement and collocation of bibliographic records in a database, that is, better collocation and better

navigation. Burger and Du Preez (2008) reiterate that FRBR is aimed at describing the entities in the bibliographic universe, their relationships, their attributes to be included in the national bibliographic record and user tasks that serve as criteria to determine which attributes and relationships are important in a bibliographic description. FRBR can be used to find entities in a search, to identify an entity as being the correct one, to select an entity that suits the user's needs, or to obtain an entity (physical access or licensing) (Ingbert 2009).

Oliver (2010) defines Functional Requirements for Authority Data (FRAD) as "a conceptual model designed to describe the authority side of the library catalogue". However, FRAD extends and expands upon the Functional Requirements for Bibliographic Records (FRBR) model. Jin and Bouthillier (2012:2) notice that, in FRAD, authority data collocates works by a person, family, corporate body or the various editions of a title and even by providing the controlled access points and variant forms of a name. Oliver (2010) claims that FRAD is a cataloguing tool which provides a clearly defined structured frame of reference for relating the data that are documented in the authority records to the needs of the users of those records. Oliver (2010) also points out that FRAD assesses the potential for international sharing and using of authority records within and outside the library. In short, FRAD is an extension of FRBR, and both models are internationally recognised as effective ways to conceptualise the structure for retrieving information.

Onwuchekwa and Jegede (2011:113) regard Machine-Readable Cataloguing (MARC) as a cataloguing tool that cataloguers can use to organise library resources. Onwuchekwa and Jegede (2011:113) define Machine-Readable Cataloguing (MARC) as "a standard in library automation which forms the backbone of today's automated library systems, networks and bibliographical utilities around the world". They further describe MARC as "a data communication protocol for translating the text of a catalogue record for use in an online catalogue".

Coyle (2011) contends that the MARC products are developed by the Library of Congress (LC) which provides the standard and rules for MARC cataloguing documentation. This is supported by Murray (2009) who illustrates that these interfaces help users communicate with the collection of a library. Coyle (2011) and Murray (2009) agree that, by using MARC products in organising library resources, both the librarians and library users are able to search the library's catalogue, check borrower records, reserve reading materials and library news

bulletins, and enhance the usability of catalogues. However, the Joint Steering Committee for Development of RDA (2014) maintains that RDA and MARC21 are two different standards designed for different purposes. Thus RDA is a content standard whereas MARC21 is an encoding standard. This is because RDA contains guidelines for choosing and recording bibliographic and authority data, while MARC21 encodes records created using RDA data in other schemes such as MODS or Dublin Core.

According to the Bibliographic Framework Initiative (2013), the future of the MARC formats is a matter of debate among libraries because their storage formats are quite complex and are based on outdated technology. Furthermore, there is no alternative bibliographic format with an equivalent degree of granularity. That is why billions of MARC records in tens of thousands of individual libraries (including over 50,000,000 belonging to the OCLC consortium alone) create inertia. These problems resulted on the Library of Congress launching the Bibliographic Framework Initiative, which aims at providing a replacement for MARC that provides greater granularity and easier re-use of the data expressed in multiple catalogues (Bibliographic Framework Initiative 2013). Bibliographic Framework Initiative (2013) further postulate that beginning in 2013, OCLC Research exposed data detailing how various MARC elements have been used by libraries in the 400 million MARC records (as of early 2018) contained in WorldCat. According to MARC Usage in WorldCat (2013) the MARC formats are managed by the MARC Steering Group, which is advised by the MARC Advisory Committee. Proposals for changes to MARC are submitted to the MARC Advisory Committee and discussed in public at the American Library Association (ALA) Midwinter and ALA Annual meetings (MARC Advisory Committee 2013).

From the liability standpoint, it can be argued that library organising systems such as RDA, FRBR and FRAD are the most flexible frameworks for content description of digital resources. They also serve the needs of libraries when organising traditional resources and enable institutions to introduce efficiencies in data capture and storage retrieval. These systems are designed for managing the construction of catalogues and other lists in general libraries of all sizes.

2.2.2 Library classification tools

Guenther (2002:120-131) contends that classification schemes include all knowledge organisation systems that provide ways to separate entities into broad topic levels thereby

providing a hierarchical arrangement of numeric or alphabetic notation to represent broad topics. Opaleke et al (2006) define library classification systems as "the classification systems which enable cataloguers to assign classification numbers to an item so that it can be shelved with other items on the same subject". They further indicate that library classification schemes serve as a bridge between the users' information needs and the material in the collection. Opaleke et al (2006) also note that, with these systems, library users are able to identify information sources of their interest with or without prior knowledge of its existence. However, the function of the classification number is to direct the users to a specific subject and to group items on the same or related subjects together. Classification numbers also guide the user throughout a discovery process whether through browsing or direct searching, themes on a Web page or a site search engine. Furthermore, the classification numbers enable the library organisers to answer questions regarding the scope of a collection and how to access it.

Guenther (2002:120-131) contends that, since the process of classification of library resources can also be done electronically, cataloguers are able to perform a keyword search in order to locate the possible classification numbers through captions, notes or index terms. Guenther (2002:120-131) further articulates that, with the use of the library classification systems, the cataloguers are able to trace the information of synthesised numbers to assist cataloguers in classifying materials. In addition to that, online classification may assist the cataloguer in obtaining consistency in the assignment of classification numbers to library materials. Classification schemes include the Library of Congress Classification Schedules, the Dewey decimal classification, the Universal Decimal Classification and Colon Classification schemes.

Chan (2007:326-331) describes the Dewey Decimal Classification system (DDC) as one of the classification systems used by libraries to organise library resources. Chan (2007:326-331) defines the DDC as "a numeric classification system used by most libraries to classify information resources in certain subject groups so that they are easily accessible to users".

Dewey Services (2009) indicates that DDC is available directly from the Online Computer Library Centre (OCLC) Dewey Services. The OCLC Dewey Services own all copyright rights and licenses for a variety of uses. This system is a general knowledge organisation tool that is continuously revised to keep pace with knowledge and it is in its 23rd edition. It is available in print and in Web as Web-Dewey versions. Libraries of every type apply Dewey numbers on a daily basis and share these numbers through a variety of means including World-Cat and the

OCLC Online Union Catalogue.

As noted by the Dewey Services (2009), one of Dewey's great strengths is that the system is developed and maintained in a national bibliographic agency at the Library of Congress. It is for this reason that cataloguers know and understand that, regardless of a discipline and subject that library materials may appear, these materials still need to be catalogued and placed in a relevant class. According to Kaplan (2012) and Fandino (2008), though the DDC is used worldwide, DDC is criticised as it is difficult to use, expensive and time consuming. Subject headings are biased towards an Anglo-American world and it is seen as a proprietary system which is licensed by Online Computer Library Center (OCLC) only.

McIlwaine (2010) also suggests that the use of the Universal Decimal Classification (UDC)/ Brussels Classification to classify library materials is important because it is a disciplinary classification system covering the entire universe of knowledge. This type of classification can also be described as “aspect or perspective” which means that concepts are subsumed and placed under the field in which they are studied (Slavic 2008). Thus, the same concept can appear in different fields of knowledge. It is the world's foremost multilingual classification scheme for all fields of knowledge and a sophisticated indexing and retrieval tool. It is a highly flexible classification system for all kinds of information in any medium.

Slavic (2008) explains that, when using UDC, library resources are arranged decimally using Arabic numerals. Every number is thought of as a decimal fraction with the initial decimal point omitted in order to determine the filing order. An advantage of decimal notational systems is that they are infinitely extensible and, when new subdivisions are introduced, they need not disturb the existing allocation of numbers. For ease of reading, a UDC notation is usually punctuated after every third digit. Slavic (2008) further postulates that, the UDC notations enhance hierarchically and syntactically expressive features that make the scheme easier to browse and work with. The code/notation itself is independent of any particular language or script, consists of Arabic numerals and common punctuation marks and the accompanying class descriptions have appeared in many translated versions. This code is commonly used in classification schemes to represent a class, that is, a subject and its position in the hierarchy, to enable mechanical sorting and filing of subjects.

Slavic (2008) distinguishes UDC from the Dewey Decimal Classification System because of

its expansions on the use of various symbols in addition to Arabic numerals which result in exceedingly long notations. In spite of the differences between the Dewey and Universal Decimal Classifications, they are fundamentally the same because they both use Arabic numerals which are arranged decimally in a logical hierarchical arrangement.

Guenther (2002:120-131) rightly observes that online access to the classification numbers saves time for the cataloguer. For instance, the cataloguer may perform a keyword search to locate the possible classification numbers quickly through captions, notes or index terms. With this system, the cataloguer is able to trace the information of synthesised numbers to assist in classifying materials. In addition, online classification may assist the cataloguer to obtain consistency in the assignment of classification numbers to library materials.

To sum up, the present information environment is largely composed of digitally available materials due to the rapid evolution of web technologies, thus creating an online information world. There is an ever-increasing flow of information resources published electronically and these resources require new kinds of access. The evolution of web technologies and an ever-increasing flow of electronic information resources have prompted serious concern in the cataloguing community as the libraries have to remain relevant by creating effective catalogue records for online resources. The digital environment has also changed the formats of publishing information resources and that makes the treatment of non-book formats using the model meant for cataloguing print materials less useful. The fact that the publication of information resources is appearing in multiple formats such as print, eBook, audio and video in the market shows clearly the impact of the digital age in the way information is being published.

2.2.3 Abstracting and indexing tools

Brown (2010) defines an index as “a systematic arrangement of entries designed to enable users to locate information in a book, journal, audiotape, computer film and other documents”. Whereas Perera (2012) describes an index as “an alphabetical list of references composed of a list of topics, people, titles, giving the location of where they are mentioned in a text”. Brown (2010) argues that an indexing process involves organising, classifying and providing an index to data according to a specific schema or plan such that information becomes more presentable and accessible and easier to retrieve.

Bello (2007) contends that the process of indexing serves the purpose of grouping together information on topics scattered by the arrangement of the document and organises headings and their modifying subheadings into index entries. Crisp and Toale (2008) further assert that indexing makes it easier to avoid users getting lost in a myriad of information. An index can be used to direct users seeking information under terms not chosen as index headings to headings that have been chosen using "see references". An index can be used to suggest to users of a topic to look up related topics also by means of "see also". Thus indexing literally affords a means for arranging entries into a systematic and helpful order and identifying or locating potentially relevant information in the document or collection being indexed. The process is made possible through the use of subject headings.

Reitz ([sa], sv 'subject heading') views a subject heading as

> the most specific word or phrase that describes the subject, or one of the subjects, of a work, selected from a list of preferred terms (controlled vocabulary) and assigned as an added entry in the bibliographic record to serve as an access point in the library catalogue. A subject heading may be subdivided by the addition of subheadings and sub-subheadings (example: Libraries—History—20th century) or include a parenthetical qualifier for semantic clarification, as in Mice (computers).

Miller and Sears (2004) contend that a subject heading is an example of classifications and categories which emphasise the creation of subject sets. Subject headings may be represented in individual bibliographical records or in classification systems or as separators in card catalogues. Hodge (2000:7) observes that subject heading lists can be extensive and cover a broad range of subjects. These subject headings tend to be coordinated with rules for how they can be joined to provide concepts that are more specific. And by adding subject headings to a catalogue record, the catalogue user is able to retrieve all items on a given subject in a consistent manner.

The use of subject headings in this regard gives the person searching for items in the library a way to find information by the topics that are covered in those items. Subject heading lists are used to provide consistency in the terms used to describe the subjects or topics covered by the materials in the library. Having an already established listing of subject heading terms means that the cataloguer does not need to think of what word to use to describe the topic of the item being catalogued, because the correct word or phrase is chosen from the list being used and

consistency is provided for all items on the same topic in the library. The most commonly used sets of subject headings are: the Library of Congress Subject Headings (LCSH) and Sears List of Subject Headings.

Denda (2005) defines LCSH as "a controlled vocabulary used for indexing, cataloguing, and searching for bibliographic records in library catalogues and electronic databases". Denda (2005) further postulates that, LCSH provides an alphabetical list of all subject headings, cross-references and subdivisions in verified status in the Library of Congress subject authority file. They are assigned by the Library of Congress to American books and via exchange of MARC records searchable in many libraries across the world and they are updated daily in Classification Web and in the latest print edition. Drabinski (2013) also points out that LCSH facilitates the uniform access and retrieval of items in any library in the world using the same search strategy and the LCSH thesaurus of correct headings have been applied to the item by the library.

According to Drabinski (2013), LCSH is criticised for its difficulty of use and its information retrieval effectiveness in an online environment. The Library of Congress (LC) also points out that the headings are not based on comprehensive principles and they are not intended to cover the universe of knowledge. Despite these claims and criticisms, LCSH remains the most popular choice for subject access in digital libraries

Satija (2015) also views the Sears List of Subject Headings as a tool that can be used for indexing library resources. Satija (2015) and Weihs (2015) describes Sears as "a thesaurus-like database which delivers a core list of headings, together with patterns and examples to guide the cataloguer in creating further headings as needed". It is recommended that the Sears List of Subject Headings be one tool that is at the forefront of information discovery and academic library asset management workflow and the foundation of the information discovery process. This is supported by Weihs (2015) who further suggests that Sears stands out as a proven, user-friendly solution to meet the challenges associated with information identification and utilisation in the context of subject heading/classification governance today.

Adamich (2014) and the Sears List of Subject Headings 21st Edition (2014) postulate that the Sears List has served the unique needs of small and medium-sized libraries, suggesting headings appropriate for use in their catalogues and providing patterns and instructions for adding new headings as they are required. In addition to that, the successive editors of the list

have noted the need to accommodate change while maintaining a sound continuity, that is, the new and revised headings in each edition reflect developments in the material catalogued, in the use of the English language and in cataloguing theory and practice. The aim is always to make library collections as easily available as possible to library users.

Satija (2015) and Weihs (2015) posit that Sears strives to offer a basic list that includes many of the headings that are likely to be needed in small libraries together with patterns and examples that will guide the cataloguer in creating additional headings as needed. Furthermore, they suggest that these headings for new topics can be developed from the Sears List in two ways, that is, by establishing new terms as needed and by subdividing the headings already in the list. The instructions for creating new headings are based on the pattern in Sears and the sources for establishing the wording of new headings are given in the Principles of the Sears List, also known as the front matter. However, various kinds of subdivisions and the rules for their application are also discussed in the front matter.

Adamich (2014) and Intner (2015) assert that Sears offers a basic list that includes many of the headings most likely to be needed in small libraries together with patterns and examples that will guide the cataloguer in creating additional headings as needed. By being flexible and expandable, Sears has been able to fulfil the needs of various kinds of libraries. Satija (2015) and Weihs (2015) note that the degree or level of specificity required for a collection depends entirely on the material being collected. It is therefore the role of the cataloguers to know their collection, know its emphases and know how to assign subject headings to the library collection.

Intner (2015) contends that the subject headings within Sears are meant to correlate to the classification scheme used within the well-known Dewey Decimal System. This is supported by Adamich (2014) who says that “Sears list of subject headings make it easier for libraries to find the subject headings they can use to further classify their collection”. Adamich (2014) further postulates that “the combination of Sears and Dewey is therefore a good contextual grouping for web-savvy users who are looking for a logical approach to putting similar materials together in a structured framework”. Hodge (2000:7) further contends that the use of subject headings serves a purpose in Boolean searches as ways of limiting too broad searches as it increases recall in an older database considerably by verbalising coded subject headings and making them searchable. Subject headings allow the catalogue user to retrieve all items on

a given subject in a consistent manner because the lists can be extensive and may cover a broad range of subjects but they are less effective for indexing or searching.

The above discussion can be summarised with a statement by Omekwu (2007:20) who explains that library organisation systems in the shared environment are very important for both location and co-location purposes. Library organisation systems and processes enhance the organisation of library materials for the purpose of retrieval and for managing a collection as they allow the organisers to answer questions regarding the scope of a collection and what is needed to round it out.

2.2.4 Technology for organising library resources

Johnson, Trabelsi and Tin (2009) believe that remote users require more than just access to library resources. They argue that remote users also require expertise to make sense of library systems and research tools in the research process. They further contend that it is the responsibility of the librarians and cataloguers to see to it that library users have access to library services and resources to achieve their academic goals and to pursue their instructional and research goals, and also to acquire and enhance lifelong learning skills. Johnson et al (2009) also recommend that easy location of information enhances access and retrieval of library resources in any library.

Dourgarian (2011) rightly observes that an assessment of the demand for library services is therefore crucial as it is the manifestation of what happens in the library. Through these assessments and empirical observations, librarians are able to determine the patterns of the use of library services within the library. Dourgarian (2011) further contends that the characteristics of demand warrant attention because they are manifestations of user behaviour and, as such, deserve to be central in the design of library services. Library user demand drives resource development and as such the latter is informed by statistics on user demands.

Tuomi and Namaala (2007), on the other hand, assert that modern technologies, particularly information and communication technologies (ICTs), affect the organisation of library information resources. Roush (2005) indicates that ICTs facilitate the provision of information resources in various forms and formats including printed, electronic and network. Online catalogues have revolutionalised the way in which materials are made available and accessible in the age of information technology.

Bamidele, Saturday, Omeluzor and Hannah (2013) believe that technology, in this computer age, is being upgraded frequently and increases the complexity of organising library information resources. This is because in a work place, ICT can be a double-edged sword because, according to Wang, Shu and Tu (2008) and Tarafdar, Tu, Ragu-Nathanand Ragu-Nathan (2007), ICTs may have both a positive and negative impact on the relationship between librarians and library patrons. Wang et al (2008) and Tarafdar et al (2007) reveal that the positive side of ICTs is that they increase access to information, allow greater flexibility, improve efficiency and increase communication. While, on the other hand, the negative side of ICTs create increased demands and stress amongst librarians and library patrons by creating expectations of greater productivity and accessibility as well as creating technical problems between them.

Bamidele et al (2013), whilst evaluating the use of ICTs in the library environment, found that the technological changes are influencing the basic settings of academic libraries which result in the need for new or expanded skills, abilities and knowledge of librarians. They further indicate that these changes include the implementation of new technologies such as computer-based cataloguing, automated circulation systems, online access to machine-readable bibliographic databases and the development and formalisation of personnel policies and procedures**.**

Anunobi and Okoye (2008:1) assert that academic institutions are also subscribing to electronic journal databases so that they can provide research and scholarly writing software, computer workstations or computer labs for students to access journals, library search databases and portals, institutional electronic resources, internet access and course or task related software, word processing and spreadsheet software. As a result, librarians need to have expanded skills, abilities and knowledge for operating these technologies effectively.

It is therefore clear that the advent of the ICTs and the use of various information technologies in the organisation of library resources by cataloguers can save them time while library resources are made available and more easily accessible.

2.3 Skills for organising library information resources

Ahmad and Yaseen (2009) postulate that, “both the librarians and cataloguers in the 21st century must be aware of emerging technologies and have necessary technical skills such as

the knowledge of HTML, Networking, scripting languages, the ability to deal with the back-end of the OPAC, the ability to translate library services into the online medium, the ability to troubleshoot basic computer and printer problems, or just a good healthy knowledge of emerging technologies".

Orme (2008:630) contends that a mixture of discipline-specific knowledge, generic skills and personal competencies is required of library and information professionals in a digitally-oriented environment. Library and information professionals require personal, generic and discipline-specific skills to be able to exercise effective and efficient working in the digital era dynamically (Nonthacumjane 2011:280-286).

2.3.1 Discipline knowledge

Partridge and Hallam (2004) argue that disciplinary knowledge and generic capabilities make up the genome (order) of the successful information professional in the information age. Researchers such as Choi and Rasmussen (2009:465), Gerolimos and Konsta (2008:697), McCarthy (2005:45), Middleton (2003:42) and Missingham (2006:266) reveal that the new digitally oriented academic library is a renewed conceptualisation of the traditional library and information science resources and services now supported and driven by new technologies. Hence, in a digital academic library environment, the core knowledge and skills of traditional librarianship are important but need to be augmented by new technological knowledge (Choi & Rasmussen 2009:465).

Tammaro (2007:237) points out that librarians responsible for cataloguing and classification of library resources must acquire a thorough knowledge of the major schemes and their working principles. This will enable them to adapt and accommodate existing metadata schemes and to possess the basic expertise to construct new schemes. According to Choi and Rasmussen (2009:463), digital library applications are closely linked to web technology.

Raju (2014) declares that

> As modern academic libraries move into the creation of digital content and its organisation and preservation through metadata creation and management to make their special collections more accessible through the Web, the need for knowledge of the following technologies becomes critical. This includes the use of digital

> library architecture and software, technical and quality standards, HTML coding, general computer skills and computer literacy, database development and management, Web mark-up languages such as SGML and XML, and Web development and design.

2.3.2 Generic skills

Partridge and Hallam (2004) define generic skills as

> transferable skills or graduate attribute and life skills such as communication and interpersonal skills, critical thinking, problem solving and teamwork which allow individuals to function not only in disciplinary or subject domains but also in employment.

Reeves and Hahn (2010:112) further reveal that communication skills are the most highly ranked generic skills which enhance teamwork in a work place. Choi and Rasmussen (2009:464) posit that the demand for interpersonal skills is a reflection of the reality that team-based approaches are common practices in digital projects and that interpersonal skills are a key to success in team efforts. They note that interpersonal skills involve thinking through practical solutions to integrate technologies within existing services or technology infrastructure, designing, managing and maintaining interfaces and systems. It is therefore important for librarians to seek opportunities to train in new or unfamiliar information technologies in order to support their team, customers and colleagues to utilise technology fully.

Materska (2005) asserts that librarians need to be familiar with different types of information resources in every field and format so that they can evaluate various resources and guide specialists of different fields. Librarians need to be able to use various information and communication technologies to disseminate information to colleagues, skills in supporting electronic educational programmes, knowledge for organising seminars and educational programmes for knowledge-based organisations and participating in organisational learning models through networks.

Ocholla and Shongwe (2013:39-42) in their content analysis of job advertisements in South Africa over a four-year period (2009-2012) reveal that information technology is very useful

in libraries because more information services, particularly in academic and research environments, become IT or e-access and e-service dependent. Parallel to the development of digitisation and curation of unique collections, the academic library in the digital era is also challenged by an emerging trend of research data management and curation. The emergence of e-Science and e-Research is accompanied by the generation of vast amounts of research data in need of collection, preservation, management and provision for future access to enable re-using, re-purposing and re-combining of library resources. Luce (2008), in Raju (2014:163) explains metadata as "an essential component of research data and research or academic libraries, because their traditional knowledge base are well positioned to lead the development of standardised ontologically rich automated metadata for research data sets". Again, the creation and management of metadata allows academic libraries to take responsibility for the curation and preservation of data for its re-use when needed. Olorunfemi, Mostert and Ocholla (2012) contend that ICTs enable library and information science professionals to achieve a wide variety of academic, work-related and personal goals and ensure that library users are able to cope with the information intensive world. Olorunfemi et al (2012) further assert that it is therefore the responsibility of librarians to have knowledge of the structure of the database and the instructions which must be put into the search engine as well as ways in which instructions are linked to one another.

Rockman (2004) suggests that both librarians and library patrons must be able to recognise when information is needed and have the ability to locate, evaluate and use the needed information effectively by making use of information technologies. This is because information technology is the backbone of effective access and use of information resources (Rockman 2004). It is therefore important for librarians to act confidently, critically and have personal self-directed learning and not be paralysed by information overload.

Ahmad and Yaseen (2009) postulate that librarians are facing problems using the new computers and scanners, fixing the printer, and troubleshooting any other technology problems they may be having. They further indicate that many librarians cannot troubleshoot information technologies because, when librarians have to troubleshoot technical problems, they refer them to the IT team in the university because they do not have enough computer knowledge to solve the problem.

2.3.3 Personal competencies

Choi and Rasmussen (2009:457) are of the view that personal attributes/competencies are important in the library and information science (LIS) work environment as they include the capacity for continuous learning, flexibility, fostering change and the capacity to work independently. Enthusiasm and self-motivation, reflective thinking and the ability to respond to others' needs also form part of the above mentioned personal attributes (Nonthacumjane 2011:283).

Reeves and Hahn (2010:118) posit that other studies regarding job requirements in the LIS professional sector, including the academic library sector, demonstrate the need for new generation LIS professionals to be multi-skilled. They further suggest that, in order for LIS professionals to mediate the digital academic library environment effectively, they need to embrace a blend of discipline-specific knowledge, generic skills and personal competencies.

Partridge and Hallam (2004) also reiterate that generic capabilities, including personal competencies and discipline knowledge, are quite significantly intertwined and interrelated and vital for success as a library and information professional in the 21stcentury. According to Orme (2008:629-630) and Reeves and Hahn (2010:115), librarians require experience, specific discipline knowledge, personal competencies in disciplinary and/or generic skills particularly in technical service functional areas such as those requiring cataloguing and metadata experience.

It has therefore become increasingly important that librarians keep up with technology and demonstrate the need to be multi-skilled personnel for new generation LIS professionals (Orme 2008:624; Reeves & Hahn 2010:118). Ahmad and Yaseen (2009) highlight that librarians are therefore expected to be able to use various technologies in the library so that they can learn what problems commonly occur and to fix them, if necessary. They further suggest that librarians need to do online searching and be able to go beyond basic catalogue and database searching. Furthermore, librarians must acquire knowledge of using search engines and use them well to find quality online resources. It is also the duty of librarians to help patrons set up e-mail and teach basic internet skills and be able to troubleshoot problems that users experience when accessing online library resources to the extent where they can figure out if the problem is on the library's side or the user's side (Ahmad & Yaseen 2009).

In summing up the above discussion, librarians responsible for cataloguing and classification of library resources must acquire a thorough disciplinary knowledge of the major schemes and their working principles to enable them to adapt and accommodate existing metadata schemes to use new schemes for organising library resources. It is also important that library and information science professionals acquire communication and interpersonal skills, critical thinking, problem solving and teamwork which allow them to function not only in disciplinary or subject domains but also in employment.

2.4 Barriers and enablers experienced in accessing information resources

Hundie (2003:557) and Campbell (2006:17) claim that original cataloguing has always been a very expensive task in terms of time and energy of professional cataloguers and that this has resulted in problems of backlogs, outsourcing and subscriptions to expensive databases. Nowadays, with the advent of the internet in libraries, cataloguing tools and resources available on the internet are limitless, knowledge and use of these tools by cataloguers can save time and money for libraries.

2.4.1 Enablers of access information resources

Byrum (2000:3) contends that the benefit of information organisation is that each record or item of information is organised for effective use, dissemination, maintenance and disposition. A record is placed within a larger framework and its context is defined within the organisation's overall information landscape. This allows electronic and traditional systems to deal with each individual record. Online Computer Library Center (2011) and Omekwu (2007:20) further indicate that the use of Online Public Access Catalogue's (OPAC's), computerised cataloguing and classification tools make processing and organisation of library collections more accurate, interesting and faster. They have evolved into direct access to the MARC computer files during the search process and enhance usability over traditional card formats because they do not need to be sorted statically but the user can choose author, title, keyword, or systematic order dynamically. OPACs allow searching for any word in a title or other field thereby increasing the ways to find a record. They allow links between several variants of an author's name hence information becomes more accessible to information users.

Nkanu and Okon (2010) assert that the use of ICTs in the library facilitate the provision of information resources in various forms and formats which include printed, electronic, and

networking, for instance, the web, e-mail, fax, and electronic transfer of scanned documents using the internet. They further contend that information technologies also help catalogue users find the information they need more easily. ICTs are a flexible framework for content description of digital resources that serve the needs of libraries in organising traditional resources and introducing efficiencies in data capture and storage retrievals. ICTs also provide a set of guidelines and instructions on formulating data to support resource discovery of all types of content and media.

Adegbore (2011) notes that ICTs enable libraries to provide for better service and satisfy diverse user needs because they enhance the transformation of libraries into digital and virtual libraries. Adegbore (2011) asserts that printed resources are being changed into e-books, e-journals, full-text databases, indexing and abstracting databases and reference databases, that is, biographies, dictionaries, directories, encyclopaedia and e-zines. This has increased the global dissemination of information. Adegbore (2011) also claims that electronic resources are easily accessible in remote areas and they solve storage problems, control the flood of information and their updates are significantly more efficient. Adegbore (2011) further contends that ICTs have revolutionised the way libraries operate because the cost of materials in soft copy or digital are much cheaper and delivery is almost instant after payments unlike waiting for months for a printed book to be delivered.

The International Federation of Library Associations and Institutions or Johnson, Evensen, Gelfand, Lammers, Sipe and Zilper (2012) also note that the rapid growth of new technologies has changed the communication process and reduced the cost of communication for individuals. Johnson et al (2012) are of the view that the internet and the universal adoption of the World Wide Web have enabled the faster, convenient and more extensive distribution of scholarly communications. They also assert that publishing sectors are increasingly migrating to publishing online and that the impact of this is felt all over the world therefore academic institutions are left with no alternative except to subscribe to electronic resources.

Armstrong, Croft, Kok and Lener (2010) and Sethi (2010) attest that the use of the internet and related network technologies have a positive impact on scholarly communities since they are changing the ways in which scholars seek information, communicate with each other, conduct research and distribute research results. Armstrong et al (2010) and Sethi (2010) agree that the internet provides the library with a means of delivering electronic resources purchased for the

library's collection to its users. It enables the library to connect to sites that it has determined meet the selection criteria in the library's materials selection policy and allows library users to reach sites that are beyond the scope of the library's collections and the mission of the library.

In the view of the enablers experienced in accessing information resources, the use of various ICTs such as the internet and the World-Wide Web (WWW) encourage the library users to connect to all kinds of networks across the globe, search the online catalogues of many libraries using FTP and obtain vast amounts of electronic information for their needs (Armstrong et al 2010). To sum up, various information technologies enhance access and retrieval of information which is stored on the Web in any format including text, graphics, sound and video.

2.4.2 Barriers for access information resources

Libraries are viewed as store houses of information which also exist in virtual reality. In this kind of space, there must be wireless access to the library network which enables computers, internet and other information technologies to provide all the software, services and resources to enhance the online environment. In other words, computers must provide the processing, storage and retrieval capabilities, while telecommunications must provide the capabilities for the transfer and/or communication of data from one workstation to another.

Ahmad and Yaseen (2009) are of the opinion that, for the librarians to keep up with information technologies, they need to acquire certain basic technical skills, Hypertext Mark-up Language (HTML), networking, scripting languages, the ability to deal with the back-end of the OPAC, the ability to translate library services into the online media and the ability to troubleshoot basic computer and printer problems.

As noted by Armstrong et al (2010) and Materska (2005), some of the challenges facing both librarians and library patrons in accessing electronic resources include access control, workload and shortage of personnel to assist users, technical support and security, volatility in coverage of journal titles by resource providers, lack of formal orientation programmes, electricity failure, few resources such as computers, difficulty in reservation of sources, limited access especially through use of IP authentication, slow internet connectivity, complexity in searching and overlapping coverage of journals. Following the argument by Han and Goulding (2003), in a networked environment, quality of staff, their performance, their ability to run a one stop service effectively from technical to readers information services and the availability of

digitised collections have an impact on service delivery beyond the traditions of library practice. Han and Goulding (2003) further assert that there is need for not only an intelligent digital library system but also for highly skilled personnel staff responsible for effective personalised assistance.

Inadequate number of computers has also been pointed out by Mwiria,Ng'ethe, Ngome and Wesonga (2007:52) as one of the key challenges facing universities. This researcher observes that universities require adequate computer facilities to enhance access and retrieval of library resources. Other challenges include poor connectivity, low bandwidth and limited wireless connection hotspots. Institutions must be networked sufficiently to provide services to satellite campuses and services, such as the use of OPAC, must be made available to library users so that they can identify resources through the internet. Wachira (2013 citing Kiondo 2004:54) reveals that

> Access and availability of personal computers influences the use of e-resources but notes that, while most of the staff access computers directly from their offices, most students access the computers from internet cafes, at the university library, public access rooms or computer labs in the university.

This implies that, in spite of the availability of e-resources and e-services, access to a networked PC is also a challenge. Mwiria et al (2007:52) postulate that other causes of power failure are vandalism and illegal connections causing overload. They assert that vandalism and illegal connections cause physical damage to equipment or lead to a loss of data and, as a result, service delivery is hampered due to lack of connectivity. Mwiria et al (2007:52) suggest that the solution to power failure is for libraries to generate an alternative power supply to complement the national power supply. However, the cost may be affected by the cost of fuel given that libraries do not generate income to support their recurrent expenditure. It is on this note that the study attempted to find answers to a number of issues about measures that could be put in place to improve the organisation of library information resources. These include workshops, seminars, educational programmes, in-service training sessions, outsourced training and inter-organisational congresses.

2.5 Measures to improve organisation of library information resources

Afshar and Nozari (2006) suggest that libraries must organise seminars, educational

programmes and in-service training programmes for librarians so that they are familiar with methods of organising information. Librarians will then be able to use different media for disseminating information to other colleagues and create new knowledge by composing disseminated knowledge. Afshar and Nozari (2006) claim that librarians need to have relevant knowledge for supporting electronic educational programmes for organisations. This knowledge will make them familiar with different types of information resources in every field and every format so that they can guide library users of different fields to access information resources relevant to their information needs.

Asadikiya (1997) postulates that, "in-service training and educational programmes relate to training and continuous professional development. These programmes assist librarians to adapt to change and fulfil their role in the age of digital knowledge". Furthermore, Esfandiari and Tosic (2005) and Sacchanand (2002) agree that inter-organisational congresses and joint workshops give librarians opportunities to exchange and share knowledge using their particular skills and expertise for organising library resources. They further posit that such congresses prepare the way for projects such as resource sharing and interlibrary loans, and create a collaborative environment among librarians. As a result, libraries with better resources may help to equip other libraries by creating agreements among managers during these meetings. Sacchanand (2002) also contends that libraries should also conduct remote education for librarians because remote education gives updates on tools, techniques and skills for acquiring and updating knowledge. Asadikiya (1997) also contends that the educational programmes aim at improving the quality of library services, updating and familiarising librarians with relevant scientific matters and improving the professional abilities and skills of librarians.

Bearing in mind that libraries are store houses of information which also exist in virtual reality, seminars and joint workshops, educational programmes and in-service training as well as inter-organisational congresses are essential to the improvement of library services.

2.6 Summary

This chapter presented a discussion on the aspects related to the strategies and skills for organising library information resources. These include various tools for organising, classifying and indexing various library resources, the effectiveness and the impact they have on organising library resources and in providing access to information. The chapter also emphasised the skills that librarians must possess for them to be able to organise library

information resources and the measures that could be put in place to improve the organisation of library information resources.

The next chapter focuses on the research methodology adopted to carry out the study. A description of the research approach, research design and research methods/techniques, population and sampling, data collection and data analysis are presented. Measures to ensure validity and reliability and ethical considerations are also presented in Chapter Three.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

Chapter Two discussed the review of the literature consulted for this study and the discussions that took place in the various literature sources. This chapter outlines, explains and justifies the research methodology that was used to undertake the necessary investigation to address the questions raised as outlined in 1.9.

According to Brink, Van der Walt and Van Rensburg (2005:191), research methodology entails "the methods that the researcher will use to explore the research problem or to answer the research question". Leedy and Ormrod (2010:12) view research methodology as "a general approach or procedural framework that the researcher takes in carrying out the research project". To some extent, it dictates the particular tools the researcher selects. It enables the researcher to focus clearly on the facts that the study will add to the body of accumulated knowledge.

O'Sullivan, Rassel and Berner (2008:25) outline the steps that a research methodology should follow. These include:

- Deciding when and how often to collect data.
- Developing or selecting measures for each variable.
- Identifying a sample or test population.
- Choosing a strategy for contracting subjects.
- Planning the data analysis.

This chapter covers research approaches, the research design and the research methods/techniques utilised as outlined in Figure 3.1. This chapter also provide the population and sampling, data collection instruments, data analysis and ethical considerations.

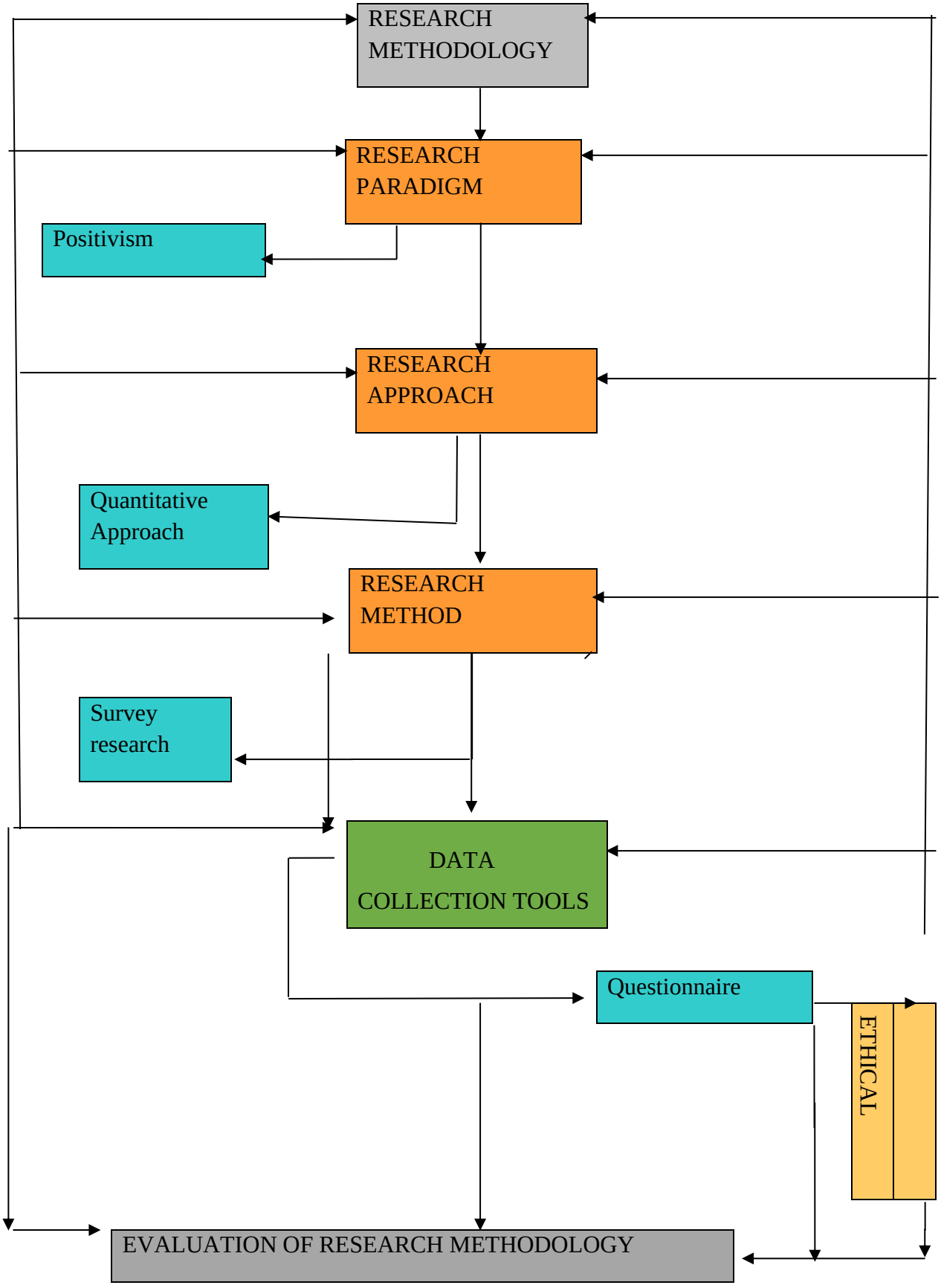
RESEARCH METHODOLOGY
RESEARCH PARADIGM
Positivism
RESEARCH APPROACH
Quantitative Approach
RESEARCH METHOD
Survey research
DATA COLLECTION TOOLS
Questionnaire
ETHICAL
EVALUATION OF RESEARCH METHODOLOGY

Figure 3.1: Methodology framework

3.2 Research approaches

Babbie and Mouton (2009) define research approaches as "the plans and the procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation". The overall decision involves the choice of approach that should be used to study a topic. The philosophical assumptions, research designs and specific research methods of data collection, analysis and interpretation that the researcher brings to the study inform this decision.

According to Ngulube (2005), the selection of a research approach is based on the nature of the research problem or issue being addressed, the researcher's personal experiences and the audiences of the study. Thus, research approaches, research designs and research methods are three key terms that represent a perspective about research that presents information in a successive way from broad constructions of research to the narrow procedures of methods. Babbie and Mouton (2009) note that there are three research approaches, namely: qualitative, mixed-method and quantitative approaches. For the purpose of the study, the researcher adopted a quantitative approach to collect and analyse data from the librarians, students and academics.

Babbie and Mouton (2009) define quantitative research as "a formal, objective, systematic process for obtaining information about the world". They further indicate that this approach is used to describe, test relationships and examine cause/effect relationships between variables and that it is typically associated with hypothesis-driven, experimental approaches. A quantitative research takes a particular approach to theory, answering research questions and/or hypotheses, setting up a research strategy and making conclusions based on the results obtained. It is viewed as a systematic subjective approach used to describe life experiences and to give them meaning (Connaway & Powell 2010: 77).

Kowalczyk (2015) states that quantitative research is a type of empirical investigation which focuses on verifiable observation with the overall goal of making generalisations from the sample being studied to a wider population as well as conveying numerically what is being seen in the research in order to arrive at specific and observable conclusions. The approach draws heavily on statistical analysis techniques to examine the data collected, whether

descriptive or inferential in nature. The approach tries to assess the quality of the findings in terms of reliability, internal and external validity, and construct validity (Creswell 2009; Kowalczyk 2015).

Klazema (2014) argues that quantitative research can be broken down into three major procedures that include "observing and explaining something that happens, collecting information and analysing the information". Explaining occurrences can be done by making observations about something that is unknown, unexplained or new, investigating current theory surrounding the problem or issue, hypothesising an explanation for those observations, making predictions of outcomes based on hypotheses and formulating a plan to test the prediction. The search for an explanation can be presented in the form of a question or as a hypothesis. In the case of a hypothesis, the search for an explanation is made as a statement to be proved or disapproved, depending on the goals of the research.

After observing and explaining occurrences, it is then that data can be collected and processed. Predictions must be verified to find out whether they are correct and, if not, a new hypothesis must be formed based on the new knowledge. The last step of the research revolves around using mathematics to analyse the data collected. This is done with statistics. The researcher must then verify the findings, make the final conclusions and then present the findings in an appropriate form for the audience (Klazema 2014).

The researcher is of the view that quantitative approach enhances the examination and verification of data collected making use of numerical statistical analysis techniques to arrive at specific and observable conclusions studied from a wider population. Connaway and Powell (2010: 77) support the notion that the strength of quantitative approach relied on quantifiable measures of variables of interest, formulation and testing of hypothesis, and the drawing of inferences from samples of the population. The researcher was able to report the findings of the study using statements, data, tables and graphs that address each research question and/or hypothesis.

3.3 Research design

According to De Vos (2008:323), research design is seen as "a detailed plan according to which the research is conducted" while Mouton (1996:107) describes a research design as "a set of

guidelines and instructions followed in addressing the problem and to seek answers to research questions". According to Creswell (2012), a research design is the blue print of the study which defines the study type such as descriptive, correlation, semi-experimental, experimental, review and meta-analytic. However, a researcher may choose to adopt a qualitative research approach, mixed method research approach or quantitative research approach, depending on the type of approach adopted for the study.

Quantitative research takes a particular approach to theory, answering research questions and/or hypotheses, setting up a research strategy and making conclusions from results. A systematic subjective approach is used to describe life experiences and give them meaning and it involves four basic forms of research designs, namely, correlation, causal-comparative, experimental and survey (Kowalczyk 2015).

For the purpose of the study, the researcher adopted a survey research design. A survey research design uses interviews, questionnaires and sampling polls to get a sense of behaviour with intense precision. It allows researchers to judge behaviour and then present the findings in an accurate way. Survey research can be conducted around one group specifically or used to compare several groups. When conducting survey research, it is important that the people questioned are sampled at random.

A survey research design seeks to identify principles about the sample design, data collection instruments, statistical adjustment of data and data processing, and a final data analysis that can create systematic and random survey errors. Survey errors are sometimes analysed in connection with survey cost.

Survey research uses data collection tools such as personal/face-to-face interviews, telephone interviews and questionnaires. The information so obtained may be concerned with the prevalence, the distribution and/or the interrelationships between variables within these groups. A survey allows for more accurate findings across a greater spectrum of respondents. The findings are expressed in a percentage and, as a result, a researcher must work with statisticians and field service agents who are reputable (Polit & Hungler 1999).

According to Kowalczyk (2015), one advantage of a survey is that "a large amount of information is collected relatively quickly because the researcher does not need in-depth background about the participants to collect their opinions". However, the drawbacks of a

survey method include making decisions on how to identify and select potential sample members, contact sampled individuals and collect data from those who are hard to reach or reluctant to respond. Other disadvantages include: evaluating and testing questions, selecting the mode for posing questions and collecting responses, training and supervising interviewers, checking data files for accuracy and internal consistency, and adjusting survey estimates to correct for identified errors.

3.4 Population and sampling

Kowalczyk (2015) describes a population for a study as "that group (usually of people) about whom the researcher wants to draw inferences". However, with limited time and money, researchers are unlikely to study the entire body of relevant facts about the whole group of people under investigation. Therefore the findings and conclusions in survey research are based on information gathered from a limited number of people from whom generalisations can be made about the whole number.

The population for this study comprised 39 librarians, 9000 students and 700 academics at the University of Venda as outlined in the University of Venda Annual Report (2013). From this population, a sample was drawn. According to Polit and Beck (2008:536), a sample "consists of only those units from the population of interest that are under study". According to Maxwell (2013:96), it is very important to select the sample carefully in order to select an unbiased and representative sample. In order to do this, sampling techniques are used.

Leedy and Ormrod (2005:183) are of view that when choosing a sample, the researcher often has to prepare a comprehensive list of all units in the target population which is called a "sampling frame". The sampling frame is defined as "the list or data bank that represents all elements/units/participants of an accessible target population used as a basis for random sampling of participants" (Leedy & Ormond 2005:183). It is a list of all the elements in the population from which the sample is drawn (Stommel & Wills 2004).

For the purpose of this study, the researcher obtained the list of all library sections rendering library services at the University of Venda, the total number of academics and the total number of students per faculty (University of Venda Annual Report 2013). The allocation of librarians in each of these library sections was as follows: two technical, three acquisition, two periodicals, four cataloguing, three law library, two special collection, four reference, two user

services, three circulation section, four main issue desk, two reserve collection, two inter library loan, four shelving and two reserve collection.

Table 3.1: Population for the study (N = 9739)

Population for the study	
	Population size
Librarians	39
Students	9000
Academics	700
Total population	9739

When determining a predetermined sample size, a Raosoft calculator was used to calculate sample size. According to Rao and Rao (2009), a Raosoft sample size calculator is "a sample size generator which provides calculation codes for margin error, confidence level and response distribution used for calculating the sample size".

For the purpose of the study, the margin of error was calculated at 5%, confidence level at 90% and the response distribution at 50%.

Table 3.2: Calculation of sample size

Population	**Population size**	**Margin error**	**Confidence level**	**Response distribution**	**Recommended sample size**	**Sample percent**
Librarians	39	5%	90%	50%	35	89.7%
Academics	700	5%	90%	50%	196	28 %
Students	9000	5%	90%	50%	263	2.9 %

For the purpose of the study, the sample size comprised 35 library team members who are responsible for providing library services in each of the library sections. Information users including 263 students and 196 academics were recruited to participate in this study in order to describe various challenges they encounter when it comes to accessing library information resources. A total sample size of 494 participants was recruited for the study.

This study used a stratified random sampling since the population from which the sample was

drawn did not constitute a homogeneous group. The reasons for this were as a result of the following:

- There would be more students and academics, which would mean if one did a simple random sample or systematic sample, librarians would not be adequately represented.
- The result would be skewed, as students and academics would be overrepresented.

According to Ngoepe (2012), when stratified random sampling is employed, the researcher makes sure that the sample is similar to the population in certain respects. The attraction of this technique is that it reduces the standard error by controlling a proportion of the variance. In this study, a stratified sample was obtained by separating the population elements into three sub-strata, that is, librarians, academics and students.

A simple random sample was then taken from each stratum and the sub-samples were combined to form the total sample of 100%. The sample in each stratum was taken in proportion to the size of the stratum. Out of 100% of the sample size, 35 (89.7%) would be librarians, 196 (28%) would be the academics and 263 (2.9%) would be the students. The first step of arriving at that was to find the total number of the population (494). Calculation of percentages in each group was as follows:

- % librarians = (35 / 39) x 100 = 89.7%
- % academics = (196 / 700) x 100 = 28%
- % students = (263 / 9000) x 100 = 2.9%

All these factors indicate that the researcher is more likely to get a valid result if a stratified sample is used. By using stratified sampling, the researcher has all the advantages of random sampling and does not need to sample nearly as many people.

3.5 Data collection instruments

According to Creswell (2009), data collection instruments are “research techniques/methods that use a logical approach in order to obtain information about a specific subject under study”. Miller, Wilson, Chepp and Luis Padilla (2014:18) point out that “the purpose of data collection is to collect pertinent data that can elaborate and refine understanding of a particular phenomenon.” Research techniques can be applied to a broad range of issues or areas of research based on a formal process. The order of the steps depends highly on the subject and the reason for the

research. Data collection occurs in many ways, depending on the research approach and the methods used.

Kowalczyk (2015) states that the quantitative data collection method "relies on random sampling and structured data collection instruments that fit diverse experiences into predetermined response categories". They produce results that are easy to summarise, compare and generalise because the researcher asks a standard set of questions and nothing more. The most common sources of data collection in both qualitative and quantitative research are interviews, observations, focus group, document analysis and questionnaires (Locke, Silverman & Spirduso 2010).

For the purpose of the study, the researcher adopted questionnaires as a technique for collecting data because it enabled the researcher to collect a large amount of accurate findings across a greater spectrum of respondents within a short space of time. Questionnaires was used to collect factual information in order to classify people and their circumstances, to gather straightforward information relating to people's behaviour, to look at the basic attitudes/opinions of a group of people relating to a particular issue, to measure the satisfaction of library users with a service and to collect baseline information which can then be tracked over time to examine changes.

The researcher designed separate questionnaires, that is, questionnaires for librarians, students and academics to get in-depth information from the librarians about the strategies they used to organise library resources with a view of assessing access to library resources by both students and academics at the University of Venda's library.

According to Locke, Silverman and Spirduso (2010), a questionnaire is "a tool for collecting and recording information about a particular issue of interest". It is mainly made up of a list of questions and includes clear instructions and space for answers or administrative details. Questionnaires have a definite purpose that is related to the objectives of the research and it needs to be clear from the outset how the findings will be used. Respondents also need to be made aware of the purpose of the research wherever possible and should be told how and when they will receive feedback on the findings.

Questionnaires often seem a logical and easy way of collecting information from people. They are usually self-explanatory in that participants are able to read and understand what they are

supposed to do. This makes a well-designed questionnaire one of the easiest and quickest ways to collect a large amount of data as the researcher does not need exceptionally detailed responses (Kowalczyk 2015).

When using questionnaires, the researcher needs to take expert advice in setting up a questionnaire to ensure that all the information required about the respondents is included and filled in. The researcher needs to ensure that questions are clear and well understood and must determine reliable ways of collecting and managing the data. Setting up a questionnaire that can be read by an optical mark reader is a way to collect large numbers of responses and analyse them statistically rather than reading each questionnaire and entering data manually (Wisker 2007).

Mellenbergh (2008) states that questionnaires can be distinguished between closed or open questions. An open-ended question asks the respondents to formulate their own answer and can be coded into a response scale afterwards or analysed using more qualitative methods, whereas a closed-ended question has the respondent pick an answer from a given number of options which can be exhaustive and mutually exclusive. Four types of response scales for closed-ended questions are: dichotomous, where the respondent has two options; nominal-polytomous, where the respondent has more than two unordered options; ordinal-polytomous, where the respondent has more than two ordered options; and bounded/continuous, where the respondent is presented with a continuous scale.

3.5.1 Advantages of using questionnaires

Questionnaires enable the researcher to contact a large number of people at a relatively low cost. They can reach people who are spread across a wide geographical area or who live in remote locations. Questionnaires are simple to administer and they are also relatively easy and straightforward to analyse. Respondents have time to think about their answers as they are not usually required immediately (Kowalczyk 2015).

Questionnaire responses can be highly structured and easily coded using statistical tests depending on the nature of the data collected. Questionnaires can be reliable and replicable to be used in later studies if they are well constructed and properly piloted. Information is collected in a standardised way and enables the researcher to compare own work to other studies. Questionnaires can be used for sensitive topics which may make participants feel

uncomfortable disclosing to an interviewer (Kowalczyk 2015).

Respondents are able to complete postal questionnaires in their own time and telephone call-backs can be arranged for a convenient time. Telephone questionnaires can make it easier to consult some visually challenged people while face-to-face questionnaires can make it easier to identify the appropriate person to complete the questionnaire. Face-to-face questionnaires can be longer than postal and phone questionnaires, collect more information and allow the use of visual aids (Creswell 2009).

3.5.2 Disadvantages of using questionnaires

According to Kowalczyk (2015), questionnaires are difficult to design and their layout is an art form in itself because, in poorly laid out questionnaires, respondents tend to repeat their ticking of boxes in the same pattern. If given a choice of responses on a scale of one to five, participants usually opt for the middle point and often tend to omit sub-sections to questions.

Wisker (2007) finds that questionnaires tend to be very limited in what they can ask because participants will not fill out long questionnaires. This can, of course, limit the sample because the researcher has to take note of the length of the questionnaire and the kind of questions asked. A low response rate may be a problem unless a researcher has ways of making people complete them and hand them in on the spot.

In the case of postal questionnaires, the response rates can be low and refusal rates can be high in telephone and face-to-face interviews. There is little control over the participants who complete a postal questionnaire which can lead to bias. Postal questionnaires are inappropriate for people with reading difficulties or visual impairments. Postal and telephone questionnaires must be kept relatively short and require the use of trained interviewers. Face-to-face questionnaires are time consuming for respondents, more costly and more labour intensive than other methods (Kowalczyk 2015).

Locke, Silverman and Spirduso (2010) contend that the researcher cannot go back to respondents if the question is not answered, especially if they are anonymous. Respondents may also ignore certain questions because questionnaires may appear impersonal. Respondents may misunderstand questions because of poor design and ambiguous language and they can also fail to complete them correctly. Questionnaires cannot give the context and meaning

behind a response and, as a result, they are not suitable to investigate long, complex issues that require follow up research to explore in greater depth or to identify ways to solve problems highlighted. There is also the danger of questionnaire fatigue if surveys are carried out too frequently (Creswell 2009).

Data was also collected making use of checklists and rating scales. These devices simplify and quantify people's behaviours and attitudes. A checklist is a list of behaviours, characteristics or other entities that the researcher is looking for while a rating scale is more useful when a behaviour needs to be evaluated on a continuum (Castle 2010:76; Locke, Silverman & Spirduso 2010).

According to LaMarca (2011), the Likert Scale is an ordinal psychometric measurement of opinions. In each question, a statement is presented in which a respondent must indicate a degree of agreement or disagreement in a multiple choice type format. Likert Scales are the most universal methods for survey collection because they are easily understood. The responses are easily quantifiable and can be subjected to computation or mathematical analysis. A Likert Scale does not require the participant to provide a simple and concrete yes or no answer therefore it does not force the participant to take a stand on a particular topic but allows them to respond in a degree of agreement; this makes question answering easier for the respondent.

The responses presented can accommodate participants' neutral or undecided feelings. The responses are very easy to code when accumulating data since a single number represents the participant's response. Likert surveys are quick, efficient and inexpensive methods of data collection. They have high versatility and can be sent out by post, over the internet or administered in person. Attitudes of the population for a particular item in reality exist on a vast, multi-dimensional continuum. However, the Likert Scale is uni-dimensional and only gives five to seven options of choice and the space between each choice cannot possibly be equi-distant (McLeod 2008).

Likert Scales, however, fail to measure the true attitudes of respondents. It is also not unlikely that peoples' answers will be influenced by previous questions or will heavily concentrate on one response side (agree/disagree). Frequently, people avoid choosing the extreme options on the scale, because of the negative implications involved with extremists, even if an extreme

choice would be the most accurate (LaMarca 2011).

Hence, for the purpose of the study, the Likert Scale was employed in order to measure participants' opinions on strategies used for organising library resources at the University of Venda. It is a universal method for survey collection that is easily understood by both the participants and quantitative researchers. The responses are easily quantifiable and subject to computation or mathematical analysis.

3.6 Pilot survey

Hulley (2007) defines a pilot study as

> A small scale preliminary study conducted in order to evaluate efficiency, feasibility, time, cost, adverse events, and effect size, that is, statistical variability in an attempt to predict an appropriate sample size and improve upon the study design prior to performance of a full-scale research project and it is appropriate for survey research.

Sincero (2012) indicates that the function of a pilot study is to test the design of the full-scale experiment which then can be adjusted. It is a potentially valuable insight and, should anything be missing from the pilot study, it can be added to the full-scale study/experiment to improve the chances of a clear outcome. The main objective of a pilot study is to determine whether conducting a large-scale survey is worth the effort (Sincero 2012). A pilot study is meant to ensure that the indicators would yield the same results, irrespective of when or where they are applied (Synodinos 2003). The research instruments need to be tested during their development and application for acceptability, feasibility, reliability, sensitivity to change and validity (Ngulube 2005). A pilot study enables the researcher to administer the data collection instrument with a small set of respondents from the population before the full-scale survey (Bullen 2014).

According to Haralambos and Holborn (2000), a pilot study is carried out on members of the relevant population, but not on those who will form part of the final sample. This is because it may influence the later behaviour of research subjects if they are already involved in the research. When conducting a survey, the questionnaire is administered to a percentage of the total sample population or, in more informal cases, just to a convenience sample (Sincero

2012).

For the purpose of the study, a pilot study was conducted in order to identify problems with the data collection instrument and find possible solutions (Babbie & Mouton 2007; Mugenda & Mugenda 2003; Naoum 2007). The validity of data collected in the study was guaranteed by conducting a pilot study using five librarians from the University of Limpopo and five librarians from the University of Mpumalanga. The pilot study helped the researcher to bring to light the weaknesses of the questionnaires. At the same time, questions which were vague were revealed in the pilot study because respondents interpreted them differently, giving room for the researcher to rephrase the questions until they conveyed the same meaning to all subjects, therefore enhancing the validity of the results.

In addition, comments and suggestions made by respondents during the pilot study were seriously considered and incorporated, therefore helping to improve the questionnaires. In the pilot study differences in the questionnaire were revealed, for example, unclear directions, insufficient space to write the response, clustered questions, wrong numbering were revealed and corrected. With the guidance of the researcher's supervisors it was possible to deal with all the grey areas in the preparation of the questionnaires.

3.7 Measures to ensure validity and reliability

This is the measure of how precise the results of the study are. The most important aspects of precision are validity and reliability (Hopkins 2000:1).

3.7.1 Validity

According to McMillan and Schumacher (2006:178), validity is concerned with how the research data is interpreted and the appropriateness of research methods and techniques. Validity is seen as a situation-specific concept which puts its focus on the purpose, population and situational factors in which measurement take place. The study establishes various categories of data collection instruments that are used during data analysis.

The validity of data collected in the study was guaranteed by conducting a pilot study amongst 10 librarians from various library institutions. The pre-test helped the researcher to bring to light the weaknesses of the questionnaires. At the same time, questions which were vague were revealed in the pilot study because respondents interpreted them differently, giving room for

the researcher to rephrase the questions until they conveyed the same meaning to all subjects, therefore enhancing the validity of the results.

3.7.2 Reliability

According to McMillan and Schumacher (2006:326), reliability is concerned with how well the investigation is carried out, that is, the consistency of measurement. The researcher ensures that there is a logical link between the formulated survey questions and the aim of the study.

To ensure the reliability of the questionnaire, the researcher made sure that the questions were formulated using simple and clear language to enable the recording of participant language and to eliminate ambiguity and the risk of different interpretations emanating from the participants. In addition, comments and suggestions made by respondents during the pre-testing were seriously considered and incorporated therefore helping to improve the questionnaires. In the pilot study, differences in the questionnaire were revealed, for example, unclear directions, insufficient space to write the response, clustered questions and wrong numbering were revealed and corrected. With the guidance of the researcher's supervisor, it was possible to deal with all the grey areas in the preparation of the questionnaires.

3.8 Ethical considerations

Wysocki (2008:228) defines ethics as guidelines for research that enable a researcher to ensure that all respondents participate voluntarily and are not harmed. This is supported by Uys and Basson (2005:96) who say that ethics tend to "involve doing what is right and good during the research" (refer to section 1.13). Before data was collected, required ethical considerations were followed. Ethical issues included permission to conduct the study, coercion, recruitment, informed consent, violation of privacy, confidentiality and protection from harm.

The limitation that the researcher came across was the reluctance of some participating librarians to divulge information regarding strategies used to organise library information sources at the University of Venda. However, efforts were made to encourage the participants to participate in the study.

In this study, the researcher sought permission from the following:

- An ethical clearance certificate and permission to conduct the study was granted by the University of South Africa (UNISA) through the Department of Information Science

committee and UNISA policy (see Annexure 5).

- Approval to conduct the study was sought from the management at the University of Venda (see Annexures 6 and 7).

Essack and Juwah (2007:12) note that the researcher is expected to seek consent only under circumstances where the prospective participants consider whether to participate or not to participate, minimising the possibility of under-influence. In this study, special attention was given to the potential for coercion, undue influence, power disparities, as well as fairness in the process of selecting participants. Before data collection, participants were provided with information letters giving an explanation of the study and inviting them to participate in the study. This was done to avoid coercion. Consent forms emphasising the voluntary nature of participation and the absence of punishment for withdrawal from the study prior to completion were also provided. The participants read and signed these forms before participating in the study (see Annexures 8 and 9).

Bless and Higson (2006:183) propose that research participants should be told the nature of the study to be conducted and be given the choice of either participating or not participating. They should be informed of their right to withdraw from the study at any time if they do not feel comfortable participating any further. In this study, participants were given ample time, adequate information concerning the purpose of this research, procedures that were followed, possible advantages and disadvantages for the respondents, credibility of the researcher and how the results were to be used so that they could make an informed decision whether they wanted to participate or not (see Annexures 7, 8 and 9).

Monette and Thomas (2008:490) express the view that the researcher should respect the rights to privacy of the participants, particularly concerning sensitive and personal information. Such information should be kept strictly confidential. Questions must be formulated in a polite manner so that they do not affront the dignity of the participants. The participants were assured of their protection from loss of dignity, friendship and embarrassment and that their names would not be disclosed in the report (see annexure 8).In this study, confidentiality was ensured by limiting access to the data to persons directly responsible for the research as propagated by Burns and Grove (2001:195). Participants were requested to adhere to confidentiality. Anonymity was protected by assigning codes to the research participants when analysing and reporting as recommended by Creswell (2005:211).

The researcher maintained honesty in all scientific communication by honestly reporting data, results, methods and procedures and publication status after acceptance of the dissertation by the University of South Africa, subject to its specifications. The researcher did not fabricate, falsify or misrepresent data. The researcher did not deceive colleagues, granting agencies or the public on any part of the subject matter being studied. The researcher avoided careless errors and negligence by continuing to examine the work carefully and critically. Accurate records of research activities, such as data collection and research design were kept.

3.9 Evaluation of research methodology

Bryman (2008:602-626) acknowledges that research methodologies have weaknesses as well as strengths. The researcher adopted a quantitative approach to gain an understanding of the strategies for organising library resources with a view to assessing the implications of access to information at the University of Venda. Collection instruments were essential in this study and the researcher used survey research design as the main research procedure to collect data (refer to section 3.3). Questionnaires were employed as an instrument for data collection (refer to section 3.5).

There were challenges experienced during data collection. Most questionnaires were handed out to students as they came out of the library. The researcher also did door-to-door visits to those staying on the university campus. One of the challenges was that the researcher experienced a low response rate until the researcher asked the participants to complete questionnaires and hand them in on the spot. Some participants, especially students, did not want to complete questions that asked for their thoughts; they opted to tick the middle options provided without analysing and understanding the questions.

3.10 Summary

This chapter included a detailed report on the research process and design, which includes methodology, the population and sampling, the data collection method and the instrument that was used in the study. Strategies and methods used to ensure trustworthiness of the study were provided and the steps taken to ensure ethical consideration were outlined. The next chapter covers data presentation and analysis.

CHAPTER FOUR
DATA ANALYSIS AND PRESENTATION

4.1 Introduction

In Chapter Three, the choice of research methodology and data collection tools adopted in this study were discussed and justified as they constitute the source of data. They provide the paths that guide the scientific inquiry so that the knowledge about the phenomena being studied is organised and increased and that the results of the study are validated (Ngulube 2003:239). The purpose of this chapter is to presents the data analysis of the collected data collected through questionnaires (see Annexures 2, 3 and 4 for copies of questionnaires).

Data analysis and presentation serve as the vehicle of translating raw data into meaningful information. As indicated by Monette, Sullivan and De Jong (2011), data analysis unlocks the information hidden in the raw data and transforms it into something useful and meaningful. Data analysis enhances researchers' abilities to learn whether their ideas are confirmed or refuted by the empirical reality. Creswell (2009:152) and Ellison (2010:317) view data analysis as a key aspect of any research because it helps to describe, discuss, evaluate and explain the content and characteristics of the collected data to enable the researcher to answer the research questions and to draw conclusions and generalisations of the findings of a problem statement. For quantitative data, the variables are defined prior to the study by using numerical variables and categorical variables. The researcher develops a problem analysis diagram in preparation for a field study which identifies factors that influence the core problem.

The preparation of a plan for data processing and analysis was done in order to provide an insight into the feasibility of the analysis to be performed and the resources that were required as outlined by Ellison (2010:317). Data was presented in the charts and tables that were developed before conducting the study. Questionnaires were numbered to enable the researcher to process and analyse the data efficiently and to maintain privacy for the respondents. The researcher ensured that all the information was properly collected and recorded. Before and during data processing, the information was checked once again for completeness and internal consistency.

The researcher followed quantitative data processing and analysis in order to make generalisations from the sample being studied over a wider population and to convey

numerically what was being seen in the research in order to arrive at specific and observable conclusions. Ellison (2010:321) advocates that, when working with data, the researcher needs to ensure that data collected is complete and that it is organised in a way that the researcher will be able to find and use it for the research. The responses to open-ended questions were categorised in two steps. Firstly, the researcher listed the responses for each question, read through the whole list of answers and then started giving codes for the answers that belonged together. Secondly, the researcher tried to find a label for each dataset and, after some shuffling, the researcher remained with four to six datasets. A dataset for "others" containing of fewer than 5% of the total number of answers was added so that when the total in the datasets are added together during data analysis, they gave a total of 100%.

Harding (2013:104) asserts that coding assists in the identification of commonalities and differences in datasets. When finalising the questionnaire, the researcher inserted a box for the code in the right margin of the page for each question which were filled in afterwards during data processing. Common responses had the same code in each question in order to minimise mistakes by coders. Data was analysed by a computer using Statistical Packages for the Social Science (SPSS) programme, version 23, which is used in the statistical analysis of data, cross tabulations and dummy tables as outlined by Daniel (2012). In this case, hand compilation was necessary when the researcher wanted to go back to the raw data to make additional tabulations in which different variables were related to each other.

4.2 Response rate and participant's profile

Of the 263 questionnaires distributed to students, only 196 were returned, representing a 75% return rate. One hundred and ninety six questionnaires for academics were distributed. However, out of the 196 questionnaires only 139 were returned, representing 71% return rate. Thirty five librarians' questionnaires were distributed manually. However, out of 35 questionnaires, only 24 were returned, representing a 69% return rate. In aggregate, out of 494 questionnaires distributed to participants, only 359, representing 73%, were returned.

The response rate was considered to be adequate in accordance with the statement of Babbie and Mouton (2009) that "the consensus in survey research is that a response rate of 50% is considered adequate for analysis, while 60% is good and 70% is considered to be very good". Returned questionnaires were analysed using survey tool called the SPSS programme.

As indicated above, this section also presents the background information of the respondents. It is therefore worth mentioning that the sub-section sought to determine library sections that library staff were working in, years of service in their current position, years of experience of library users while using the library and the frequency at which library users visit the library.

4.2.1 Library sections that library staff are working in

The purpose of this question was to determine various library sections that library staff were working in (refer to Table 4.2).

Table 4.1: Library section (N = 24)

Library section	Frequency	Percentage
Cataloguing	9	38
Other	14	58
Missing	1	4
Total	24	100

When the library staff were asked the section of the library they work in, of the 24 library staff, nine (38%) of them indicated that they work in the cataloguing section, 14 (58%) work in other sections like circulation section, evening staff, information commons, law library circulation, periodicals, reserve collection, shelving, special collections, systems librarian and technical section, as indicated in Table 4.1, while only one (4%) library staff member did not respond to the question.

4.2.2 Years of service within a library

This question sought to find out from library staff their years of service in their current position.

Table 4.2: Years of service (N=24)

How long have you been in your current position		
Years of experience	Frequency	Percent
1-3 years	3	13
4-5 years	5	21
6-8 years	4	17
9-10 years	5	21
11 and above	7	29
Total	24	100

The results indicate that of the 24 (100%) library staff, 7 (29%) of them indicated that they have 11years and above of service in the current position. 5 (21%) has 9-10 and 4-5 years of service respectively. 4 (17%) has 6-8 years of service in their current position. Only 3 (13%) of them has 1-3 years of service.

4.2.3 How long have you been using the library?

The purpose of this question was to find out from library users, (the students and the academics) their years of experience while using the library.

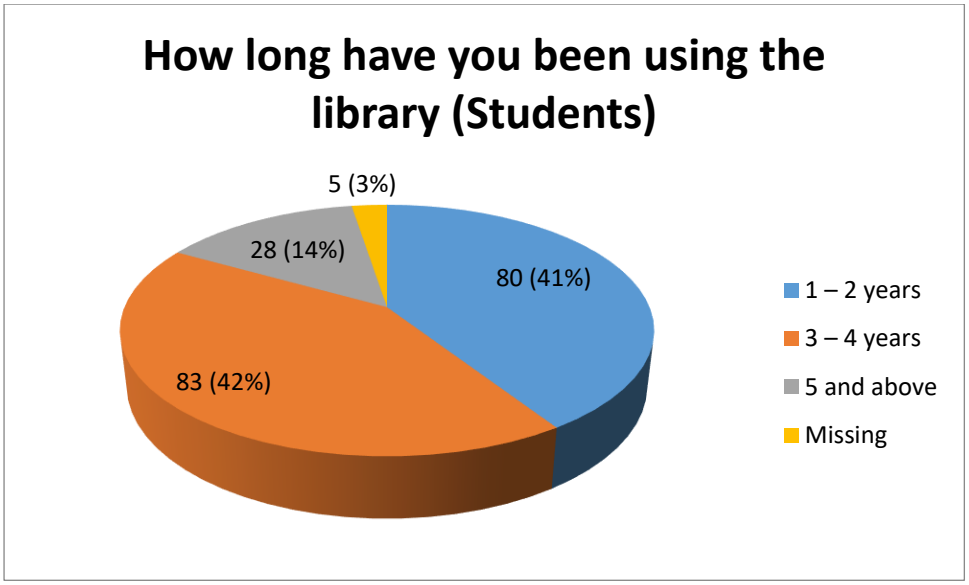

Figure 4.1: Years of using library

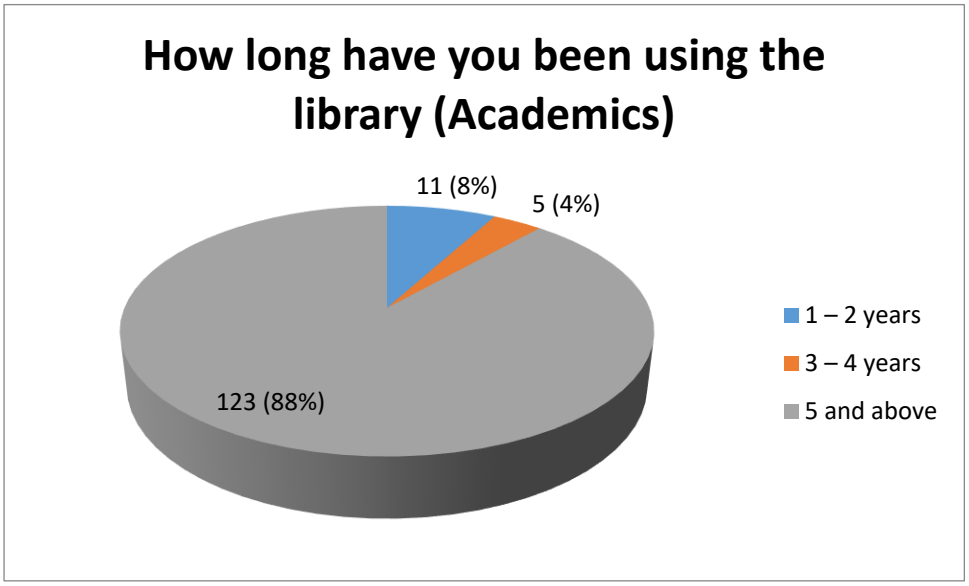

Figure 4.2: Years of using library

When the respondents were asked to indicate their years of experience while using the library, the finding revealed that out of 196 students (100%), the majority of 83 (42%) of them had three to four years of experience, this was followed by 80 (41%) students who indicated that they had one to two years of using the library, 28 (14%) of them indicated that they have 5 and more years of experience. Only 5 (3%) did not respond to a question.

Of the 139 (100%) academics, the majority of 123 (89%) indicated that they 5 and more years of experience in using the library, this was followed by 11 (8%) of them who indicated that

they have 1 to 2 years of using the library, while only 5 (4%) indicated that they have 3 to 4 years of experience when using the library.

4.2.4 How often do you use the library?

The purpose of this question was to find out the frequency at which library users visit the library.

Table 4.3: Library use frequency

How often do you use the library				
Library use frequency	**Students**		**Academics**	
	Frequency	**Percent**	**Frequency**	**Percent**
Never	-	-	1	1
Rarely	28	14	64	46
Monthly	21	11	39	28
Weekly	80	41	28	20
Daily	65	33	4	3
Missing	2	1	3	2
Total	196	100	139	100

When this question was posed to the respondents, of the 196 students, the majority of 80 (41%) responded that they visit the library on weekly bases. This was followed by 65 (33%) indicated that they use the library daily, 28 (14%) students indicated that they rarely visit the library. 21 (11%) responded that they consult the library on a monthly bases, while the remaining 2 (1%) did not respond to a question. On the other hand, the majority of academics 64 (46%) indicated that they rarely visit the library, 39 (28%) indicated that they visit the library on a monthly bases, 28 (20%) indicated that they visit the library weekly, 4 (3%) visit the library daily, 1

(1%) never visit the library while 3 (2%) did not respond to the question.

4.3 Data presentation

In this study, results are presented through written descriptions, numerical tables and graphs. The findings are presented through questionnaire and in accordance to the objectives and research questions of the study (refer to sections 1.5 and 1.6). According to Mouton (2009:101), the research purpose gives a broad indication of what researchers wish to achieve in their research. The broad objective of the study was to determine the strategies adopted by the University of Venda's library to organise information resources with the view to assessing the implications on access to information.

The specific objectives for this study were to:

- Assess the effectiveness of the strategies for organising library information sources at the University of Venda.
- Identify and assess the skills of librarians in applying the tools and technologies for organising information resources at the University of Venda.
- Identify the barriers and enablers experienced by library patrons when it comes to accessing library information resources at the University of Venda.
- Assess the implications on access to information resources at the University of Venda.
- Make recommendations on the strategies that can be utilised for the effective organisation of library resources at the University of Venda.

The data presented does not reveal the identity of any individual who participated in this study as anonymity was promised. The data analysis chapter is therefore divided into four sections. The sections include: the effectiveness of the tools for organising library resources, identifying and assessing the skills of librarians for organising library information resources, barriers and enablers experienced in accessing information resources and recommendations for improving the effectiveness of the organisation of library information resources.

4.3.1 Tools for organising library information resources

In this section, the study attempted to find answers to a number of issues about the effectiveness of the tools for organising library information resources. These include cataloguing tools which

are consulted when cataloguing library resources, how often library staff use cataloguing tools, type of cataloguing done, how cataloguing system works, ability to use cataloguing tools by library staff, tools consulted when classifying library resources, how often library staff use the classification tools, effectiveness of classification tools, impact of classification system on the organisation of library resources, indexing tools used in the library and the extent to which indexing tools affect organisation of library materials, ICTs used in organising library resources, as well as the extent to which ICTs their work easier.

4.3.1.1 Cataloguing tools which are consulted when cataloguing library resources

The purpose of the question in this section was to determine various cataloguing tools and sets of rules that are used for organising library resources. The study attempted to find answers from both the librarians, assistant librarians and cataloguers on the cataloguing tools they consult when organising library resources. This is because Miksa (2005:1-12) alluded to the fact that there is a need for using the relevant cataloguing tools and resources for organising library resources for the success and effectiveness of the process of cataloguing.

Table 4.4: Cataloguing tools consulted (N=24)

Cataloguing tools	Yes		No		Missing	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Anglo American Cataloguing Rules (AACR2)	14	58	7	29	3	13
Machine-Readable Cataloguing (MARC21)	12	50	9	38	3	13
Resource Description and Access (RDA)	11	46	10	42	3	13
Functional Requirements for Bibliographic Records (FRBR)	4	17	12	50	8	33
Functional Requirements for Authority Data (FRAD)	4	17	12	50	8	33

The findings revealed from Table 4.4 indicate that, out of 24 (100%) librarians, 14 (58%) consulted AACR2, 12 (50%) consulted MARC21, 11 (46%) consulted RDA, four (17%) consulted FRBR and four (17%) consulted FRAD. These results can be interpreted that four (17%) of the participants consulted all cataloguing tools when cataloguing library resources. The findings of the analysis reveal that most of the respondents stated that they experienced problems with the various cataloguing tools and resources due to insufficient training beforehand or insufficient on-the-job training.

4.3.1.1.1 The type of cataloguing done

The purpose of the question in this section was to determine the type of cataloguing that librarians are involved with in their daily work.

Table 4.5: Type of cataloguing (N=24)

What type of cataloguing do you do?		
	Frequency	**Percent**
Copy cataloguing	7	29
Original cataloguing	3	13
Both	5	21
Missing	9	37
Total	**24**	**100**

When participants were asked to mention the type of cataloguing they do, their responses were as follows:

Out of 24 (100%) participants, seven (29%) of them do copy cataloguing, three (13%) do original cataloguing and only five (21%) do both copy cataloguing and original cataloguing while nine (38%) did not respond to the question. This is because Kim (2003:105) maintains that there are two types of cataloguing, that is, original cataloguing and copy cataloguing. However, original cataloguing has always been a very expensive task in terms of time and

energy of professional cataloguers and this has resulted in problems of backlogs, outsourcing and subscriptions to expensive databases (Campbell 2006:17).

4.3.1.1.2 How does the cataloguing system work?

The purpose of the question in this section was to find out if library staff members know and understand how the cataloguing system works.

When the respondents were asked to describe how the cataloguing system works, 24 (100%) indicated that cataloguing systems entail the creation of various library entries for a catalogue. The process includes the bibliographic description, subject analysis, assignment of classification notation and other activities involved in physically preparing the item for shelving.

4.3.1.2 Classification tools used when classifying library resources

The purpose of the question in this section was to find out various classification tools that the respondents consult when classifying various library resources.

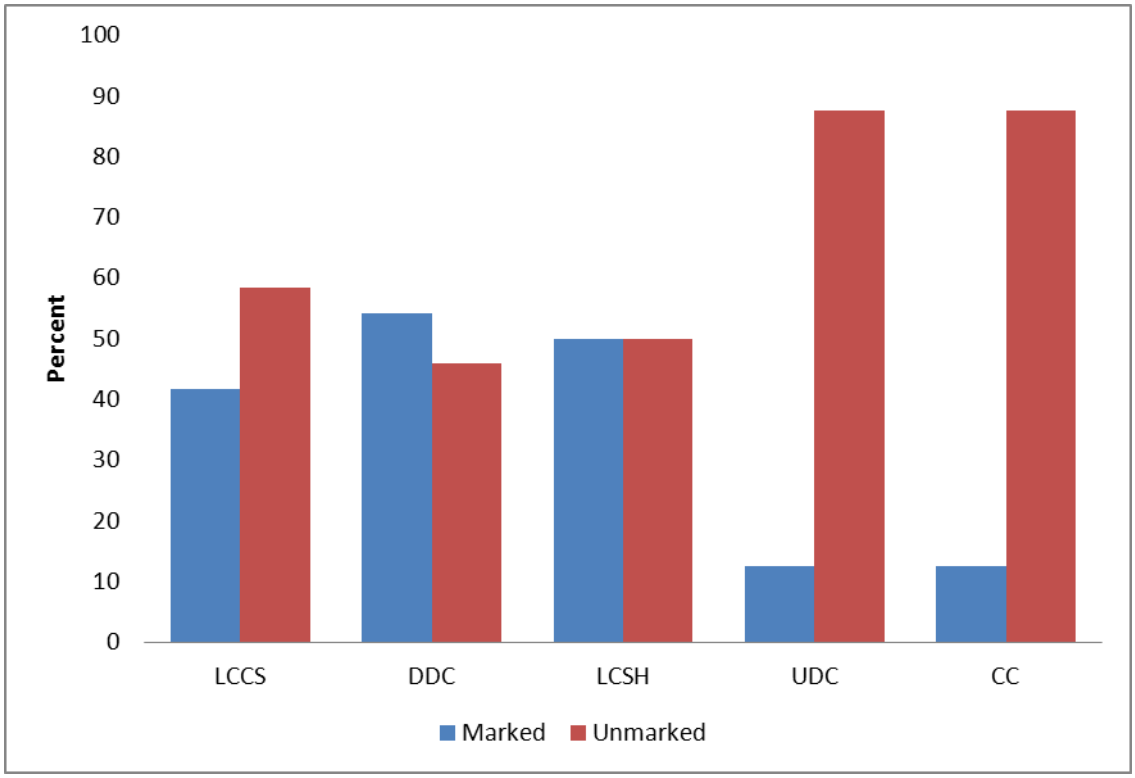

Figure 4.3: Classification tools consulted

Respondents were asked to indicate all classification tools they consult when classifying library resources. The findings revealed that, out of 24 (100%) participants, 10 (42%) of them indicated that they consult Library of Congress Classification System (LCCS), whereas 13 (54%) participants mentioned that they also consult Dewey Decimal Classification System (DDC), 12 (50%) participants said that they consult Library of Congress Subject Headings (LCSH), three (13%) participants indicated that they use Universal Decimal Classification (UDC) and three (13%) participants indicated that they consult Colon Classification (CC) when classifying library resources.

4.3.1.2.1 Effectiveness of classification tools in organising library information resources

When asking this question, the researcher wanted to determine the effectiveness of various classification tools on the organisation of library resources. The results of the findings were as follows:

Table 4.6: Effectiveness of classification tools

Classification tools	Extremely effective	Effective	Moderately effective	Somewhat effective	Not effective	Missing
LCC	3(13%)	9(38%)	1(4%)	-	-	11(46%)
DDC	2(8%)	10(42%)	2(8%)	-	-	10(42%)
LCSH	2(8%)	7(29%)	3(13%)	-	-	12(50%)
UDC	-	-	2(8%)	2(8%)	2(8%)	18(75%)
CC	-	-	2(8%)	-	4(17)	18(75%)

With regard to LCC, of the 24 (100%) participants, three (13%) indicated that LCC seemed to be extremely effective when organising a library, whereas nine (38%) indicated that LCC is effective, one (4%) indicated that LCC is moderately effective and the remaining 11 (46% did not respond to the question.

The findings revealed that, with regard to DDC, two (8%) participants view DDC as an extremely effective tool for organising library resources whereas the majority, 10(42%),

participants viewed DDC as an effective tool for organising library resources. Two (8%) participants viewed DDC as a moderately effective tool for organising library resources, while the remaining 10 (42%) participants did not respond to the question.

When it comes to the use of LCSH, of the 24 (100%) participants, two (8%) of them indicated that LCSH seemed to be an extremely effective tool for organising library resources, seven (29%) viewed it as an effective tool, three (13%) viewed LCSH as moderately effective tool for organising library resources, while the remaining 12(50%) did not respond to the question.

With regard to the use of UDC, of the 24 (100%) respondents, two (8%) indicated that the tool can be considered as a moderately effective tool for organising library resources. Two (8%) of the respondents believed that UDC is somewhat effective, two (8%) mentioned that UDC is not effective when organising library resources, while 18(75%) did not respond to the question.

The findings also revealed that, concerning the use of Colon Classification for organising library resources, two (8%) participants believed that CC is moderately effective, two (8%) indicated that it is somewhat effective, four (17%) regarded it to be not effective, while the other 18 (75%) did not respond to the question.

4.3.1.3 Indexing tools used in the library

The purpose of the question was to find out which indexing tools are used in the library in providing indices of various library resources.

Table 4.7: Indexing tools used in the library (N=24)

Indexing tools	**Marked**		**Unmarked**	
	Frequency	**Percent**	**Frequency**	**Percent**
Sears List of Subject Headings	12	50	12	50
Library of Congress Subject Headings (LCSH)	12	50	12	50
Book Industry Standards and Communication Subject Headings List (BISAC)	3	13	21	88

When all 24 (100%) of the respondents were asked to mark relevant indexing tools used in the

library, they responded as follows: 12 (50%) of the participants use Sears List of Subject Headings, 12 (50%) participants also use Library of Congress Subject Headings (LCSH) and only three (13%) participants indicated that they also use Book Industry Standards and Communication Subject Headings List (BISAC) to provide indexes of various library resources in the library.

4.3.1.3.1 The extent to which indexing tools affect the organisation of library materials

The aim of this question was to investigate the extent to which various indexing tools affect the organisation of library information resources.

Table 4.8: Effect of indexing tools on organising library materials (N=24)

Indexing tools	Very great extent	Great extent	Average extent	Hardly	Not at all	Missing
Sears List of Subject Headings	3 (13%)	7 (29%)	2 (8%)	1 (4%)	-	11 (46%)
Library of Congress Subject Headings (LCSH)	3 (13%)	5 (21%)	3 (13%)	2 (8%)	-	11 (46%)
Book Industry Standards and Communication Subject Headings List (BISAC)	2 (8%)	-	3 (13%)	3 (13%)	2 (8%)	14 (58%)

The respondents were asked to provide the rating using the five point scale on the extent to which various indexing tools affect the organisation of library resources.

Regarding the use of Sears List of Subject Headings, of the 24 (100%) participants, three (13%) regarded the use of this indexing tool to be of a very great extent, seven (29%) regarded the use of Sears to be a great extent, two (8%) participants regarded the use of this tool to be of average extent while only one participant rated it to be used hardly and the remaining 11 (46%) did not respond to the question.

When it comes to the use of Library of Congress Subject Headings (LCSH), out of 24 (100%) participants, three (13%) indicated that LCSH is of a very great extent, five (21%) believed

that LCSH is of a great extent, three (13%) regarded LCSH as of an average extent, two (8%) indicated that LCSH is hardly affecting the organisation of library resources and the remaining 11 (46%) did not respond to the question.

When the 24 (100%) participants were asked to rate the extent to which the use of Book Industry Standards and Communication Subject Headings List (BISAC) affect the organisation of library resources, two (8%) responded that BISAC is affecting the organisation of library resources very greatly, three (13%) of them mentioned that BISAC seemed to have an average effect on the organisation of library resources, three (13%) participants indicated that BISAC is hardly affecting the organisation of library resources, while two (8%) indicated that BISAC does not affect organisation of resources at all while the remaining 14 (58%) did not respond to the question.

4.3.1.4 The extent to which ICTs made work easier

The purpose of the question was to find out the extent to which ICTs have made the respondents' work easier.

Table 4.9: The extent to which ICTs made work easier (N=24)

ICTs	Very great extent	Great extent	Average extent	Hardly	Not at all	Missing
Computer	18 (75%)	5 (21%)	-	-	-	1 (4%)
Internet	14 (58%)	4 (17%)	3 (13%)	-	-	3 (13%)
The web	10 (42%)	3 (13%)	5 (21%)	-	1 (4%)	5 (21%)

Regarding the use of a computer, of the 24 (100%) respondents, 18 (75%) of them indicated that a computer makes their work easier to a very great extent, while five (21%) rated a computer to be of a great extent in terms of making their work easier and the remaining one (4%) did not respond to the question.

Concerning the use of the internet, the findings revealed that 14 (58%) of the respondents viewed the internet to be of very great extent when it comes to making their work easier, four

(17%) viewed it to be of great extent while three (13%) viewed it to be of average extent and the remaining three (13%) did not respond to the question.

Regarding the use of the web, 10 (42%) of the respondents responded that they consider the web to be of very great extent when it comes to making their work easier, while the remaining three (13%) of the respondents considered the web to be of great extent when it comes to making their work easier, five (21%) viewed it to be of average extent, one (4%) said that it does not affect organisation of resources and the remaining five (21%) did not respond to the question.

The majority, who found the changes useful, resulting in significant changes in their work, were those who are able to grasp the new knowledge and skills in technology. The majority 18 (75%) found the changes very useful and that they had an impact on their work by making cataloguing easier.

4.3.1.5 Possibilities of accessing unprocessed materials

When asking this question, the researcher wanted to find out if it is possible to access unprocessed materials.

Table 4.10: Possibilities of accessing unprocessed materials (N=24)

Is it possible to access unprocessed materials?		
	Frequency	**Percent**
Yes	-	-
No	17	71
Not sure	4	17
Missing	3	13
Total	**24**	**100**

When the respondents were asked to indicate whether unprocessed materials can be accessed and retrieved, the majority, 17 (71%) of them responded that unprocessed materials cannot be accessed, four (17%) indicated that they are not sure if unprocessed library materials can be made available for use by library users while the remaining three (13%) did not attempt to

answer the question.

4.3.1.6 Are there cataloguing backlogs at your institution?

The purpose of the question was to find out if there are cataloguing backlogs in the library.

The results revealed that the majority, 12 (50%) respondents, indicated that there are backlogs in the library, only four (17%) respondents said that there was no cataloguing backlog in the library and the remaining eight (33%) indicated that they are not sure of cataloguing backlogs.

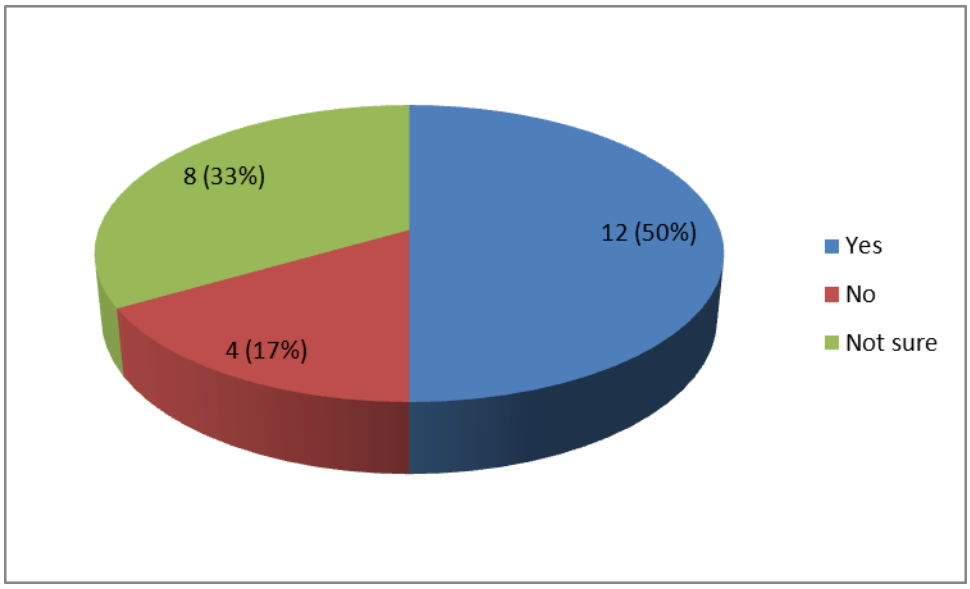

Figure 4.4: Cataloguing backlogs

4.3.1.6.1 Reasons why backlogs exist

The purpose of this question was to find out from the library staff the main causes of cataloguing backlogs in the library.

Table 4.11: Reasons why backlogs exist (N=24)

Why backlogs exist	Marked		Unmarked	
	Frequency	Percent	Frequency	Percent
Workload and shortage of library personnel	19	79	5	21
Technical support and security	17	71	7	29

Volatility of journal titles	16	67	8	33
Lack of formal orientation programmes	16	67	8	33
Difficulty in reservation of sources	18	75	6	25
Limited access through the use of IP authentication	17	71	7	29
Slow internet connectivity	24	100	-	-
Complexity in searching and overlapping coverage of journals	22	92	2	8
Few resources as computers	23	96	1	4

This question was directed to the 24 participants who were asked to mark all options that are relevant to them. The majority of the respondents, 13 (54%), 10 (42%) and eight (33%), responded that backlogs exist due to workload and shortage of library personnel, slow internet connectivity, technical support and security, whereas six (25%) indicated that lack of formal orientation programmes, volatility of journal titles, few resources such as computers and complexity in searching and overlapping coverage of journals applied to them. According to the findings, only three (13%) and four (17%) attributed the difficulty in reservation of sources and limited access through the use of IP authentication as other factors that contributed to cataloguing backlogs.

4.3.1.6.2 Possible strategies for resolving backlogs

The findings revealed that, out of 24 (100%) participants, the majority, 18 (75%) respondents stated that more staff should be trained in cataloguing practices and procedures, while five (21%) indicated that the libraries should recruit more cataloguers (staff). Only one (4%) maintained that a solution for backlogs would be to acquire more cataloguing tools and resources for the cataloguers.

4.3.2 Identifying and assessing the skills of librarians for organising library information resources

In this section, the study attempted to find answers to a number of issues about the skills of the librarians for organising library information resources. These include:

4.3.2.1 Training received on the use of library organising tools

This question wanted to find out from the respondents if they had received training on the use of various library organising tools such as AACR2, MARC21, RDA, LCC, DDC, LCSH, Sears List of Subject Headings, UDC, CC, FEBR and BISAC.

Table 4.12: Training received on the use of library organising tools (N=24)

Library organising tools	Yes		No		Missing	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
AARC	10	42	6	25	8	33
MARC	9	38	7	29	8	33
RDA	8	33	8	33	8	33
FRBR	6	25	7	29	11	46
LCC	5	21	7	29	12	50
DDC	9	38	8	33	7	29
LCSH	7	29	9	38	8	33
UDC	3	13	8	33	13	54
CC	3	13	8	33	13	54
BISAC	3	13	5	21	16	67
Sears List of Subject Headings	12	50	9	38	3	13

From the findings, out of 24 (100%) participants, 10 (42%) respondents indicated that they received training on the use of AACR2, nine (38%) on MARC21, eight (33%) on RDA, five

(21) on LCC, nine (38%) on DDC, seven (29%) on LCSH and 12 (50%) on Sears List of Subject Headings. three (13%) of them indicated that they had received training on the use of UDC, three (13%) on CC, six (25%) on FEBR and three (13%) on BISAC.

4.3.2.1.1 Nature of training received

The majority of the respondents indicated that they face problems with the cataloguing tools and resources due to a lack of training in the use of the various classification tools and resources. Some respondents also attributed this to a lack of mentoring and proper supervision while others thought that continuing education may probably be the solution to this problem. The study established that the cataloguers were trained on the job.

Table 4.13: Nature of training received (N=24)

Nature of training received	Marked		Unmarked	
	Frequency	Percent	Frequency	Percent
Workshops	8	33	16	67
Seminars	1	4	23	96
Educational programmes	2	8	22	92
In-service training sessions	5	21	19	79
Outsourced training	2	8	22	92
Inter-organisational congress	-	-	24	100

The findings also established that, out of 24 (100%) respondents, only one (4%) had attended various cataloguing and classification seminars, eight (33%) attended workshops and two (8%) attended academic training on the use of AACR, MARC, RDA, LCC, DDC, LCSH and Sears. All 24 (100%) indicated that they had never attended inter organisational congresses.

4.3.2.1.2 Skills acquired during training

The purpose of this question was to determine whether library staff members had acquired relevant skills during their training programmes.

Table 4.14: Skills acquired during training (N=24)

Skills acquired	Marked		Unmarked	
	Frequency	Percent	Frequency	Percent
Dealing with the back end of the OPAC	15	63	9	38
Translating library services into the online media	10	42	14	58
Troubleshooting basic computer and printer problems	15	63	9	38
Networking	11	46	13	54
Scripting languages	5	21	19	79
Knowledge of HTML	9	38	15	63
All of the above	3	13	21	88

The respondents were asked to indicate the skills they have acquired during their training. Out of 24 participants, 15 (63%) of them indicated that they are able to deal with the back-end of the OPAC, 10 (42%) had acquired skills of translating library services into online media, 15 (63%) are able to troubleshoot basic computer and printer problems, 11 (46%) are good at networking, five (21%) can do scripting languages, while nine (38%) had a knowledge of HTML and only three (13%) indicated that they have knowledge of all the skills.

4.3.3 Barriers and enablers experienced in accessing library information resources

In this section, the study attempted to find answers from librarians as well as library users to a number of issues about barriers and enablers experienced in accessing library information

resources. This section is therefore divided into two sub-sections, that is, librarian's section and library user's section.

Librarians were requested to respond to questions regarding resources available to library users, the most commonly requested resources, frequency of requesting library resources, reasons for requesting library resources, demand for accessing library resources, statistics on the use of library resources, ability to search library information resources, information retrieval tools to access library resources, complaints about access and retrieval of various library information resources, resolving complaints regarding access and retrieval of library resources and the nature of training received by library users.

4.3.3.1 Librarian's section

4.3.3.1.1 What are the most commonly requested resources by library users?

This question was asked in order to determine the most commonly requested resources in the library.

Table 4.15: The most commonly requested resources (N=24)

Library resources	Marked		Unmarked	
	Frequency	Percent	Frequency	Percent
Magazines	8	33	16	67
Academic journals	21	88	3	12
Institutional repositories	13	54	11	46
Databases	15	63	9	37
Newspapers	9	37	15	63
Addison	2	8	22	92
Books and e-books	23	96	1	4
Encyclopedia	7	29	17	71

However, when the question was posed to the respondents, the finding revealed that academic journals, books and e-books were the most commonly requested resources in the library by 23 (96%) and 21 (86%) of respondents, whereas databases and institutional repositories were the second most requested library resources according to the findings by 15 (63%) and 13 (54%). Magazines and newspapers were the third most requested library resources and Addison was the least requested by two (8%) participants.

4.3.3.1.2 Is there demand for accessing the following library resources?

The question sought to find out if there is a demand for accessing library information resources.

Table 4.16: Demand for accessing library resources (N=24)

Library resources	Yes		No		Missing	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Magazines	11	46	11	46	2	8
Academic journals	17	71	2	8	5	21
Institutional repositories	17	71	2	8	5	21
Databases	17	71	3	13	4	17
Newspapers	14	58	6	25	4	17
Addison	1	4	10	42	13	54
Books and e-books	20	83	2	8	2	8
Encyclopedias	17	71	2	8	5	21

The findings revealed that 20 (83%) participants indicated that books and e-books were highly in demand because they provide quick access to the latest information, the ability to incorporate multimedia elements, quick searching, linking from and to other sources (hypertext capability),

security (no fear of loss) and multi-user capability for those who require information for study purposes. Academic journals, institutional repositories, databases and encyclopaedia were the second most requested library resources. Fourteen (58%) and 11 (46%) of the participants indicated that the demand for newspapers and magazines was low. Only one (4%) indicated that the demand for Addison was very poor.

4.3.3.1.3 Does the library maintain statistics on the use of library resources in the following areas?

The purpose of this question was to determine whether the library maintains statistics on the use of library resources. When participants were asked if they maintained statistics on the use of library resources, their responses were as follows:

Table 4.17: Statistics on the use of library resources (N=24)

	Yes		No		Missing	
	Frequency	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Access to specific databases	20	83	1	4	3	13
Access to journal articles	18	75	2	8	4	17
Online reservation	17	71	3	13	4	17
Online search requests	19	79	1	4	4	17
Online document delivery	14	58	4	17	6	25

Twenty (83%) respondents said that they kept statistics on access to specific databases and online search requests. Nineteen (79%), 18 (75%) and 17 (71%) of the participants indicated that they maintained statistics of online reservations and online search requests. Fourteen (58%)

maintained that librarians also maintain statistics for online document delivery.

4.3.3.1.4 Information retrieval tools to access library resources

The purpose of this question was to find out the various information retrieval tools used to access library resources. When the respondents were asked whether or not library users were able to use various information resources, their responses were as follows:

Table 4.18: Utilisation of information retrieval tools to access library resources (N=24)

Information retrieval tools	Yes		No		Missing	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Online Public Access Catalogue (OPAC)	22	92	1	4	1	4
Internet search engines e.g. Alta Vista, AOL search, Google	22	92	1	4	1	4
Online database and digital libraries	12	50	3	13	9	38
Subject directory	6	25	4	17	14	58
Index	5	21	4	17	15	63
Bibliographic	7	29	3	13	14	58

Twenty-two (92%) of the participants indicated library users are able to use Online Public Access Catalogue (OPAC) and internet search engines e.g. Alta Vista, AOL search and Google. Twelve (50%) of the participants mentioned that library users are able to use online databases and digital while seven (29%), six (25%) and five (21%) of the participants indicated that library users are able to use library indexes, bibliographic records and subject directories.

4.3.3.1.5 Complaints on access and retrieval of various library information resources

The purpose of this question was to find out various complaints regarding access and retrieval

of library information resources.

Table 4.19: Complaints on access and retrieval of various library information resources (N=24)

Complaints regarding access and retrieval of library resources	Marked		Unmarked	
	Frequency	Percent	Frequency	Percent
Volatility of journal titles	2	8	22	92
Lack of formal orientation programmes	6	25	18	75
Few resources such as computers	11	46	13	54
Troubleshoot basic computer	3	12	21	88
Difficulty in reservation of sources	5	21	19	79
Limited access through the use of IP authentication	6	25	18	75
Slow internet connectivity	10	42	14	58
Complexity in searching and overlapping coverage of journals	6	25	18	75

When the question was posed to participants requesting them to mark all complaints received regarding access and retrieval of various library information resources, the findings revealed that 11 (46%) of the participants indicated that library users complain of few resources such as computers, 10 (42%) revealed that users complain about slow internet connectivity, while six (25%) noted that there were complaints about the volatility of journal titles, lack of formal orientation programmes and complexity in searching and overlapping coverage of journals and limited access through the use of IP authentication as major problems that hamper access and retrieval of information resources.

Five (21%) of the participants revealed that library users experienced difficulty in the reservation of sources as the major concern for accessing and retrieving library resources and

only three (13%) indicated that library users complain about troubleshooting basic computer problems in order to access and retrieve library resources.

4.3.3.1.6 Resolving complaints regarding access and retrieval of library resources

This question was asked with the aim of determining things that can be done to assist library users on resolving their complaints regarding access and retrieval of library resources

When the respondents were asked this question, 20 (83%) of the participants indicated that library users can be assisted by providing workshop regarding computer assisted instructions, various information retrieval skills and by installing Wifi while the remaining 4 (17%) did not respond to the question.

4.3.3.1.7 Nature of training received by library users

The purpose of this question was to determine nature of training that was offered to library users.

Table 4.20: Nature of training received (N=24)

Nature of training	Yes		No		Missing	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Library orientation	22	92	-	-	2	8
Guided tours	8	33	3	13	13	54
Advanced bibliographic instruction	5	21	4	17	15	63
Conducted tours	4	17	6	25	14	58
Lectures	5	21	5	21	14	58
Seminars	2	8	6	25	16	67
Computer or electronic	10	42	2	8	12	50

resource assisted instruction						
Use of audio visual aids	2	8	4	17	18	75
Motion pictures	1	4	5	21	18	75
Handbooks and bibliographic aids	1	4	5	21	18	75
Library guides	17	71	-	-	7	29

When respondents were asked to indicate if library users were provided with training programmes, the majority, 22 (92%) participants indicated that library users received library orientation programmes.

This was followed by 17 (71%) of the participants who indicated that training was provided using library guides and 10 (42%) of the participants indicated that library users were trained on computers or by electronic resource assisted instructions.

Eight (33%) of the participants indicated that library users were trained through guided tours, five (21%) indicated that library users were trained on the use of advanced bibliographic instructions and lectures, whereas only two (8%) participants indicated that library users were trained on audio visual aids and seminars.

The findings revealed that one (4%) of the participants also indicated that conducted tours and the use of motion pictures were provided to library users.

4.3.3.2 Library users' section

Library users such as students and academics were requested to respond to questions regarding the accessibility of library resources, library information resource preferences, purposes for using the library, complaints on access and retrieval of library resources, frequency of receiving library resources, challenges experienced when accessing library resources, assistance received from the librarians and the reasons for not getting assistance.

They were also requested to indicate librarians' performance in terms of offering assistance to

library users, training offered to library users, time spent in training, adequacy of the training, tools used to access and retrieve library information resources, skills training, whether the skills benefit efficiency levels in terms of access and retrieval of library information, the extent to which the skills are benefiting efficiency levels, their ability to use various library retrieval tools when no training was received and the programmes that can enhance access and retrieval of library resources.

4.3.3.2.1 What format do you prefer to access your library information resources?

The question sought to find out library user's preferences regarding access of library information resources.

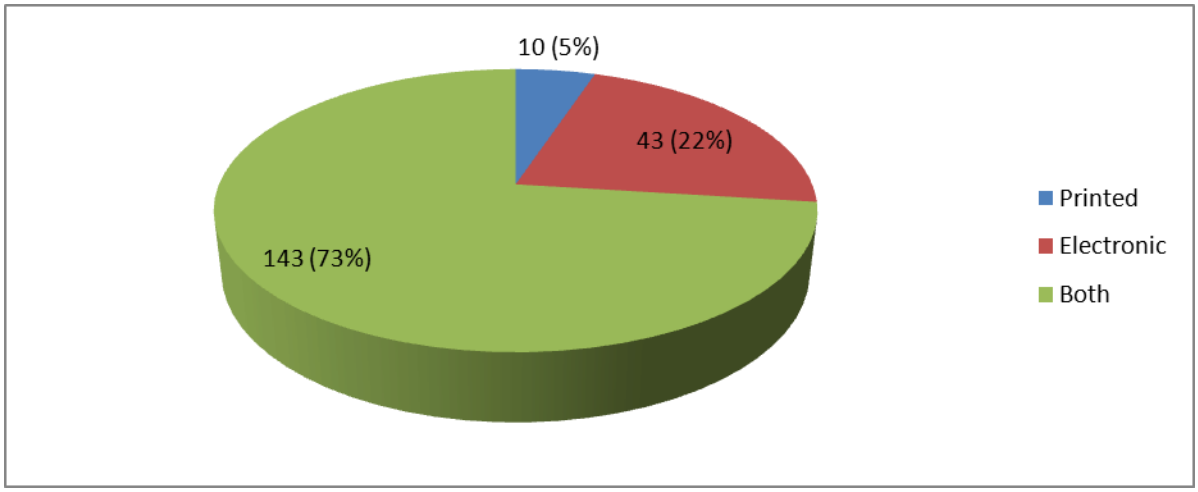

Figure 4.5: Format preferred to access library information resources (students)

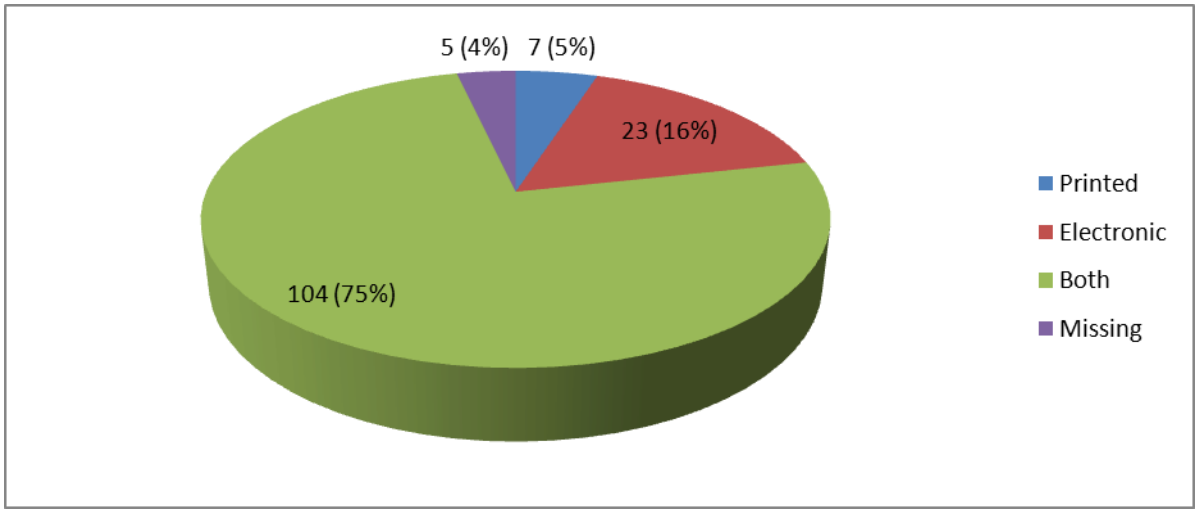

Figure 4.6: Format preferred to access library information resources (academics)

When the respondents were asked to indicate the format they prefer to access library resources, the majority, 143 (73%) of the students and 104 (75%) academics indicated that they prefer both printed and electronic library resources as sources of information. Forty-three (22%) students and 23 (17%) academics indicated that they prefer to access library resources by electronic resources, whereas only 10 (5%) students and seven (5%) academics indicated that they prefer printed library resources. Only five (4%) academics did not respond to the question.

4.3.3.2.2 How often do you get library materials in that format?

The purpose of the question was to find out the frequency at which library users get library materials in the format of their choice.

Table 4.21: How often do you get library materials in that format?

How often do you get library materials in that format?				
	Students		**Academics**	
	Frequency	**Percentage**	**Frequency**	**Percent**
Always	74	38	37	27
Sometimes	95	49	84	60
Rarely	24	12	13	9
Never	1	1	-	-
Missing	2	1	5	4
Total	**196**	**100**	**139**	**100**

However, the findings revealed that out of 196 (100%) students and 139 (100%), 74 (38%) students and 37 (27%) academics indicated that they always get library materials in the format

of their choice, 95 (49%) students and 84 (60%) academics indicated that they sometimes receive library resources, 24 (12%) students and 13 (9%) academics show that they rarely receive library materials in the format of their choice, only 1 (1%)student indicated that he/she does not have access to library materials while 2 (1%) students and 5 (4%)academics did not answer the question, (see Table 4.21 of chapter 4).

4.3.3.2.3 Do you find library information resources accessible?

The purpose of the question was to find out if library users are able to access library resources in the library.

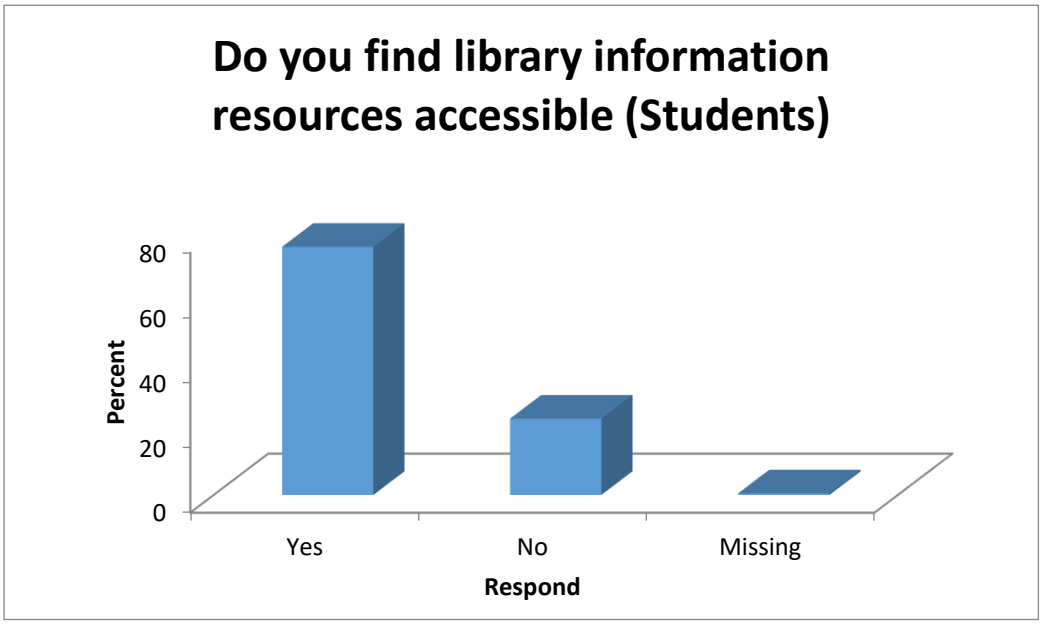

Figure 4.7: Accessibility of library information resources (Students)

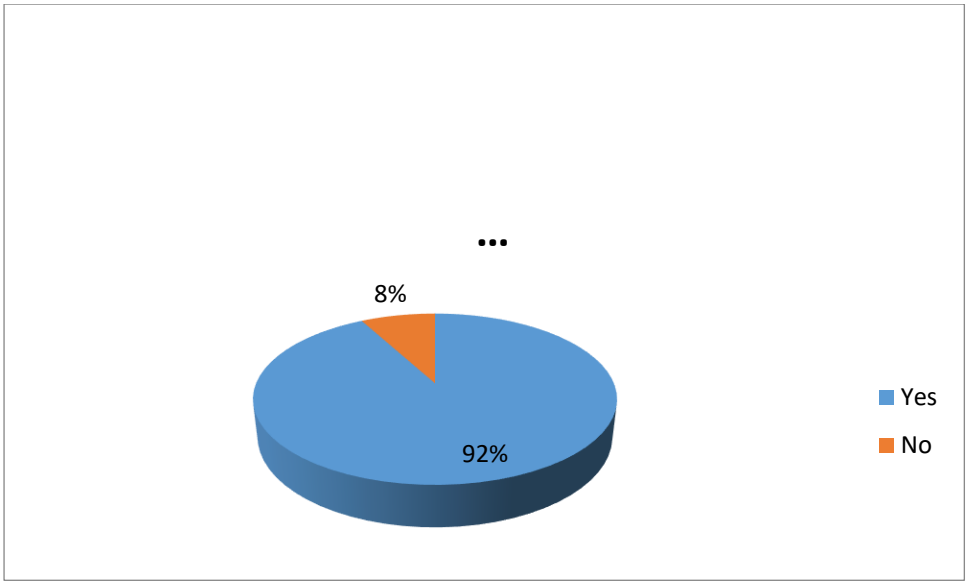

Figure 4.8: Accessibility of library information resources (Academics)

When the library users were asked to indicate if they are able to access library resources requested, the findings revealed that the majority of 149 (76%) students and 128 (92%) academics, view library resources being accessible, while only 46 (23%) students and 11 (7%) academics responded that library resources are not accessible and only 1 representing 1% of the students did not respond to the question, (Figure 4.7 & 4.8).

4.3.3.2.4 Which tools do you use to access and retrieve library information resources?

The purpose of the question was to find out from library users the tools they use to access and retrieve library information resources.

Table 4.22: Tools used to access and retrieve library information resources

Which tools do you use to access and retrieve library information resources?								
	Students				Academics			
	Marked		Unmarked		Marked		Unmarked	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Online Public Access Catalogue (OPAC)	120	61	76	39	75	54	64	46
Internet search engines e.g. Alta Vista, AOL search, Google	124	63	72	37	113	81	26	19
Online databases and digital libraries	84	43	112	57	92	66	47	34
Subject directory	37	19	159	81	81	58	58	42
Index	29	15	167	85	43	31	96	69
Bibliographic records	36	18	160	82	43	31	96	69
Thesaurus	22	11	174	89	15	11	124	89
Semantic networks	14	7	182	93	3	2	136	98
Ontologies	13	7	183	93	2	1	137	99

When library users were asked to mark the tools they use to access and retrieve library resources, Table 4.20 revealed that the majority, 124 (63%) students and 113 (81%) academics, use internet search engines. One hundred and twenty (61%) students and 75 (54%) academics indicated that they use OPAC to access library resources. Eighty-four (43%) students and 92 (66%) academics noted that they use Online databases and digital libraries to access library resources.

Thirty-seven (19%) students and 81 (58%) academics indicated that they also use subject

directories, 36 (18%) students and 43 (31%) academics indicated that they use bibliographic records to access library resources, 29 (15%) students and 43 (31%) academics marked that they use index to access library resources while14 (7%) students and three (2%) academics whereas 13 (7%) students and two (1%) academics marked that they use a thesaurus, semantic networks and ontologies to access library resources (see Table 4.22 in Chapter Four).

4.3.3.2.5 Have you received training on the use of library retrieval tools?

The purpose of the question was to find out if library users received training on the use of library retrieval tools.

Table 4.23: Training received on the use of library retrieval tools

Have you received training on the use of library retrieval tools				
	Students		**Academics**	
	Frequency	**Percent**	**Frequency**	**Percent**
Yes	161	82	129	93
No	33	17	8	6
Missing	2	1	2	1
Total	**196**	**100**	**139**	**100**

When library users were asked if they received training on the use of library retrieval tools, the findings revealed that the majority of 161 (82%) students and the 129 (93%) academics indicated that they received training on the use of various tools for access and retrieval of library information resources (see Table 23).

4.3.3.2.6 Was the training adequate?

The purpose of the question was to find out if the training received by library users was adequate.

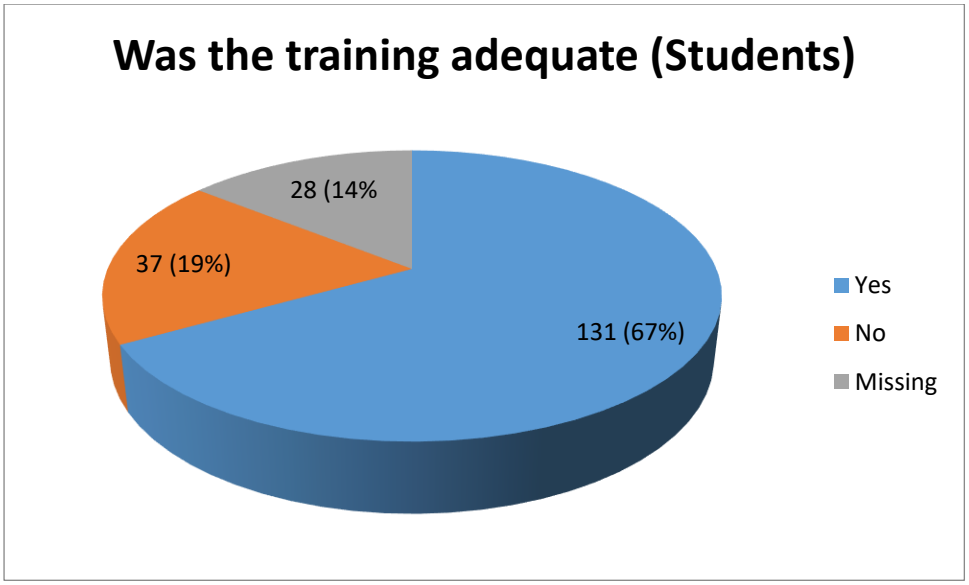

Figure 4.9: Adequacy of training (Students)

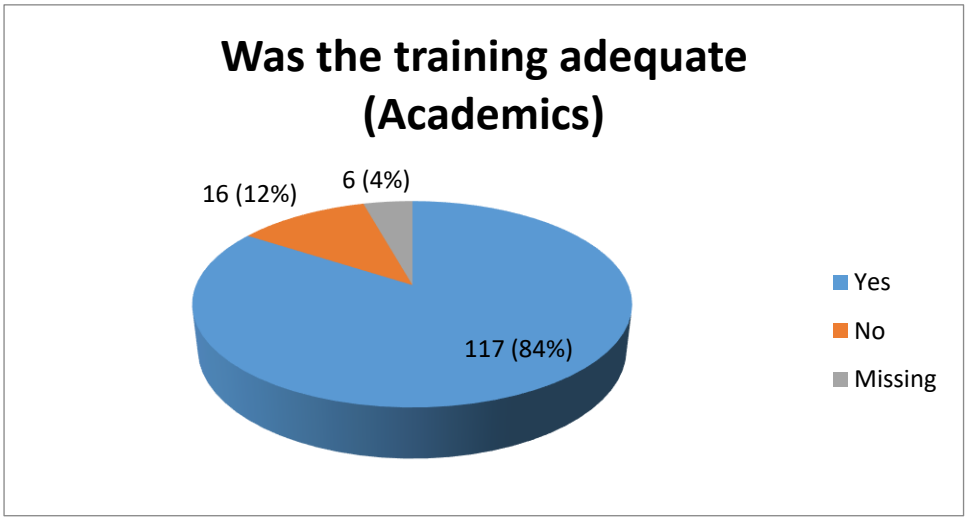

Figure 4.10: Adequacy of training (Academics)

When the question was posed to library users, out of 196 (100%) students and 139 (100%) academics, 131 (67%) and 117 (84%) academics responded that the training was adequate, 37 (19%) students and 16 (12%) academics responded that the training was not adequate while 28 (14%) students and 6 (4%) academics did not respond to the question, (see Figure 4.9 & 4.10).

4.3.3.2.7 Which skills were you trained on?

The purpose of this question was to determine various skills in which library users were trained

on.

Table 4.24: Skills acquired during training

Which skills were you trained on								
	Students				**Academics**			
	Marked		Unmarked					
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Using library resources and services effectively	141	72	55	28	64	46	75	54
Using advanced searching/ techniques	94	48	102	52	104	75	35	25
Using Internet search engines e.g. Alta Vista, AOL search, Google	78	40	118	60	111	80	28	20
Using Online databases and digital libraries	69	35	127	65	91	66	48	35
Able to use Subject directory	30	15	166	85	63	45	76	55
Keeping up with	21	11	175	89	40	29	99	71

current awareness alert profiles in electronic resources								
Setting up and maintaining Endnote library, import references,	24	12	172	88	12	9	127	91

When library users were asked to mark all the skills they were trained, the results revealed that the majority of 141 (72%) students and 64 (46%) academics were able to use library resources and services more effectively, 94 (48%) of students and 104 (75%) academics were able to use advanced searching techniques, 78 (40%) students and 111 (80%) academics are able to use internet search engines effectively, 69 (35%) students and 91 (66%) academics indicated that they are able to use online databases and digital libraries.

However, 30 (15%) students and 63(45%) academics indicated that they are able to use subject directories, 24 (12%) students and 40 (29%) academics indicated that they are able to set up and maintain endnote library while 21 (11%) and 12 (9%) academics indicated that they are able to keep up with current awareness alert profiles in electronic resources, (see Table 4.24) for the skills that the library users were trained on.

4.3.3.2.8 What challenges do you experience when accessing library resources of your preference?

The purpose of this question was to determine various challenges that library users experience when accessing library resources.

Table 4.25: Challenges experienced when accessing library resources of own preference

What challenges do you experience when accessing library resources of your preference

	Students				Academics			
	Marked		Unmarked		Marked		Unmarked	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Workload and shortage of library staff	167	85	29	15	46	33	93	67
Technical support and security	183	93	13	7	8	6	131	94
Volatility of journal titles	181	92	15	8	46	33	93	67
Lack of formal orientation programmes	177	90	19	10	8	6	131	94
Few resources such as computers	153	78	43	2	24	17	115	83
Difficulty in reservation of sources	179	91	17	9	77	55	62	45
Limited access through the use of IP authentification	174	89	22	11	82	59	57	41
Slow internet	153	78	43	22	102	73	37	27

connectivity								
Complexity in searching and overlapping coverage of journals	174	89	22	11	99	71	40	29

When the question was posed to library users requesting them to mark all the challenges they encounter when accessing various library information resources, the finding revealed that out of 196 (100%) of the participants the majority of students indicated that problems of workload and shortage of library staff, technical support and security, volatility of journals titles, lack of formal orientation programmes, few resources such as computers, difficulty in reservation of sources, limited access through the use of IP authentification, slow internet connectivity, and complexity in searching and overlapping coverage of journals where the major challenges they encounter when accessing library information resources by more than 50%.

However, the majority of academics indicated that the challenges they encounter when accessing various library information resources includes slow internet connectivity, complexity in searching and overlapping coverage of journals, limited access through the use of IP authentification and difficulty in reservation of resources by 102 (74%), 99 (71%), 82 (59%) and 77 (55%) respectively. According to the findings, other challenges were considered to be minor by less than (50 %) of the response rate, (See Table 25).

4.3.3.2.9 Do you get assistance from the librarians?

The purpose of the question was to find out from library users if they receive assistance from library users regarding access to library resources.

Table 4.26: Do you get assistance from the librarians

Do you get assistance from the librarians		
	Students	**Academics**

	Frequency	Percentage	Frequency	Percentage
Yes	153	78	122	88
No	43	22	5	4
Missing	-	-	12	8
Total	**196**	**100**	**139**	**100**

However, when the question was posed to library users, out 196 (100%) students and 139 (100%) academics, 153 (78%) students responded that they receive assistance from librarians regardless of workload and shortage of library staff whereas 122 (88%) academics also responded that they receive assistance from librarians regardless of workload and shortage of library staff and only 43 (22%) students and 5 (4%) indicated that they do not receive assistance from librarians at all while the remaining 12 (8%) of academics did not respond a question, (see Table 4.26 of chapter 4).

4.3.3.2.10 How often do you get assistance from the librarians?

The purpose of the question was to find out the frequency at which library users get assistance from the librarians.

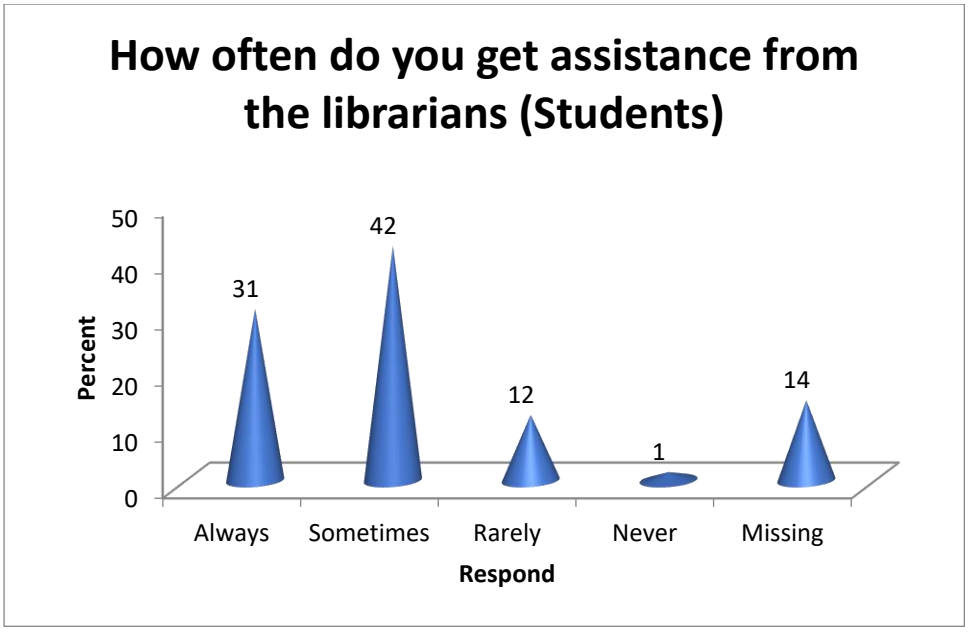

Figure 4.11: The frequency of receiving assistance from the librarians (Students)

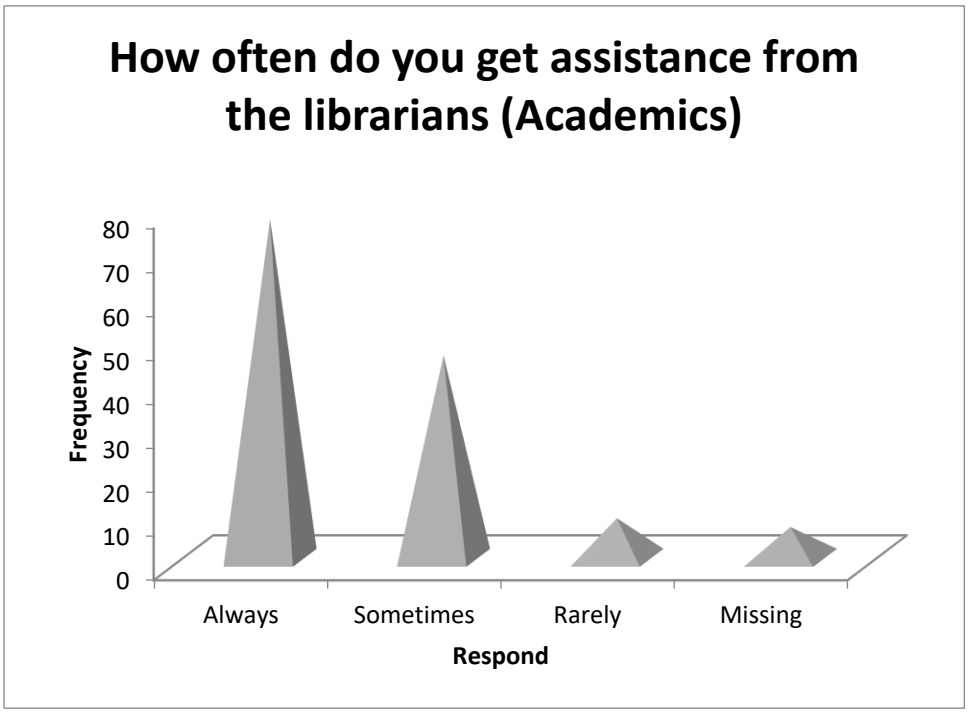

Figure 4.12: The frequency of receiving assistance from the librarians (Academics)

When library users were asked how often they get assistance from the librarians, Figure 9 and 10 indicated that out of 196 (100%) students and 139 (100%), the majority of 82 (42%)

students and 46 (33%) academics responded that they sometimes get assistance from the librarians, 60 (31%) students and 77 (55%) academics responded that they always receive from the librarians assistance, 23 (12%) students and 9 (7%) academics indicated that they rarely receive assistance from the librarians, while 28(14%) students did not respond to the question and only 3 (1%) students and 7 (5%) academics showed that they do not get assistance from the librarians, (see Figure 11 & 12).

4.3.3.2.11 Rate Librarians' performance in terms of offering assistance to library users

The purpose of the question was to find out how librarians' performance is rated in terms of offering assistance to library users.

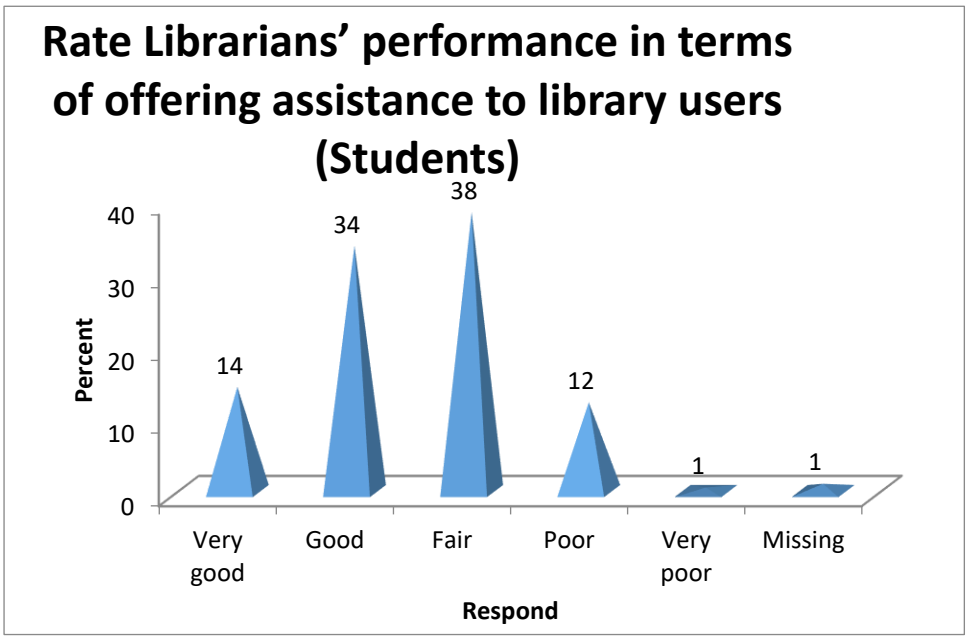

Figure 4.13: Librarians' performance in terms of offering assistance to library users (Students)

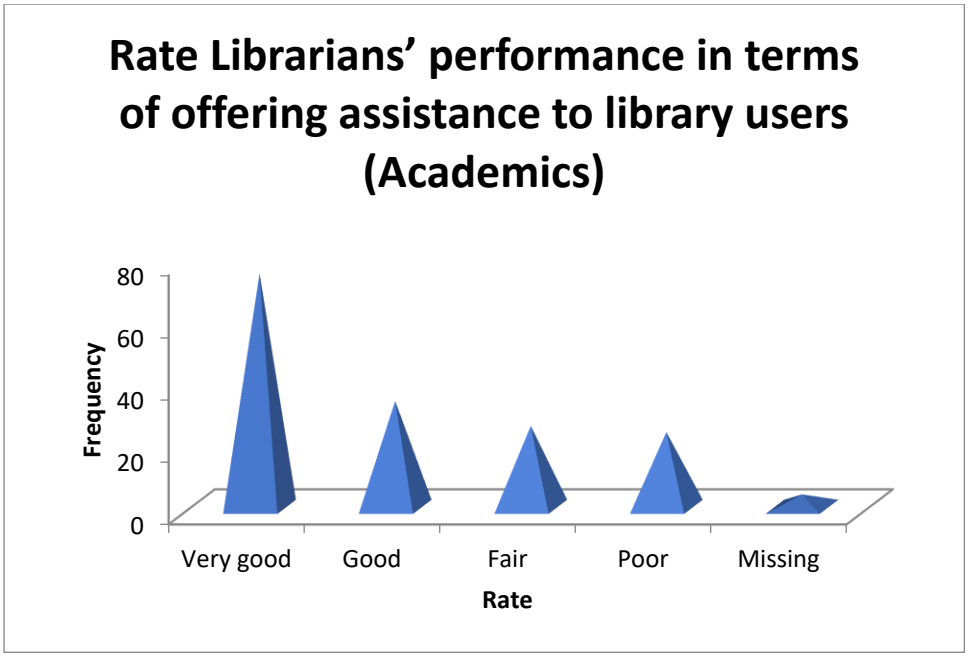

Figure 4.14: Librarians' performance in terms of offering assistance to library users (Academics)

When this question was posed to library users, out 196 (100%) students and 139 (100%) academics, 28 (14%) students and 75 (54%) academics rated librarians' performance very good, 66 (34%) students and 34 (25%) academics rated librarians' performance good, the majority of 75 (38%) students and 34 (25%) academics rated librarians' performance fair, while only one (1%) student rated librarians' performance very poor and two (1%) students and four (3%) academics did not respond to the question (see Figure 13 & 14).

4.3.3.2.12 Which programmes can enhance access and retrieval of library resources?

The aim of the question was to find out from the library users if there are programmes that can enhance access and retrieval of library resources.

Table 4.27: Programmes which can enhance access and retrieval of library resources

Programmes which can enhance access and retrieval of library resources								
	Students				Academics			
	Marked		Unmarked		Marked		Unmarked	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Library orientation	143	73	53	27	63	45	76	55
Guided tours	73	37	123	63	46	33	93	67
Advanced bibliographic instruction	59	30	137	70	107	77	32	23
Conducted tours	42	21	154	79	30	22	109	78
Lectures	65	33	131	67	23	17	116	84
Seminars	59	30	137	70	46	33	93	67
Course – related instruction	70	36	126	64	79	57	60	43
Computer or electronic resources assisted instructions	87	44	109	56	87	63	52	37
Web – based instruction	54	28	142	72	105	76	34	25
Use of audio visual aids	30	15	166	85	32	23	107	77
Motion pictures	32	16	164	84	25	18	114	82
Handbooks and bibliographic aids	69	35	127	68	61	44	78	56

Library guides	89	45	107	55	53	38	86	62

When the question was posed to library users for them to mark all the programmes that can enhance access to library resources as shown in Table 27, 143 (73%) students and 63 (55%) academics marked that library orientation programmes can enhance access to library resources, 89 (45 %) students and 53 (62) academics indicated that library guides can even assist in this regard. 87 (44%) students and 87 (63%) indicated that computer or electronic resources assisted instructions might assist.

However, 73 (37%) students and 46 (33%) academics marked that guided tours can enhance access to library resources, 70 (36%) students and 79 (57%) academics marked that course-related instruction can be a remedy to access to library resources, 69 (35) students and 61 (44%) academics felt that even handbooks and bibliographic aids might assist, 65 (33%) students also think that even lectures can assist in this regard.

59 (30%) students and 46 (33%) academics indicated that both advanced bibliographic instruction and seminars can enhance access to library resources, 54 (28%) students and 105 (76%) academics indicated that web-based instruction can assist in this regard.

4.3.4 Recommendations for improving the effectiveness of the organisation of library information resources

In this section, the study attempted to find answers to a number of issues about recommendations for improving the effectiveness of the organisation of library information resources. These include, challenges encountered when organising various library information resources, dealing with challenges that hamper organization of library resources, programmes that improve the effectiveness of organisation and retrieval of library resources, measures that will help improve the effectiveness of the organisation of library information resources.

4.3.4.1 Challenges encountered when organising various library information resources

The purpose of this question in this section was to determine challenges that librarians and cataloguers come across when organising library resources.

Table 4.28: Challenges encountered when organising library information resources

Challenges encountered when organising various library information resources				
	Marked		Unmarked	
	Frequency	Percentage	Frequency	Percentage
Workload and shortage of library staff	19	79	5	21
Technical support and security	17	71	7	29
Volatility of journal titles	16	67	8	33
Lack of formal orientation programmes	16	67	8	33
Few resources such as computers	18	75	6	25
Difficulty in reservation of sources	17	71	7	29
Limited access through the use of IP authentication	24	100	-	-
Slow internet connectivity	22	92	2	8
Complexity in searching and overlapping coverage of journals	23	96	1	4

When the respondents were asked to indicate the challenges they encounter when organising library information resources, the findings revealed that a high number of respondents indicated that challenges such as workload and shortage of library staff, technical support and security, volatility of journal titles, lack of formal orientation programmes, few resources such as computers, limited access through the use of IP authentication, slow internet connectivity and complexity in searching and overlapping coverage of journals were the major stumbling blocks in organising library information resources. They also highlighted that difficulty in reservation of resources is a factor that hampers organisation of library resources.

4.3.4.2 Dealing with challenges that hamper organisation of library resources

The purpose of this question was to find out how librarians and cataloguers were able to deal with the challenges they had indicated in 4.3.4.1when organising library resources.

When they were requested to explain how they were dealing with those challenges, 14 (58%) indicated that they made requisitions to their supervisors for the provision of regular workshops, seminars, in-service training, as well as educational and outsourced training so that they become well equipped with modern technologies.

The findings also revealed that eight (33%) of the respondents indicated that they have requested the supply of resources such as computers and the installation of Wi-Fi so that information can become more accessible while the remaining two (8%) respondents did not respond to the question.

4.3.4.3 Programmes that improve the effectiveness of organisation and retrieval of library resources

This question was asked in order to find out the programmes that librarians and cataloguers were provided with in order improve the effectiveness of organisation and retrieval of library resources.

Table 4.29: Programmes offered to improve the effectiveness of organisation and retrieval of library resources

Programmes offered	Marked		Unmarked	
	Frequency	Percent	Frequency	Percent
Joint workshops and seminars	3	13	21	88
Educational programmes	11	46	13	54
In-service training sessions	5	21	19	79
Outsourced training	4	17	20	83
Inter-organisational congresses	1	4	23	96
All of the above	-	-	-	-

When the respondents were asked to indicate the various programmes that were provided in order to improve the effectiveness of the organisation of library resources, out of 24 (100%) respondents, a high number of 11 (46%) of them indicated that they received educational programmes. This was followed by five (21%) who indicated that they received in-service training sessions. Four (17%) indicated that they received outsourced training, three (13%) responded that they received joint workshops and seminars and one (4%) indicated that he/she went to inter-organisational congresses (see Table 4.29).

4.3.4.4 Measures that will improve the effectiveness of the organisation of library information resources

In terms of the recommended measures for improvement as offered by the respondents, the findings highlighted three main areas, namely, internet connectivity, provision of a proxy server for authentication and authorisation for networked and unlimited access. Suggestions for improvement revealed that 100% of the participants cited provision of access by proxy can ensure unlimited access remotely.

Notably, 19 (79%) respondents indicated that a complete automation process and digitisation to allow access to e-reserves would enhance the effectiveness of the organisation of library information resources. Furthermore, most of the respondents in the questionnaires expressed that an increase in the number of wireless hotspots and a resolution of the issue of slow internet

could improve access to library information resources. They also highlighted the fact that those working in other sections should be given an opportunity to learn how library materials are catalogued and organised for access to library users. This is because they indicated that those from other sections remain in those particular sections only.

Fourteen (58.3%) participants highlighted the fact that there is a need for the provision of regular educational programmes, outsourced training and inter-organisational congresses for all library staff so that they keep abreast of current technological developments. They also acknowledge the fact that encouraging library staff to join interest groups in cataloguing practices to interact and share ideas can assist in this regard. The respondents also recommended the need for increasing number of cataloguers, automation of library services in order to have online cataloguing as a matter of urgency, considering the problems being encountered by cataloguers and the need for fast access to information by the users. They also recommended that regular departmental meetings be encouraged in order to iron out problems and map the way forward.

4.4 Conclusion

The analysis and the findings of the study appear in this chapter. The aim of the questionnaire was to determine the strategies adopted by the University of Venda's library to organise information resources with the view to assessing the implications on access to information. Data analysis was done according to the objectives of the study.

The findings as a whole revealed a number of problems encountered by respondents as there were backlogs with the overall cataloguing process. Suggestions and recommendations were given by respondents on how to improve the effectiveness of the organisation of library information resources, improve services and the cataloguing practice. These could be of benefit to the University of Venda and other academic libraries in general which are involved in the cataloguing process. Interpretations and discussions of the findings of the data analysis are presented in the next chapter.

CHAPTER FIVE
INTERPRETATION AND DISCUSSION

5.1 Introduction

The presentation of the results in Chapter Four was based on the responses from the library staff members, the academics and the students at the University of Venda. The opinions of the library staff members, academics and the students on the use of various tools used for organising library resources to enhance access and retrieval of library resources in the University of Venda library, and the feasible alternatives, were all taken into consideration. They became the basis of the analysis and also provided more in-depth information. The purpose of this chapter is to provide an interpretive discussion of the findings and relate them to the objectives of the study, as well as the literature reviewed in Chapter Two.

5.2 Response rate and participants' profiles

The results were obtained from 24 (100%) librarians, 139 (100%) academics and 196 (100%) students who participated in the study.

5.2.1 Daily activities, areas of specialisation and years of service

The results from the study established that amongst those 24 (100%) who responded in the study, only 9 (38%) participants are responsible for organising library resources making use of various tools like cataloguing tools, classification tools, indexing tools and various ICTs to perform activities such as descriptive cataloguing and copy cataloguing while 14 (58%) participants work in other sections within the library (see Table 4.1 of Chapter 4). These results reflect that the majority of cataloguers are engaged in all the cataloguing activities of all subject areas on a daily basis.

The study also established that of the 24 (100%) respondents, their year of experience vary considerably. They range from 11years and above by 7 (29%) followed by 5 (21%) with 9-10 and 4-5 years of service, 4 (17%) with 6-8 years of service in their current position and only 3 (13%) of them indicated that they have 1-3 years of service (see Table 4.2).

These results reflect that the majority of the cataloguers acquire their knowledge and skills in cataloguing through experience as they engage in their daily work. The study also revealed that workload and shortage of librarians responsible for organising library resources remain the

major challenges facing this library and has to be considered.

5.2.2 Years of experience and the frequency of using the library by library users

When the respondents were asked to indicate their years of experience while using the library, the finding revealed that out of 196 students (100%), the majority of 83 (42%) of them had three to four years of experience, this was followed by 80 (41%) students who indicated that they had one to two years of using the library. These results revealed that most of the students who visit the library are undergraduate student as compared to the number of post-graduate students who prefer to access information making use of their personal computers. The majority of 80 (41%) of these students indicated that they visit the library on weekly bases while 65 (33%) students indicated that they visit the library daily.

Of the 139 (100%) academics, the majority of 123 (89%) indicated that they have 5 and more years of experience in using the library, this was followed by 11 (8%) of them who indicated that they have 1 to 2 years of using the library, while only 5 (4%) indicated that they have 3 to 4 years of experience when using the library. However, large number of academics indicated that they have more years of experience of using the library but amongst those academics, the results also highlighted the fact that they are rarely visiting the library and most of them even go to the library only to find out if there are relevant resources that students might use to complete their assignments. This group also indicated that they prefer to access information using their own personal computers in their offices. They complain of the number of few resources of which in many instances are outdated and the number of few databases available in the library, (see Table 4.3, Figure 4.1 & 4.2).

The study aimed to answer the following research questions:

- How effective are the tools in organising library information sources?
- What skills do librarians have for organising information resources?
- What are the barriers and enablers for access and retrieval of library information resources?
- What are the implications on access to information resources at the University of Venda?

- What measures could be put in place to improve the effectiveness of the organisation of library information resources at the University of Venda?

5.3 Interpretation of data

The investigation was based on the collection of data through a review of the available literature and the use of a survey questionnaire (see Annexures 2, 3 and 4). The questionnaire was divided into four sections and the results will be discussed using this structure. At the end of Chapter Five, there will be a summary showing how the research questions of the study were answered.

5.3.1 Effectiveness of the tools for organising library information resources

Academic libraries use cataloguing and classification tools to organise their materials to enable users to access them in an easy manner from the shelves. Cataloguing, classification and indexing tools and resources are essential for this process. Various questions were asked of the library staff regarding their use of the cataloguing, classification and indexing tools and resources.

5.3.1.1 Cataloguing tools consulted when cataloguing library resources

When the respondents were asked to indicate cataloguing tools consulted when cataloguing library resources, the findings revealed that few librarians know of the tools used for cataloguing library resources and that they are being guided by various cataloguing rules when cataloguing library resources. Acknowledging the fact that there are a limited number of librarians as mentioned above, they are capable of processing and organising library resources for different subjects until they are ready for use by library users even though the majority did not have knowledge of the tools used for cataloguing library resources (see Table 4.4 in Chapter Four). Carstens (2000:47-50) concluded that librarians and cataloguers must know how records and information are organised, the structured set of rules and information technology required and the ways in which the records and information are stored and handled in order to support the organisation's policies, procedures, mandates and legislatures.

Kauffman (2005:12) also notes that academic libraries should strive to use corporate technologies, products and processes or develop new models and strategies of developing and implementing new services quickly because library information resources appear in various

forms and formats that include printed and electronic resources.

5.3.1.1.1 The type of cataloguing done

Kim (2003:105) maintains that there are two types of cataloguing i.e. original cataloguing and copy cataloguing. When participants were asked to indicate the type of cataloguing they do, the results revealed that, although the library has automated or online cataloguing, it still maintains the traditional manual catalogues (card) for backup in case of problems with the online system. The findings revealed that processing of materials mostly depended on the type of materials being catalogued. They indicated that original cataloguing is more time-consuming than copy cataloguing therefore it depended on which category was being catalogued. The findings show that most of the materials take at least a month to be processed and to be ready on the shelves for the users. This can be attributed to a lack of cataloguing knowledge and skills in the use of cataloguing tools.

Types of materials catalogued can also affect the workflow in that some materials have less readily available copy and, if a copy is available, it requires more upgrading and it is harder to catalogue originally than other materials, for example, music and non-book materials. In most cases, original cataloguing takes more time than copy cataloguing. For instance, non-book items are more difficult to catalogue than other material unless there is substantial customisation (Hall-Ellis 2008; Jung-ran, Caimei & Linda 2009).

The findings also show that there is no specific period put in place to catalogue library materials as some materials take longer to process than others (see Table 4.5 in Chapter Four). The researcher also discovered that some materials which are difficult to catalogue are put on hold and, in the process, these materials accumulate into backlogs. Hill (2002) recommends that, to ensure effective operation in the processing of materials, the librarians should use surveys among the cataloguers to investigate their problems and come up with solutions to ensure effective service in providing quick access to materials.

5.3.1.1.2 How does the cataloguing system work?

When the respondents were asked to describe how the cataloguing system works, the results revealed that some of them were able to describe how the process of cataloguing works. They indicated that when cataloguers engage in the process of cataloguing, they enter information

about a book or any other resource into the library's catalogue so that, when library users search the catalogue, they find what they are looking for or at least something that will help them find an answer to their questions.

They also indicated that cataloguing systems entail the creation of various library entries for a catalogue which includes the bibliographic description, subject analysis, assignment of classification notation and other activities involved in physically preparing the item for shelving. This was supported by Kim (2003:96-98) who stated that cataloguing systems involve the creation of an original bibliographic record and the verification of bibliographic information in existing records. This includes the description and the provision of access points for all library materials.

5.3.1.2 Classification tools used when classifying library resources

The purpose of the question in this section was to find out various classification tools that the respondents consult when classifying library resources. When the respondents were asked to indicate all classification tools they consult when classifying library resources, they pointed out that there is a need for classification systems to separate entities into broad topic levels that provide a hierarchical arrangement of numeric or alphabetic notations to represent broad topics. These include the Library of Congress Classification Schedules, the Dewey Decimal Classification, the Universal Decimal Classification and Colon Classification (Guenther 2002:120-131& Hodge 2000). These results also indicated that the majority of the librarians are able to use the classification tools mentioned above (see Figure 4.3 in Chapter Four).

Opaleke et al (2006) establish that classification systems are necessary for organising library resources as they provide consistency in the assignment of classification numbers to library materials. They also play a major role in directing library users to specific subjects of the same or related subjects and where they are shelved in the library. The findings revealed that classification systems have an impact on the organisation of library resources because the use of classification tools enable cataloguers to assign classification numbers to items, maintain consistency in the assignment of classification numbers to library materials and group items on the same or related subjects. Classification systems enable the cataloguers to perform a keyword search and to locate classification numbers through captions, notes or index terms and direct the users to a specific subject (Opaleke et al 2006).

5.3.1.2.1 Effectiveness of classification tools in organising library information resources

The respondents were asked to determine the effectiveness of various classification tools on the organisation of library resources. The results show that cataloguers at the University of Venda mostly use DDC, LCSH, CC, LCC, UDC and Taxonomies and Categorization schemes to organise library resources by separating entities and providing a hierarchical arrangement of numeric or alphabetic notation to represent broad topics as alluded by Guenther (2002: 120-131) and Hodge (2000). The findings also revealed that LCC, DDC and LCSH are more effective than UDC and CC in organising library resources. This is noted by Slavic (2008) who indicated that UDC uses various symbols in addition to Arabic numerals which result in exceedingly long and complex notations.

Colon Classification (CC) was also criticised because of major changes from one edition to the next, as noted by Encyclopædia Britannica (2003), Glassel (1998), Satija (1997) and Singh (1999) who indicate that CC is still a work in progress rather than a fully functioning scheme and that the use of Colon Classification notation and code numbers are too complex to gain acceptance from average library patrons (see Table 4.6 in Chapter Four).

5.3.1.3 Indexing tools used in the library

When the respondents were asked to indicate relevant indexing tools used in the library, 50% of them responded that they use Sears List of Subject Headings and Library of Congress Subject Headings (LCSH), (see Table 4.6). According to Adamich (2014), Satija (2015), Sears List of Subject Headings 21st Edition (2014) and Weihs (2015), Sears stands out as a proven, user-friendly solution to meet the challenges associated with information identification and utilisation in the context of subject heading/classification governance today.

With regard to the use of Library of Congress Subject Headings (LCSH), Drabinski (2013) argues that the widespread use and acceptance of the LCSH facilitates the uniform access and retrieval of items in any library in the world using the same search strategy and LCSH thesaurus if the correct headings have been applied to the item by the library (see Table 4.7).

5.3.1.3.1 The extent to which indexing tools affect the organisation of library materials

The respondents were asked to indicate the extent to which various indexing tools affect the organisation of library resources. The majority of 42% of the respondents indicated that the

Sears List of Subject Headings is used to a great extent when compared to 34% use of Library of Congress Subject Headings (LCSH) and 21% of Book Industry Standards and Communication Subject Headings List (BISAC). Satija (2015) and Weihs (2015) note that Sears strives to offer a basic list that includes many of the headings most likely to be needed in small libraries together with patterns and examples that will guide the cataloguer in creating additional headings as needed. Sears also provides suggestions of headings appropriate for use in catalogues and provides patterns and instructions for adding new headings as they are required with the aim of making library collections as easily available as possible for library users (Adamich 2014; Sears List of Subject Headings 21st Edition 2014).

However, according to the John (2011), LCSH has been widely criticised for its difficulty of use and its information retrieval effectiveness in online environments. The Library of Congress (LC) has claimed that the headings were not based on comprehensive principles nor ever intended to cover the universe of knowledge (see Table 4.7 in Chapter Four).

5.3.1.4 The extent to which ICTs make work easier

When the respondents were asked to indicate the extent to which ICTs make their work easier, the findings revealed that in a work place, ICTs can be a double-edged sword. They may have a positive impact on librarians and library patrons by increasing access to information, allowing greater flexibility, improving efficiency and increasing communication. However, ICTs may also create increased demands and stress amongst librarians and library patrons by creating expectations of greater productivity and accessibility as well as creating technical problems for them (Wang et al 2008; Tarafdar et al 2007), (see Table 4.8 in Chapter Four).

According to Alter (2006:14), the work system framework "enhances human participants and machines to perform the work using information, technology, and other resources to produce products and services for internal or external customers" (see Figure 1.1).

Wendy (2003) noted that ICTs result in online library catalogues, computerised information retrievals, electronic data transmission, information-sharing and electronic e-mails, among others. The power generator and main server for the internet are shared with the rest of the institution, leading to overload and consequently low connectivity. However, human skills in ICT related tasks affect the level of availability of facilities in some libraries. As a result, a poor knowledge base and sporadic technical support, such as cabling, troubleshooting and

power supply, coupled with non-committal institutional support has an adverse effect on how the library adopts methodologies to address new needs in spite of readiness to accept them (Wendy 2003).

ICTs also have far-reaching effects upon the organisation of library information resources as they facilitate the provision of information resources in various forms and formats that influence the basic settings of academic libraries by increasing access to information, allowing greater flexibility, improving efficiency and increasing communication within the library environment (Bamidele et al 2013, Tarafdar et al 2007) & Wang et al 2008).

It can be said that the majority, who found the use of ICTs useful resulting in significant changes in their work, were those who are able to grasp knowledge of the new technological skills. They also found the ICTs very useful and that they had an impact on their work by making cataloguing easier. Other studies, such as that by Omekwu (2007), have also shown that there is a high demand for technology to make cataloguing easier.

5.3.1.5 Possibilities of accessing unprocessed materials

When asking this question, the researcher wanted to find out if it is possible to access unprocessed materials. This is because library collections house a wide variety of materials on many different topics and in many different formats. The challenge lies in making these materials available and accessible to end-users and letting them know what is available in the library collection. That is why cataloguers require relevant tools and resources to assist them in cataloguing these materials correctly so that they can be accessed by library users (Miksa 2005:1-12) (see Table 4.9 in Chapter Four).

When the librarians were asked to indicate whether unprocessed materials can be accessed and retrieved, the results revealed that unprocessed materials cannot be accessed. The findings demonstrate that cataloguing is an important part of librarianship because it facilitates the availability of materials in libraries. When materials are not processed, it is difficult to organise them and equally difficult for the users to access them (Lundy & Hollis 2004; Yakel 2005).

5.3.1.6 Cataloguing backlogs

The purpose of the question was to find out if there are cataloguing backlogs in the library. The results in Figure 4.4 revealed that 50% of the respondents indicated that there are backlogs in

the library. Results show that the majority of users in these libraries would therefore not have access to materials as a result of backlogs. This is unfortunate as users are being denied access to these materials as stipulated by article 19 in the Human Rights Declaration.

5.3.1.6.1 Reasons why backlogs exist

When the researcher probed to find out the type of materials which exist in the backlogs, the respondents explained that it was mostly the materials which needed original cataloguing and that most of the cataloguers found this to be difficult and time consuming. This shows that most of the cataloguers do not have the capability to do original cataloguing and, as a result, these materials are always put aside resulting in a backlog accumulating. These findings were very similar to results found in similar studies from the literature (Mandel 2003; Lundy and Hollis 2004; Yakel 2005) (see Table 4.11 in Chapter Four).

Hundie (2003:557) noted that original cataloguing has always been a very expensive task in terms of time and energy of professional cataloguers. This resulted in problems of backlogs, outsourcing and subscription to expensive databases. Nowadays with the advent of the Internet in libraries, cataloguing tools and resources available on the Internet is limitless, thus knowledge and use of these tools by cataloguers can save precious time and money for libraries.

However, the types of materials catalogued can also affect the workflow in that some materials have less readily available copy and if a copy is available it requires more upgrading and it is harder to catalogue originally than other materials, for example music and non-book materials. In most cases it is true that original cataloguing takes more time than copy cataloguing. For instance, non-book items are more difficult to catalogue than other material unless there is substantial customisation (Hall-Ellis 2008; Jung-ran, Caimei Linda 2009).

Some materials which are difficult to catalogue are put on hold and in the process these materials accumulate into backlogs. Hill (2002) has recommended that to ensure effective operation in the processing of materials the librarians should use surveys among the cataloguers to find out their problems and come up with solutions to ensure effective service in providing quick access to materials.

5.3.1.6.2 Possible strategies for resolving backlogs

The findings revealed that out of participants, show that the majority of the respondents, 18(75%) stated that more staff should be trained in cataloguing practices and procedures, while 5(20.8%) indicated that the libraries should recruit more cataloguers (staff). Only 1(4.2%) maintained that a solution for backlogs would be to acquire more cataloguing tools and resources for the cataloguers.

According to the literature, it is frequently evident that the solution to the issue of backlogs in the institutions is to intensify training so that more cataloguers are trained to acquire more skills and knowledge in cataloguing practice (Kim 2003; Maphopha 2000 & Msiska 1998). Recruiting more staff and acquiring more cataloguing tools and resources may not only be the solution. When staff members are recruited, they still need training and even when cataloguing tools are acquired, staff members need training in order to use them properly. Thus, the training of cataloguers would be the solution to the backlogs in this regard. This is reiterated by many other studies as reflected in the literature (Bowman 2006; Cloete 2003 & Maphopha 2000).

5.3.2 Identifying and assessing the skills of librarians for organising library information resources

In this section, the study attempted to find answers to a number of issues about the skills of the librarians for organising library information resources. These include:

5.3.2.1 Training received on the use of library organising tools

When the respondents were asked whether they had received training on the use of various library organising tools such as AACR2, MARC21, RDA, LCC, DDC, LCSH, Sears List of Subject Headings, UDC, CC, FEBR and BISAC, the findings indicated that though the respondents indicated that they received training, some of them did not master the use of all library organising tools, (see Table 4.12 in Chapter Four).It is therefore important to note that the solution to the issue of backlogs in the institutions is to intensify training so that more cataloguers are trained to acquire skills and knowledge in cataloguing practices (Kim 2003; Maphopha 2000; Msiska 1998). Recruiting more staff and acquiring more cataloguing tools and resources may not be the solution because, when staff members are recruited, they still need training and when cataloguing tools are acquired, staff members need training in order to use them properly. Thus, the training of cataloguers would be the solution to the backlogs in

this regard. This is reiterated by many other studies as reflected in the literature (Bowman 2006; Cloete 2003; Maphopha 2000).

5.3.2.1.1 Nature of training received

When the respondents were asked to indicate the nature of training they received, the findings established that the majority of them face problems with the cataloguing tools and resources due to a lack of training in the use of the various classification tools and resources. Some respondents also attributed this to a lack of mentoring and proper supervision while others thought that continuing education will be the solution to this problem. The results reflect that the majority of cataloguers have problems with the use of cataloguing tools and resources and only a few cataloguers reported that they do not have problems. The results also indicate that, in this institution, there is a lack of professional staff trained in cataloguing because majority of the respondents indicated that they face problems with the cataloguing tools and resources due to a lack of training in the use of the various classification tools and resources. The study established that most cataloguers were trained on the job (see Table 4.13 in Chapter Four).

As discussed in the literature review, it is the responsibility of the institution's administration to maintain standards by employing and training professionals to improve the quality of service in providing access to materials (Dutton & Msiska 1994; Cloete 2003).Training is a very important activity in any library. Many people join the library profession without knowledge or skills in librarianship therefore it is important that staff in libraries should be trained so that they are able to grasp the library's techniques in order to perform their services effectively. Cataloguing is a special area in libraries therefore it requires on-going training to master the skills. This is supported by Intner (2015) who viewed continuing professional training as a process through which a person with basic professional qualifications in librarianship and information service develops in order to remain relevant in the profession.

Amekuedee (2005) suggests that training should be of the highest quality to enable library staff to master the cataloguing tools and resources. Institutions should provide their staff with other forms of training, apart from on-the-job training, such as formal training, workshops, seminars and outsourced training services in order to improve their services. Maphopha (2000) also indicated that continuing education through seminars and workshops helps when resources for formal education are limited.

5.3.2.1.2 Skills acquired during training

The respondents were asked to determine the skills they have acquired during their training (see Table 4.14 in Chapter Four). The skills include knowledge of HTML, networking and scripting languages, to deal with the back-end of the OPAC, translate library services into online media and have the ability to troubleshoot basic computer and printer problems. The results revealed that only a few have acquired those skills. Librarians need to have knowledge to support electronic educational programs in organisations. Librarians are also required to be able to keep up with information technologies and have certain basic technical skills. They need to acquire knowledge of HTML, networking and scripting languages, to deal with the back-end of the OPAC, translate library services into online media and have the ability to troubleshoot basic computer and printer problems. Librarians must be able to use the scanner, fix the printer and troubleshoot any other technology problems they may be having. They should learn what problems commonly come up and how to fix them, if necessary (Ahmad & Yaseen 2009).

Ahmad and Yaseen (2009) further suggest that librarians need to do online searching and be able to go beyond basic catalogue and database searching. Furthermore, librarians must acquire knowledge of using search engines and use them well to find quality online resources. It is also the duty of librarians to help patrons set up e-mail and teach basic internet skills and be able to troubleshoot problems that users experience when accessing online library resources to the extent where they can figure out if the problem is on the library's side or the user's side.

Librarians in the modern library environment need to acquire IT-related technical skills to handle information technology based tools and routines used for library services such as computer troubleshooting, knowledge of software, telecommunications media, creation of online databases, content management and information retrieval techniques through the internet, among others (Obuh 2009; Olorunfemi et.al 2012). Mishra (2009) observes that a skilled person has the ability to perform any task successfully. One of the main tasks for librarians is to provide access to information for those who need it. This implies that librarians are involved in information organisation, retrieval and dissemination.

Obuh (2009) and Olorunfemi et.al (2012) maintain that librarians require information technology skills to enable them to use computers, software applications, databases and other

technologies to achieve a wide variety of academic, work-related and personal goals to ensure that all the clients of the library are able to cope with the information intensive world. These skills include knowledge of the structure of the database and the search engine instructions as well as ways in which instructions are linked to each other (see Figure 1.1).

Librarians need to be familiar with different types of information resources in every field and format (Materska 2005) so that they can evaluate various resources and guide specialists about different fields. That includes having skills in supporting electronic educational programs, knowledge of organising seminars and educational programs for knowledge-based organisations, and participating in organisational learning models through networks.

5.3.3 Barriers and enablers experienced in accessing library information resources

In this section, the study attempted to find answers from librarians as well as library users for a number of issues about barriers and enablers experienced in accessing library information resources. This section is therefore divided into two sub-sections, librarian's section and library user's section.

5.3.3.1 Librarian's section

In this section, librarians were requested to respond to questions regarding resources available to library users, the most commonly requested resources, frequency of requesting library resources, reasons for requesting library resources, demand for accessing library resources, statistics on the use of library resources, ability to search library information resources, information retrieval tools to access library resources, complaints on access and retrieval of various library information resources, resolving complaints regarding access and retrieval of library resources, and the nature of training received by library users.

5.3.3.1.1 What are the most commonly requested resources by library users?

A question was posed to the respondents regarding the most commonly requested library resources in the library. As asserted by Abels, Jones, Latham, Magnoni and Marshall (2003) that librarians must have expertise in the total management of information resources. Librarians are striving to facilitate the organisation and dissemination of this information. The findings revealed that electronic resources such as academic journals, e-books were the most commonly requested resources in the library, whereas databases and institutional repositories were the

second most requested library resources by the respondents (see Table 4.15 in Chapter Four).

As postulated by Lees (2002) electronic resources were favoured by users due to their advantages. These advantages include the speed of access to the latest information, ability to incorporate multimedia elements, quick searching, linking from and to other sources (hypertext capabilities), security (no fear of loss) and multi-user capability (McLean & Dew 2004: 265-303).

5.3.3.1.2 Demand for accessing library resources

The respondents were asked to indicate whether there is a demand for accessing library resources. The findings revealed that books and e-books were highly in demand because they provide speed of access to the latest information, the ability to incorporate multimedia elements, quick searching, linking from and to other sources (hypertext capability), security (no fear of loss) and multi-user capability for those who require information for study purposes. Academic journals, institutional repositories, databases and encyclopaedias were the second most requested library resources, (see Table 4.16 in Chapter Four).

This demand is because access to information and materials is a human right as stated in article 19 of the Human Rights Declaration. This is supported by Armstrong et al (2010) and Sethi (2010) who argue that library users request library resources to seek information for study purposes and to conduct research by making use of the internet and related network technologies. The internet and the web have a great impact on scholarly communities since they are changing the ways in which scholars seek information, communicate with each other, conduct research and distribute research results. It is therefore the responsibility of the librarians and cataloguers to make materials available for library users in academic libraries. Easy location of information for users in any library is very important. Van House, Weil and McClure (1990) argue that a major library service is the provision of various library information resources, facilities and equipment which includes computer facilities and catalogues.

5.3.3.1.3 Statistics on the use of library resources

When the respondents were asked if they maintained statistics on the use of library resources, they responded that they kept statistics on access to specific databases and online search

requests and other library resources (see Table 4.17 in Chapter Four).

Assessment of the demand for library services is crucial as it is the manifestation of what happens in the library. Buckland (1999) argues that the demand mechanism to determine the patterns of the use of library services is not well understood with some of the effects being observed empirically. The characteristics of demand warrant attention because they are manifestations of user behaviour and, as such, deserve to be central in the design of library services. According to Dourgarian (2011), library user demand drives resource development which is informed by statistics on user demands.

5.3.3.1.4 Information retrieval tools to access library resources

When the respondents were asked whether or not library users were able to use various information retrieval tools, the results revealed that Online Public Access Catalogue (OPAC) and internet search engines e.g. Alta Vista, AOL search and Google seem to be the mostly used to retrieve library resources, (see Table 4.18 in Chapter Four).

It can be said that OPACs allow searching for any word in a title or other field thereby increasing the ways to find a record. They also allow links between several variants of an author's name hence information becomes more accessible to information users as acknowledged by Online Computer Library Center (2011) and Omekwu (2007:20) in their studies. Johnson et al (2012) are of the view that the internet and the universal adoption of the World Wide Web enable the faster, convenient and more extensive distribution of scholarly communications.

5.3.3.1.5 Complaints about access and retrieval of various library information resources

The question was posed to the respondents requesting them to mark all complaints received regarding access and retrieval of various library information resources. The findings revealed that some of the challenges facing both librarians and library patrons in accessing electronic resources as noted by Armstrong et al (2010) and Materska (2005) include access control, workload and shortage of personnel to assist users, technical support and security, volatility in coverage of journal titles by resource providers, lack of formal orientation programmes, electricity failure, few resources such as computers, difficulty in reservation of sources, limited access especially through use of IP authentication, slow internet connectivity, complexity in

searching and overlapping coverage of journals. These were the major problems that hamper access and retrieval of information resources (see Table 4.19 in Chapter Four). The provision of workshops regarding various information organisation and retrieval skills, computer assisted instructions and installation of Wi-Fi is then seen as a remedy to the problem.

5.3.3.1.6 Resolving complaints regarding access and retrieval of library resources

This question was asked with the aim of determining things that can be done to assist library users on resolving their complaints regarding access and retrieval of library resources. When the respondents were asked this question, 58.3% (14) of the participants indicated that library users can be assisted by providing workshop regarding computer assisted instructions, various information retrieval skills and by installing Wifi while the remaining 41.7% (10) did not respond to the question. Following the argument by Han and Goulding (2003), in a networked environment, quality of staff, their performance, their ability to run a one stop service effectively from technical to readers information services and the availability of digitised collections have an impact on service delivery beyond the traditions of library practice. Han and Goulding (2003) further assert that there is need for not only an intelligent digital library system but also for highly skilled personnel staff responsible for effective personalised assistance.

5.3.3.1.6 Nature of training received by library users

Johnson, Trabelsi and Tin (2009) believe that library users require more than just access to library resources. Library users also require expertise to make sense of library systems and research tools in the research process. As stipulated in the Central Texas College (2003) document on policies and procedures, access to library services and resources is essential for students to achieve their academic goals, for faculty and staff to pursue their instructional and research goals, and for students, faculty and staff to acquire and enhance lifelong learning skills.

It is therefore the responsibility of the librarians to see to it that library users receive necessary training and access to library services and resources to achieve their academic goals and to pursue their instructional and research goals, and also to acquire and enhance lifelong learning skills. As recommended by Johnson et al (2009) that easy location of information enhances access and retrieval of library resources in any library.

When respondents were asked to indicate the nature of the training that is offered to library users, the respondents indicated that most library users were provided with training programmes, library orientation programmes, library guides and on computer or electronic resource assisted instructions (see Table 4.20 in Chapter Four). The use of ICTs such as the internet and the World-Wide Web (WWW) enable the library users to connect to all kinds of networks across the globe, search the online catalogues of many libraries using FTP and obtain vast amounts of electronic information for their needs (Armstrong et al 2010).

5.3.3.2 Library users' section

Library users such as students and academics were requested to respond to questions regarding accessibility of library resources, library information resources preferences, purpose for using the library, complaints on access and retrieval of library resources, frequency of receiving library resources, challenges experienced when accessing library resources, assistance received from the librarians and reasons for not getting assistance.

They were also requested to indicate librarians' performance in terms of offering assistance to library users, training offered to library users, time spent in training, adequacy of the training, tools used to access and retrieve library information resources, skills that they acquired, whether the skills are benefiting efficiency levels in terms of access and retrieval of library information, the extent to which the skills are benefiting efficiency levels, their ability to use various library retrieval tools when no training was received and the programmes that can enhance access and retrieval of library resources.

5.3.3.2.1 What format do you prefer to access your library information resources?

When the respondents were asked to indicate the format they prefer to use to access library resources, the majority of the students and the academics indicated that they prefer both printed and electronic library resources as sources of information (see Figure 4.5 and 4.6 in Chapter Four).

According to Anunobi and Okoye (2008:1), academic institutions are subscribing to electronic journal databases so that they can provide research and scholarly writing software, computer workstations or computer labs for students to access journals, library search databases and portals, institutional electronic resources, internet access and course or task related software, word processing and spreadsheet software. As a result, librarians need to have expanded skills,

abilities and knowledge for operating these technologies effectively.

The academic libraries have embraced the technological developments and endeavoured to support the users using the ICTs. Gopakumar and Baradol (2009: 61) submit that the web has opened new windows of opportunity to provide information support for distance learners by ensuring that electronic documents can be made available anywhere and anytime through inter-connected computers. What makes this possible is the ubiquitous World Wide Web. With the technology of the Web, library documents can be viewed and printed by any person who has a web connected computer, whether that person lives nearby or in another remote location.

5.3.3.2.2 How often do you get library materials in that format?

The purpose of the question was to find out the frequency at which library users get library materials in the format of their choice.

However, the findings revealed that out of 196 (100%) students and 139 (100%), 74 (38%) students and 37 (27%) academics indicated that they always get library materials in the format of their choice, 95 (49%) students and 84 (60%) academics indicated that they sometimes receive library resources, 24 (12%) students and 13 (9%) academics show that they rarely receive library materials in the format of their choice, only 1 (1%)student indicated that he/she does not have access to library materials while 2 (1%) students and 5 (3.6%)academics did not answer the question, (see Table 4.21).

It should be noted that IT skills in the modern library environment are necessary to all librarians and information professionals. IT-related technical skills enable librarians to handle information technology based tools and routines used for library services like computer troubleshooting, knowledge of software, telecommunication media, creation of online databases, content management, and information retrieval techniques through internet, among others. Mishra (2009) observes that librarians are skilled personnel who have the ability to perform any task successfully. It is therefore one of the main tasks for librarians and other information professionals to provide access to information for those who need it. This therefore, implies that librarians and other information professionals involved in information gathering, storage, retrieval and dissemination on one hand and on the other hand the computer specialists who support the library and informational professionals should be partners in this endeavour.

5.3.3.2.3 Do you find library information resources accessible?

The purpose of the question was to find out if library users are able to access library resources in the library.

When the library users were asked to indicate if they are able to access library resources requested, the findings revealed that the majority of 149 (76%) students and 128 (92%) academics, view library resources being accessible, while only 46 (24%) students and 11 (7%) academics responded that library resources are not accessible and only 1 representing 1% of the students did not respond to the question, (See Figure 4.7 & 4.8).

According to Johnson, Trabesti & Tin (2009), library users require more than just access to library resources, they also require expertise in making sense of library systems and research tools, and to offer a helping hand along that often slippery path known as the research process. As stipulated in the Central Texas College (2003) document on policies and procedures, access to library services and resources is essential for students to achieve their academic goals, for faculty and staff to pursue their instructional and research goals, and for students, faculty, and staff to acquire and enhance lifelong learning skills.

According to Online Computer Library Center (2011) and Omekwu (2007:20) the use of Online Public Access Catalogue (OPACs), computerised cataloguing and classification tools make processing and organisation of library collections more accurate, interesting and faster. They evolved into direct access to the MARC computer files during the search process and enhance usability over traditional card formats because they do not need to be sorted statically but the user can choose author, title, keyword, or systematic order dynamically. OPACs allow searching for any word in a title or other field, increasing the ways to find a record. They allow links between several variants of an author's name hence information become more accessible to information users.

5.3.3.2.4 Which tools do you use to access and retrieve library information resources?

When library users were asked to mark all tools they use to access and retrieve library resources, the majority of students and academics use Internet search engines, OPAC to access library resources, Online databases and digital libraries and subject directories to access library

resources more effectively. The respondents also indicated that the skills acquired during training benefit their efficiency levels in terms of their job performance (see Table 4.22).

As asserted by Nkanu and Okon (2010), the use of ICTs in the library facilitate the provision of information resources in various forms and formats which include printed, electronic and networking. These tools also help catalogue users find the information they need more easily as they are seen as a flexible framework for content description of digital resources that serve the needs of libraries in organising traditional resources and introducing efficiencies in data capture and storage retrievals. ICTs also provide a set of guidelines and instructions on formulating data to support resource discovery of all types of content and media.

Adegbore (2011) also asserts that printed resources are being changed into e-books, e-journals, full-text databases, indexing and abstracting databases and reference databases, that is, biographies, dictionaries, directories, encyclopaedia and e-zines. This has increased the global dissemination of information as electronic resources are easily accessible in remote areas and they solve storage problems, control the flood of information and their updates are significantly more efficient. Johnson et al (2012) also assert that publishing sectors are increasingly migrating to publishing online and that the impact of this is felt all over the world therefore academic institutions are left with no alternative except to subscribe to electronic resources. Therefore, the use of the internet and related network technologies have a positive impact on scholarly communities since they are changing the ways in which scholars seek information, communicate with each other, conduct research and distribute research results.

5.3.3.2.5 Have you received training on the use of library retrieval tools?

When library users were asked if they received training on the use of library retrieval tools, the findings revealed that the majority of students and the academics indicated that they received training on the use of various tools for access and retrieval of library information resources (see Table 23 of Chapter Four). The findings show the importance for the library users to have expertise in making sense of library systems, information retrieval tools and research tools in the research process to achieve their academic goals and to pursue their instructional and research goals, and also to acquire and enhance lifelong learning skills.

5.3.3.2.6 Was the training adequate?

The purpose of the question was to find out if the training received by library users was adequate. When the question was posed to library users, out of 196 (100%) students and 139 (100%) academics, 131 (66.8%) and 57 (51%) academics responded that the training was adequate, 37 (18.9%) students and 16 (11.5%) academics responded that the training was not adequate while 28 (14.3%) students and 6 (4.3%) academics did not respond to the question. The findings revealed that library users' training and development programmes were adequate and contributed to their performance in the following ways: capacity to evaluate information resources and the ability to search and retrieve information. These results imply that training and development programmes and methods contributed to the increase of their professional knowledge, skills and experience and enhanced their job performance in the retrieval of library resources of their needs, (see Figure 4.9 & 4.10 of chapter 4).

5.3.3.2.7 Which skills were you trained on?

When library users were asked to mark all the skills they were trained, the results revealed that the majority of 141 (72%) students and 64 (46%) academics were able to use library resources and services more effectively, 94 (48%) of students and 104 (75%) academics were able to use advanced searching techniques, 78 (40%) students and 111 (80%) academics are able to use internet search engines effectively, 69 (35%) students and 91 (66%) academics indicated that they are able to use online databases and digital libraries.

However, 30 (15%) students and 63 (45%) academics indicated that they are able to use subject directories, 24 (12%) students and 40 (29%) academics indicated that they are able to set up and maintain endnote library while 21 (11%) and 12 (9%) academics indicated that they are able to keep up with current awareness alert profiles in electronic resources, (see Table 4.24).

Online Computer Library Center (2011) and Omekwu (2007:20) acknowledge that internet search engines such as Alta Vista, AOL search and Google, online databases and digital libraries as well as subject directories allow searching for any word in a title or other field thereby increasing the ways to find a record. They also allow links between several variants of an author's name hence information becomes more accessible to information users.

5.3.3.2.8 What challenges do you experience when accessing library resources of your preference?

When the question was posed to library users requesting them to mark all the challenges they encounter when accessing various library information resources, the finding revealed that the majority of students indicated that problems of workload and shortage of library staff, technical support and security, volatility of journal titles, lack of formal orientation programmes, few resources such as computers, difficulty in reservation of sources, limited access through the use of IP authentication, slow internet connectivity and complexity in searching and overlapping coverage of journals were the major challenges they encounter when accessing library information resources.

The majority of academics indicated that the challenges they encounter when accessing various library information resources include slow internet connectivity, complexity in searching and overlapping coverage of journals, limited access through the use of IP authentication and difficulty in reservation of resources. These problems were also noted by noted by Armstrong et al (2010) and Materska (2005) regarding access to library resources (see Table 4.25 in Chapter Four).

5.3.3.2.9 Do you get assistance from the librarians?

The purpose of the question was to find out from library users if they receive assistance from library users regarding access to library resources.

However, when the question was posed to library users, out 196 (100%) students and 139 (100%) academics, 153 (78%) students responded that they receive assistance from librarians regardless of workload and shortage of library staff whereas 122 (88%) academics also responded that they receive assistance from librarians regardless of workload and shortage of library staff and only 43 (22%) students and 5 (4%) indicated that they do not receive assistance from librarians at all while the remaining 12 (9%) of academics did not respond a question, (see Table 4.26).

Mishra (2009) observes that a skilled person has the ability to perform any task successfully. This is because one of the main tasks for librarians and other information professionals is to provide access to information for those who need it. This therefore, implies that librarians and

other information professionals are entitled to perform tasks such as information gathering, storage, retrieval and dissemination on one hand so that library resources are accessible to library users. They are therefore also expected to be the computer specialists who support the library users in this endeavour. Therefore, librarians always strive to offer assistance to library users at all cost.

5.3.3.2.10 How often do you get assistance from the librarians?

The purpose of the question was to find out the frequency at which library users get assistance from the librarians.

When library users were asked how often they get assistance from the librarians, the findings indicated that out of 196 (100%) students and 139 (100%), the majority of 82 (42%) students and 46 (33%) academics responded that they sometimes get assistance from the librarians, 60 (31%) students and 77 (55%) academics responded that they always receive from the librarians assistance, 23 (12%) students and 9 (7%) academics indicated that they rarely receive assistance from the librarians, while 28 (14%) students did not respond to the question and only 3 (1%) students and 7 (5%) academics showed that they do not get assistance from the librarians, (Figure 4.11 & 4.12).

5.3.3.2.11 Rate librarians' performance in terms of offering assistance to library users

The purpose of the question was to find out how librarians' performance is rated in terms of offering assistance to library users, the results revealed that the majority of students and academics rated librarians' performance good (see Figure 13 &14). Mishra (2009) observes that librarians are skilled personnel who are able to perform any task successfully. They provide access to information for those who need it. This implies that librarians and other information professionals are expected to be the computer specialists who support the library users and who are able to perform tasks such as information gathering, storage, retrieval and dissemination so that library resources are accessible to library users.

IT skills in the modern library environment are necessary for all information professionals to enable them to handle information technology based tools and routines used for library services such as computer troubleshooting, knowledge of software, telecommunication media, creation of online databases, content management and information retrieval techniques through the

internet, among others. It has also become increasingly important that librarians keep up with technology and demonstrate the need to be multi-skilled personnel for new generation LIS professionals (Orme 2008:624; Reeves & Hahn 2010:118). It is for this reason that librarians are expected to use various technologies in the library so that they can learn what problems commonly occur and to fix them, if necessary (Ahmad & Yaseen 2009). They further suggest that librarians need to do online searching and be able to go beyond basic catalogue and database searching. Furthermore, librarians must acquire knowledge of using search engines and use them well to find quality online resources. It is also the duty of librarians to help patrons set up e-mail and teach basic internet skills and be able to troubleshoot problems that users experience when accessing online library resources to the extent where they can figure out if the problem is on the library's side or the user's side (Ahmad & Yaseen 2009).

5.3.3.2.12 Which programmes can enhance access and retrieval of library resources?

The aim of the question was to find out from the library users if there are programmes that can enhance access and retrieval of library resources.

When the question was posed to library users for them to mark all the programmes that can enhance access to library resources, 143 (73%) students and 63 (55%) academics marked that library orientation programmes can enhance access to library resources, 89 (45 %) students and 53 (62) academics indicated that library guides can even assist in this regard. 87 (44%) students and 87 (63%) indicated that computer or electronic resources assisted instructions might assist.

However, 73 (37%) students and 46 (33%) academics marked that guided tours can enhance access to library resources, 70 (36%) students and 79 (57%) academics marked that course-related instruction can be a remedy to access to library resources, 69 (35%) students and 61 (44%) academics felt that even handbooks and bibliographic aids might assist, 65 (33%) students also think that even lectures can assist in this regard.

59 (30%) students and 46 (33%) academics indicated that both advanced bibliographic instruction and seminars can enhance access to library resources, 54 (28%) students and 105 (76%) academics indicated that web-based instruction can assist in this regard, (see Table 4.27 of chapter 4).

Johnson, Trabelsi and Tin (2009) assert that library users require expertise to make sense of

library systems and research tools in the research process. As stipulated in the Central Texas College (2003) document on policies and procedures, access to library services and resources is essential for students to achieve their academic goals, for faculty and staff to pursue their instructional and research goals, and for students, faculty and staff to acquire and enhance lifelong learning skills.

It is therefore the responsibility of the librarians to see to it that library users receive necessary training and access to library services and resources to achieve their academic goals and to pursue their instructional and research goals, and also to acquire and enhance lifelong learning skills. As recommended by Johnson et al (2009) that easy location of information enhances access and retrieval of library resources in any library. Training programmes that are offered to library users include library orientation programmes, library guides and on computer or electronic resource assisted instructions. Guided tours, course- related instruction, handbooks and advanced bibliographic instructions, web-based instructions and seminars as well as lectures are also provide to library users.

5.4 Conclusion

The broad objective of the study was to determine the strategies adopted by the University of Venda's library to organise information resources with the view to assessing the implications on access to information. The interpretation of the findings was done in accordance with the results obtained. To sum up, the researcher was able to answer the research questions posed in the study as follows:

- The researcher found out that the majority of library staff at the University of Venda were not aware of or even used the cataloguing tools and resources. Only cataloguers were aware of, and used, the cataloguing tools and resources. The low utilisation of these tools is a cause for concern.
- Problems regarding the use of various tools and resources for organising library resources were discovered. The main problem appeared to be a lack of training in the use of the cataloguing tools and resources.
- The researcher was able to ascertain the level of knowledge and skills of the cataloguing staff by asking about their qualifications, their training and length of service in cataloguing. Although many of the cataloguing staff have a number of years of experience, some of the cataloguers did not have qualifications.

- The researcher was able to find out the skills and training that was offered to the cataloguing staff at the University of Venda. Most of the cataloguers are trained through courses and on-the-job training.
- The final research question involved suggestions from the respondents regarding the various challenges and problems discussed. Most of the recommendations related to an increase in staff, the training of cataloguers and computerisation of the cataloguing system.

This study was, in many respects, similar to Miksa's (2004) research. A number of questions and some of the broader issues which were addressed in Miksa's studies, such as the level of utilisation of cataloguing tools and resources by cataloguers, training or updating staff on the use of cataloguing tools and resources and staff limitations, have also been addressed by this study.

Findings from this study have raised a number of questions about the root causes of low utilisation of the cataloguing tools and resources in the University of Venda library. Similar issues were also raised by Miksa who questioned whether the low utilisation of the cataloguing tools is a reflection of the cataloguers' levels of knowledge and education on the cataloguing tools and resources.

The findings of this study have revealed a number of problems being encountered by cataloguers in the cataloguing process and on access to library resources by library users. Suggestions and recommendations were given by both the librarians and respondents who are library users on how to improve the cataloguing practice in order to enhance access to library resources at the University of Venda.

CHAPTER SIX
CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

In this chapter, a brief summary of the study is provided. Conclusions and recommendations based on the discussion in Chapter Five are also made. Finally, suggestions for further research will be offered.

6.2 Revisiting the research questions of the study

The purpose of the study was to determine the strategies adopted by the University of Venda's library to organise information resources with a view to assessing the implications on access to information.

In retrospect, the research endeavoured to answer the following five questions derived from the objectives of the study:

- How effective are the tools in organising library information sources?
- What skills do librarians have for organising information resources?
- What are the barriers and enablers for access and retrieval of library information resources?
- What are the implications on access to information resources at the University of Venda?
- What measures could be put in place to improve the effectiveness of the organisation of library information resources in the University of Venda\

6.3 Overview of the study

Chapter One provided an introduction to the study. A brief background and a short overview of the University of Venda and its library was given. An outline of the research problem and the research questions were stated and finally the limitations of the study were noted.

In Chapter Two, various studies of a similar nature, many of them involving the use of cataloguing tools, were discussed. The researcher looked at various studies done in developed as well as other developing countries. The chapter presented a discussion on the aspects related to the tools, techniques, technologies and skills for organising library information resources. An overview on the views of tools, techniques and technologies regarding organisation of

library information resources; the effectiveness of the tools, techniques and technologies in providing access to information; the skills for organising library information resources; the benefits of utilising various tools, techniques, technologies and skills for organising library information resources and measures that could be put in place to improve organisation of library information resources, was given.

Chapter Three described the research methodology used in the study. As the chosen method, the advantages and disadvantages of survey research were discussed as well as the data collection instruments. The researcher used a self-administered questionnaire for librarians, students and academics. The data was analysed using SPSS.

The results of the data analysis were presented in Chapter Four. The results of the questionnaires to librarians regarding their use of cataloguing tools and the results from the library users regarding access to library resources were provided. Various problems relating to the use of the cataloguing tools by the cataloguers were revealed. The cataloguers gave recommendations as to how cataloguing processes could be improved.

Chapter Five presented the interpretation of the findings of the study. These showed that, although the librarians used the cataloguing tools, they did so infrequently. Their problems related largely to a lack of staff, knowledge and skills as a result of insufficient training. Cataloguing backlogs were prevalent and were an indication of the problems identified in the cataloguing and an inadequately trained staff. In summing up the chapter, it was shown how the results of the study sufficiently answered the research questions of the study.

6.4 Conclusions

The majority of the librarians indicated that they used the cataloguing tools and resources at the University of Venda and were therefore aware of their existence. The researcher discovered that these librarians consult DDC, LLC, AACR2 and MARC21. However, in this case, the level of consultation is quite disappointing as a result of the problems being encountered with the cataloguing tools and resources such as lack of staff and insufficient training resulting in cataloguing backlogs.

The opportunities for training at this university, both on a formal and informal level, seem to be limited. This is because many respondents suggested that there was a need for training on all levels and specifically in the use of cataloguing tools and resources since the pre-training

offered was not sufficient. It can be concluded that the provision of access to information will inevitably be affected by the problems that the librarians face in their efforts to provide services to the users. In conclusion, the findings of the study will hopefully motivate the University of Venda to perform a self-evaluation of the use of tools and resources by their librarians. It is hoped that the study will bring awareness to the librarians and administrators of this institution as to what supports the efficiency and effectiveness of cataloguing.

6.5 Recommendations for improving the effectiveness of the organisation of library information resources

The study investigated a number of issues that were able to provide recommendations for improving the effectiveness of the organisation of library information resources. From the findings revealed, it is clear that the quality of staff and the availability of digitised collections have an impact on service delivery beyond the traditions of library practice. In a networked environment, it is not the number of staff but the quality of staff that is desirable. This includes their performance and their ability to run a one-stop service effectively from technical to readers' information services. Following the argument by Han and Goulding (2003), there is a need, not only for an intelligent digital library system, but for highly skilled staff who can offer effective personalised assistance.

The respondents also recommend the fact that because libraries are viewed as store houses of information which also exist in virtual reality, there must be wireless access to the library network which enables computers, Internet and other information technologies to provide all the software, services and resources to enhance the online environment. In other words, computers must provide the processing, storage and retrieval capabilities, while telecommunications must provide the capabilities for the transfer and/or communication of data from one workstation to another (see Table 4. 28).

The respondents also noted that libraries must organise seminars, educational programs and in-service training sessions for librarians so that they become familiar with methods of organising information. This will enable them to use different media for disseminating information to colleagues and create new knowledge by composing disseminated knowledge. Librarians need to have relevant knowledge to support electronic educational programs. This knowledge will make them familiar with different types of information resources in all fields and formats so

that they can guide library users from different fields to access information resources relevant to their information needs (see Table 4.29).

In-service training and educational programmes can also assist librarians to adapt to change and fulfil their roles in the age of digital knowledge. They also pointed out that libraries must organise inter-organisational congresses that will give librarians opportunities to exchange and share knowledge with other librarians from various institutions of particular skills and expertise used for organising library resources. Such congresses will also prepare the way for projects such as resource sharing and interlibrary loans, and will create a collaborative environment among librarians. Libraries with better resources may help equip those libraries with few resources by creating agreements among managers during these meetings. Managers can also give guidance to other managers by expressing their own experiences in the course of managing organisational knowledge as supported by Esfandiari and Tosic (2005).

As it was noted by Sacchanand (2002), the respondents felt that libraries must also hold joint workshops that will provide the opportunities for librarians to visit other libraries and information centres in order to become aware of the activities of other organisations and educating them on new methods and tools for improving services. Thus, libraries must conduct remote education for librarians in order to give updates on tools, techniques and skills for acquiring and updating knowledge.

6.6 Measures that will help improve the effectiveness of the organisation of library information resources

In terms of the recommended measures for improvement as offered by the respondents, the findings highlighted three main areas, namely, Internet connectivity, provision of a proxy server for authentication and authorisation for networked and unlimited access. Suggestions for the improvement revealed that 100% of the participants cited that the provision of access by proxy can ensure unlimited access remotely.

Notably, the majority of the respondents indicated that complete automation process and digitisation to allow e-reserves would enhance the effectiveness of the organisation of library information resources. Furthermore, most of the respondents in the questionnaires expressed the need to increase the number of wireless hotspots and to resolve the issue of slow Internet to improve access to library information resources. They also highlighted the fact that those

working in other sections should also be given an opportunity of learning how library materials are catalogued and organised for access to library users. This is because they indicated that if one works in a particular section, they remain in that section only.

However, the respondents also emphasised that there is a need for the provision of regular educational programs, outsourced training and inter-organisational congresses to all library staff so that they keep abreast of current technological developments. They also acknowledged that encouraging library staff to join interest groups in cataloguing practices to interact and share ideas might assist in this regard. The respondents also recommended increasing number of cataloguers, automation of library services in order to have online cataloguing as a matter of urgency, considering the problems being encountered by cataloguers and fast access to information by the users. They also recommended that regular departmental meetings be encouraged in order to iron out problems and map the way forward.

From the library users' point of view, it is recommended that there is a need for them to receive frequent training on programmes that can enhance access and retrieval of library resources so that they are able to achieve their academic goals and to pursue their instructional and research goals, and also to acquire and enhance lifelong learning skills. As recommended by Johnson et al (2009) that easy location of information enhances access and retrieval of library resources in any library. Training programmes that can be offered to library users include library orientation programmes, library guides and on computer or electronic resource assisted instructions. Guided tours, course- related instruction, handbooks and advanced bibliographic instructions, web-based instructions and seminars as well as lectures. Library users also acknowledge that internet search engines such as Alta Vista, AOL search and Google, online databases and digital libraries as well as subject directories allow searching for any word in a title or other field thereby increasing the ways to find a record. It was seen as a necessity for library users to receive training on the use of internet search engines.

6.7 Recommendations from the researcher

In order to ensure effective provision of access to information materials and services by librarians, the researcher suggests that the University of Venda's library address an issue of lack of cataloguing staff, a review of the cataloguing tools and resources be done to ascertain their adequacy, online cataloguing systems be done in order to speed up the processes and

avoid backlogs and the implementation of more training programmes for cataloguers in order to enhance the cataloguing process.

The suggestions and recommendations presented above indicate the aspects that the researcher believes should receive greater attention. The suggestions could help library administrators and cataloguers to propose strategies for improvements.

6.8 Suggestions for further research

The researcher suggests that a broader user satisfaction survey be done on the provision of materials and services to facilitate access to materials and information.

Research could be undertaken to:

- Assess the cataloguing tools and resources used at the University of Venda.
- Assess the cataloguing policy of the University of Venda's library.
- Assess the implications on access to information resources at the University of Venda.

6.9 Implications for policy, theory and practice

Prompted by the calls for assessments that can better inform and support organisation of library resources, the researcher has put forth the potential benefits of the library having specific policies relating to the use of cataloguing tools and resources for organising and access of library resources as well as policies on library staff and library user training as noted by Miksa (2004). The study therefore recommends the formulation of policies that would guarantee quality organisation and provision on access of library resources to library users through appropriate information and communication technologies.

With print collections still occupying a good percentage of the resources stocked in libraries, there still exists the need for libraries to collaborate with other libraries for purposes of resource sharing through interlibrary and document delivery, consortia agreements and access to virtual electronic collections. There is also a need for summative assessments for ongoing reflection and feedback about overall progress and reporting awareness creation among librarians on their changing role, changing user characteristics and new paradigms.

The insights gained from the current study would bring about transformations for building a cumulative knowledge-base that would focus on the development and use of theory-based assessment. The conceptual scheme should serve as a guide for stimulating further thinking and discussion about the assumptions and foundations underlying an assessment.

6.10 Summary of the study

The study fulfilled its original intention which was to find out from the librarians and library users of UNIVEN Library about the use of cataloguing tools and resources in providing access to information. The study was guided by research objectives and questions.

The study establishes that problems relating to the use of cataloguing tools and resources were related largely to a lack of staff, knowledge and skills as a result of insufficient training. Cataloguing backlogs were prevalent and were an indication of the problems identified in the cataloguing and an inadequately trained staff. The study concludes that libraries must organise seminars, educational programs and in-service training sessions, provision of regular educational programs, outsourced training and inter-organisational congresses to all library staff so that they keep abreast of current technological developments and become familiar with various methods of organising library resources. The study also establishes that staff development alone is not enough to enhance effective organisation and retrieval of library resources, programmes such as library orientation programmes, library guides, course-related and electronic resources-assisted instructions, both advanced bibliographic instruction and seminars and web-based instruction can also assist library users on access and retrieval of various library resources.

Various recommendations and suggestions were made by librarians and library users for an improved service. Finally, the researcher drew conclusions, generated recommendations and made suggestions for further research.

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ANNEXURE 1: SURVEY QUESTIONNAIRE CHECKLIST

Questionnaire checklist includes three sections, i.e. the outline and format, the questions and pre-test or pilot testing.

1. The Outline and Format

A. Introduction to the Questionnaire

- Title of the Study
- Purpose
- Duration of survey and length of questionnaire
- Guarantee of confidentiality
- Brief information about the company or organization
- Incentive Information (if any)

B. Demographic Data

- Respondent's Name (This could be optional.)
- Age, Gender, etc.

C. Question Format

- The first question is a closed-ended question (answerable by Yes or No).
- Questions are arranged from general to specific.
- Sensitive questions are at the end of the questionnaire.
- Questions are grouped together according to the topic.
- The directions on how to answer are placed before the questions.
- The rating scale is written before the questions.
- The response options are placed vertically, except for tabulated questions.

D. End of Questionnaire

- A "Thank You" or any expression of gratitude to the respondent
- Information on knowing the survey results

2. The Questions

- The questions are concise and simple.
- All the questions do not contain any terminologies, acronyms or jargons that are unfamiliar to the respondents.
- The first 5 questions verify whether the respondent is eligible to continue the survey or not.
- All questions point to the survey goals.
- All possible response options or an “Other” option are included in each question.
- The respondent may or may not answer sensitive questions by placing a “Prefer not to answer” option.
- A midpoint response option such as “Average”, “Sometimes" or "Neutral" is included on the rating scale used.
- Most questions are closed-ended.
- Open-ended questions are voluntary.

3. Pre-Test

- The survey questionnaire has been sent to friends, colleagues or experts to validate the wording and timing.
- The survey questionnaire has been answered by few survey respondents from the target population.
- Five (5) close-ended questions are answerable within one minute, while two (2) open-ended questions are answerable within one minute.
- The survey takes a maximum of 15 minutes to complete.
- Appropriate revisions of the questionnaire are done.

ANNEXURE 2: DATA COLLECTION TOOL FOR LIBRARIANS

STRATEGIES FOR ORGANISING INFORMATION RESOURCES AT THE UNIVERSITY OF VENDA IN SOUTH AFRICA: IMPLICATIONS ON ACCESS TO INFORMATION

Introduction

Dear participants

You are invited to participate in a survey which is aimed at investigating strategies adopted by the University of Venda's library in organising information resources with the view to assessing the implications on access to information. Our focus therefore, is on your experiences on the provision of library services as members of the library team in this facility.

Through this study, we hope to obtain the current picture on how library information resources at the University of Venda are organised and to determine measures that could be put in place to improve the effectiveness of the organisation of library information resources thereof. Please note that it is very important for us to learn from your opinions. However, we are just as interested in negative comments as positive comments. Completion of this survey will take approximately 10-15 minutes.

Your participation in this study is completely voluntary. There are no foreseeable risks associated with this project. However, if you feel uncomfortable when answering questions, you can withdraw from the survey at any point. Your survey responses will be strictly confidential and data from this research will be reported only in the aggregate. Your information will be coded and will remain confidential.

Your cooperation in this regard will be highly appreciated.

Kind regards

Nevondo Rendani (Mrs)

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SURVEY QUESTIONNAIRE

INSTRUCTION FOR COMPLETING THE QUESTIONNAIRE

(i) Please read each question carefully and mark (x) the appropriate box to indicate your answer.

(ii) Use spaces provided to write your answer.

SECTION 1

BACKGROUND INFORMATION

Q1.1 In which section of the library do you work?

i.	Cataloguing	
ii.	Classification	
iii.	Indexing	
iv.	All of the above	
v.	Other, (please specify) ……..... …….....	

Q1.2 What is your position within the organisation?

Q1.3 How long have you been in your current position?

i.	1-3 years	
ii.	4-5 years	
iii.	6-8 years	
iv.	9-10 years	
v.	11 and above	

Q1.4 What is your highest academic qualification?

SECTION 2

THE EFFECTIVENESS OF THE TOOLS FOR ORGANISING LIBRARY INFORMATION RESOURCES

Q2.1 Do you consult the following cataloguing tools when cataloguing library resources?

Cataloguing tools	**Yes**	**No**
i. Anglo American Cataloguing Rules (AACR 2)		
ii. Machine–Readable Cataloguing (MARCH 21)		
iii. Resource Description and Access (RDA)		
iv. Functional Requirements for Bibliographic records (FRBR)		
v. Functional requirements for authority data (FRAD)		
vi. Other, (Please specify) …….. ……..		

Q2.1.1 If yes, how often do you use these cataloguing tools?

Cataloguing tools	**Daily**	**Weekly**	**Monthly**	**Rarely**	**Never**
i. Anglo American Cataloguing Rules (AACR 2)					
ii. Machine–Readable Cataloguing (MARCH 21)					
iii. Resource Description and Access (RDA)					
iv. Functional Requirements for Bibliographic Records (FRBR)					
v. Functional requirements for authority data (FRAD)					
vi. Other, (please specify) …….. ……..					

Q2.1.2 What type of cataloguing do you do?

i. Copy cataloguing	
ii. Original cataloguing	
iii. Both	
iv. Other, (please specify) ……	

…….	

Q2.1.3 Please describe how the cataloguing system works?

Q2.1.4 How do you rate your ability to use the following cataloguing tools?

Cataloguing tools	**Very good**	**Good**	**Average**	**Poor**	**Very poor**
i. AACR 2					
ii. MARC21					
iii. RDA					
iv. FRBR					
v. FRAD					
vi. Other, (Please specify) …… ……					

Q2.2 Do classification systems have impact on the organisation of library resources?

i. Yes	
ii. No	
iii. Not sure	

Q2.2.1 If yes, how? (Mark (x) **ALL** that applies)

i. Enable cataloguers to assign classification numbers to an item	
ii. Maintain consistency in the assignment of classification numbers to library materials	
iii. Group items on the same or related subjects	
iv. Enable cataloguers to perform a keyword search	
v. Enable cataloguers to locate the possible classification numbers through captions, notes, or index terms	
vi. Directs the users to a specific subject	
vii. Other, (Please specify) ……... ……...	

Q2.2.2 Which of the following classification tools do you consult when classifying library resources? (Mark (x) **ALL** that applies).

Classification tools	
i. Library of Congress Classification System (LCCS)	
ii. Dewey Decimal Classification System (DDC)	
iii. Library of Congress Subject Headings (LCSH)	
iv. Universal Decimal Classification (UDC)	
v. Colon Classification	
vi. Other, (please specify)	

2.2.3 How often do you use these classification tools?

Classification tools	**Daily**	**Weekly**	**Monthly**	**Rarely**	**Never**
i. Library of Congress Classification System (LCCS)					
ii. Dewey Decimal Classification System (DDC)					
iii. Library of Congress Subject Headings (LCSH)					
iv. Universal Decimal Classification (UDC)					
v. Colon Classification (CC)					
vi. Taxonomies					
vii. Categorization schemes					
viii. Other, (please specify) ……... ……...					

Q2.2.4 How effective are the following classification tools for organising library information resources?

Classification tools	**Extremely effective**	**Effective**	**Moderately effective**	**Somewhat effective**	**Not effective**
i. LCC					
ii. DDC					
iii. LCSH					
iv. UDC					
v. CC					
vi. Other, (please specify) …….. ……..					

Q2.3 Which of the following indexing tools do you use in your library? (Mark (x) **ALL** that applies).

Indexing tools	
i. Sears List of Subject Headings	
ii. Library of Congress Subject Headings (LCSH)	
iii. Book Industry Standards and Communication Subject Headings List (BISAC)	
iv. Other, (please specify) ……..... …….....	

2.3.1 To what extent do the following indexing tools affect the organisation of library materials?

Indexing tools	**Very great extent**	**Great extent**	**Average extent**	**Hardly**	**Not at all**
i. Sears List of Subject Headings					
ii. Library of Congress Subject Headings (LCSH)					
iii. Book Industry Standards and Communication Subject Headings List (BISAC)					
iv. Other, (please specify) …… ……					

2.4 How often do you use the following ICTs in organising library resources?

ICTs	**Daily**	**Weekly**	**Monthly**	**Rarely**	**Never**
i. Computer					
ii. Internet					
iii. The Web					
iv. Other, (please specify) ……...					

……...					

Q2.4.1 To what extent have the following ICTs made your work easier?

ICTs	**Very great extent**	**Great extent**	**Average extent**	**Hardly**	**Not at all**
i. Computer					
ii. Internet					
iii. The Web					
iv. Other, (please specify) ……... ……...					

Q2.5 On average, how long does it take materials to be catalogued?

i. Within one hour	
ii. Within one day	
iii. Within one week	
iv. Within one month	
v. Other, (please specify) …….. ……..	

Q2.6 Is it possible to access unprocessed materials?

i. Yes	
ii. No	
iii. Not sure	

Q2.6.1 If the answer is yes, how are library materials made available if they are not processed?

Q2.7 Are there cataloguing backlogs at your institution?

i. Yes	
ii. No	
iii. Not sure	

Q2.7.1 If yes, why this problem exists? (Mark (x) **ALL** that applies).

i.	Workload and shortage of library personnel	
ii.	Technical support and security	
iii.	Volatility of journals titles	
iv.	Lack of formal orientation programmes	
v.	Few resources such as computers	
vi.	Difficulty in reservation of sources	
vii.	Limited access through the use of IP authentification	
viii.	Slow internet connectivity	
ix.	Complexity in searching and overlapping coverage of journals	
x.	Other, (please specify) …… ……	

Q2.7.2 In what ways could backlogs be resolved?

SECTION 3

IDENTIFYING AND ASSESSING THE SKILLS OF LIBRARIANS FOR ORGANISING LIBRARY INFORMATION RESOURCES

Q3.1 Did you receive training on the use of the following library organising tools?

Library organising tools		**Yes**	**No**
i.	AARC		
ii.	MARC		
iii.	RDA		
iv.	FRBR		
v.	LCC		
vi.	DDC		
vii.	LCSH		
viii.	UDC		
ix.	CC		
x.	BISAC		
xi.	Sears List of Subject Headings		
xii.	Other, (please specify) ……... ……...		

Q3.1.1 If yes, please indicate the nature of training received

i.	Workshops	
ii.	Seminars	
iii.	Educational programs	
iv.	In-service training sessions	
v.	Outsourced training	
vi.	Inter-organisational congresses	
vii.	Other, (please specify) ……..	

Q3.1.2 Which of the following skills have you acquired during your training? (Mark (x) **ALL** that applies).

Skills acquired		
i.	Dealing with the back-end of the OPAC	
ii.	Translating library services into the online media	
iii.	Troubleshooting basic computer and printer problems	
iv.	Networking	
v.	Scripting languages	
vi.	Knowledge of HTML	
vii.	All of the above	
viii.	Other, (please specify) ……. …….	

Q3.1.3 To what extent do you rate your ability to utilise these skills?

Skills		**Very great extent**	**Great extent**	**Average**	**Hardly**	**Not at all**
i.	Deal with the back-end of the OPAC					
ii.	Translate library services into the online media					
iii.	Troubleshoot basic computer and printer problems					
iv.	Networking					
v.	Scripting languages					

vi.	Knowledge of HTML					
vii.	Other, (please specify) ……. …….					

Q3.2 If no in Q3.1, why were you not trained?

Q3.3 Are you able to use various library organising tools even if you have never undergone training?

i.	Yes	
ii.	No	
iii.	Not sure	

SECTION 4

BARRIERS AND ENABLERS EXPERIENCED IN ACCESSING LIBRARY INFORMATION RESOURCES

Q4.1 What resources are available to library users in your library? (Mark (x) **ALL** that applies).

i.	Magazines	
ii.	Academic journals	
iii.	Database	
iv.	Newspapers	
v.	Addison	
vi.	Books	
vii.	Encyclopedia	
viii.	Other, (please specify) ……... ……...	

Q4.2 What are the most commonly requested resources by library users? (Mark (x) **ALL** that applies).

Information resources		
i.	Magazines	
ii.	Academic journals	
iii.	Institutional repositories	

iv. Databases	
v. Newspapers	
vi. Addison	
vii. Books & e-books	
viii. Encyclopedia	
ix. Other, (please specify) …… ……....	

Q4.3 How often do library users request these resources?

Information resources	**Always**	**Seldom**	**Sometimes**	**Rarely**	**Never**
i. Magazines					
ii. Academic journals					
iii. Institutional repositories					
iv. Databases					
v. Newspapers					
vi. Addison					
vii. Books					
viii. Encyclopedia					
ix. Other, (please specify) …… . …… .					

Q4.4 Why is that the case?

Q4.5 Is there demand for accessing the following library resources?

Information resources	**Yes**	**No**
i. Magazines		
ii. Academic journals		
iii. Institutional repositories		
iv. Databases		
v. Newspapers		
vi. Addison		
vii. Books & e-books		
viii. Encyclopedia		

ix. Other, (please specify) ……..... ……......		

Q4.6 If yes, does the library maintain statistics on the use of library resources in the following areas? (Mark (x) **ALL** that applies).

	Yes	**No**
i. Access to specific databases		
i. Access to journal articles		
ii. Online reservation		
iii. Online search requests		
iv. Online document delivery		
v. Other, (please specify) ……... ……...		

Q4.7 Are library users able to search library information resources on their own?

i.	Yes	
ii.	No	
iii.	Not sure	

Q4.8 Do library users use any of the following information retrieval tools to access library resources?

	Information retrieval tools	**Yes**	**No**
i.	Online Public Catalogue (OPAC)		
ii.	Internet search engines e.g. Alta Vista, AOL search, Google		
iii.	Online databases and digital libraries		
iv.	Subject directory		
v.	Index		
vi.	Bibliographic records		
vii.	Other, (please specify) …… ……. …… …….		

Q4.9 If no, what complaints do you receive from library users regarding access and retrieval of various library information resources? (Mark (x) **ALL** that applies).

i.	Volatility of journals titles	
ii.	Lack of formal orientation programmes	

iii.	Few resources such as computers	
iv.	Troubleshoot basic computer	
v.	Difficulty in reservation of sources	
vi.	Limited access through the use of IP authentification	
vii.	Slow internet connectivity	
viii.	Complexity in searching and overlapping coverage of journals	
ix.	Other, (please specify) …… ……	

Q4.10 How are library users assisted to resolve complaints regarding access and retrieval of library resources?

Q4.11 Are there training offered to library users on the use of various tools for access and retrieval of library information resources?

i.	Yes	
ii.	No	
iii.	Not sure	

Q4.12 If yes, please indicate the nature of training library users receive.

	Nature of training	**Yes**	**No**
i.	Library orientation		
ii.	Guided tours		
iii.	Advanced bibliographic instruction		
iv.	Conducted tours		
v.	Lectures		
vi.	Seminars		
vii.	Computer or electronic resource assisted instructions		
viii.	Use of audio visual aids		
ix.	Motion pictures		
x.	Handbooks and bibliographic aids		
xi.	Library guides		
xii.	Other, (please specify) …… ……		

SECTION 5

RECOMMENDATIO NS FOR IMPROVING THE EFFECTIVENESS OF THE ORGANISATION OF LIBRARY INFORMATION RESOURCES

Q5.1 Which of the following challenges do you encounter when organising various library information resources? (Mark (x) **ALL** that applies).

i.	Workload and shortage of library staff	
ii.	Technical support and security	
iii.	Volatility of journals titles	
iv.	Lack of formal orientation programmes	
v.	Few resources such as computers	
vi.	Difficulty in reservation of sources	
vii.	Limited access through the use of IP authentification	
viii.	Slow internet connectivity	
ix.	Complexity in searching and overlapping coverage of journals	
x.	Other, (please specify) …… ……	

Q5.2 How do you deal with those challenges?

Q5.3 What programmes are offered to improve the effectiveness of organisation and retrieval of library resources? (Mark (x) **ALL** that applies).

	Joint workshops and seminars	
	Educational programs	
	In-service training sessions	
	Outsourced training	
	Inter-organisational congresses	
	All of the above	
	Other, (please specify) …….....	

Q5.4 What measures can be put in place to improve the effectiveness of the organisation of library information resources in the University of Venda?

Q5.5 Please share any additional information of concern on this subject?

We acknowledge your time in completing the questionnaire, diverse views and opinions regarding the strategies that are used for organising library information resources at the University of Venda.

ANNEXURE 3: DATA COLLECTION TOOL FOR ACADEMICS

STRATEGIES FOR ORGANISING INFORMATION RESOURCES AT THE UNIVERSITY OF VENDA IN SOUTH AFRICA: IMPLICATIONS ON ACCESS TO INFORMATION

Introduction

Dear participants

You are invited to participate in a survey which is aimed at investigating strategies adopted by the University of Venda's library in organising information resources with the view to assessing the implications on access to information. Our focus therefore, is on your experiences on the provision of library services as members of the library team in this facility.

Through this study, we hope to obtain the current picture on how library information resources at the University of Venda are organised and to determine measures that could be put in place to improve the effectiveness of the organisation of library information resources thereof. Please note that it is very important for us to learn from your opinions. However, we are just as interested in negative comments as positive comments. Completion of this survey will take approximately 10-15 minutes.

Your participation in this study is completely voluntary. There are no foreseeable risks associated with this project. However, if you feel uncomfortable when answering questions, you can withdraw from the survey at any point. Your survey responses will be strictly confidential and data from this research will be reported only in the aggregate. Your information will be coded and will remain confidential.

Your cooperation in this regard will be highly appreciated.

Kind regards

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ANNEXURE 4: SURVEY QUESTIONNAIRE

INSTRUCTION FOR COMPLETING THE QUESTIONNAIRE

(i) Please read each question carefully and mark (x) the appropriate box to indicate your answer.

(ii) Use spaces provided to write your answer to the answer

Q1. Position: Please mark (x) where appropriate

i.	Professor/Associate	
ii.	Senior Lecturer	
iii.	Lecturer	
iv.	Assistant Lecturer	
v.	Research Fellow	
vi.	Teaching Assistant	
vii.	Other,(please specify) ……..	

Q2. Please mark (x) the subject areas

i.	Arts	
ii.	Humanities	
iii.	Sciences	
iv.	Business Administration	
v.	Other, (please specify) ……..	

Q3. How long have you been using the library?

i.	1-2 years	
ii.	3-4 years	
iii.	5 and above	

Q4. How often do you use the library?

i.	Never	
ii.	Rarely	

iii.	Monthly	
iv.	Weekly	
v.	Daily	

Q5. For what purpose do you use the library? (Mark (x) **ALL** that applies).

i.	Planning and preparing for class	
ii.	For updating my knowledge	
iii.	Preparing for test or exams	
iv.	For writing paper and presenting paper	
v.	For doing research work	
vi.	Other, (Please specify) …….. ……..	

Q6. Do you find library information resources accessible?

i.	Yes	
ii.	No	

Q7.If no, what hinder access to the library information resources? (Mark (x) **ALL** that applies).

i.	Workload and shortage of library staff	
ii.	Technical support and security	
iii.	Volatility of journals titles	
iv.	Lack of formal orientation programmes	
v.	Few resources such as computers	
vi.	Difficulty in reservation of sources	
vii.	Limited access through the use of IP authentification	
viii.	Slow internet connectivity	
ix.	Complexity in searching and overlapping coverage of journals	
x.	Other, (please specify) …… ……	

Q8. What format do you prefer to access your library information resources?

i.	Printed	
ii.	Electronic	
iii.	Both	
iv.	Other, (please specify) …… ……	

Q9. How often do you get library materials in that format?

i.	Always	
i.	Sometimes	
ii.	Rarely	
iii.	Never	

Q10. What challenges do you experience when accessing library resources of your preference? (Mark (x) **ALL** that applies).

i.	Volatility of journals titles	
ii.	Lack of formal orientation programmes	
iii.	Few resources such as computers	
iv.	Troubleshoot basic computer	
v.	Difficulty in reservation of sources	
vi.	Limited access through the use of IP authentification	
vii.	Slow internet connectivity	
viii.	Complexity in searching and overlapping coverage of journals	
ix.	Other, (please specify) …… ……	

Q11. Do you get assistance from the librarians?

i.	Yes	
ii.	No	

Q12. If yes, how often do you get assistance from the librarians?

ii.	Always	
iv.	Sometimes	
v.	Rarely	
vi.	Never	

Q12. If no in Q11, what is the reason for not getting assistance? (Mark (x) **ALL** that applies).

i.	Workload and shortage of library staff	
ii.	Volatility of journals titles	
iii.	Few resources such as computers	
iv.	Slow internet connectivity	
v.	Complexity in searching and overlapping coverage of journals	

vi. Other, (please specify) …… ……	

Q13. How would you rate librarians' performance in terms of offering assistance to library users?

i.	Very good	
ii.	Good	
iii.	Fair	
iv.	Poor	
v.	Very poor	

Q14. Please explain your choice in Q13 above.

Q15. Have you received training on the use of library retrieval tools?

i.	Yes	
ii.	No	

If yes, please answer Q15.1 – Q15.7

Q15.1 How many times you have undergone training programmes?

i.	Once	
ii.	Twice	
iii.	Three times and more	

Q15.2 Was the training adequate?

i.	Yes	
ii.	No	

Q15.3 Which of the following tools do you use to access and retrieve library information resources? (Mark (x) **ALL** that applies).

i.	Online Public Access Catalogue (OPAC)	
ii.	Internet search engines e.g. Alta Vista, AOL search, Google	
iii.	Online databases and digital libraries	
iv.	Subject directory	
v.	Index	

vi.	Bibliographic records	
vii.	Thesaurus	
viii.	Semantic networks	
ix.	Ontologies	
x.	Other, (please specify) …… ……	

Q15.4 To what extent are you able to use the following information retrieval tools?

Information retrieval tools		**Very great extent**	**Great extent**	**Average**	**Hardly**	**Not at all**
i.	Online Public Access Catalogue (OPAC)					
ii.	Internet search engines e.g. Alta Vista, AOL search, Google					
iii.	Online databases and digital libraries					
iv.	Subject directories					
v.	Index and abstracting services					
vi.	Endnote library and import references					
vii.	Bibliographic records					
viii.	Other, (please specify) ……... ……...					

Q15.5 If yes, which of the following skills were you trained on? (Mark (x) **ALL** that applies).

Information retrieval skills		
i.	Using library resources and services effectively e.g. library web site, books, catalogue, databases, document delivery, information services, reciprocal borrowing.	
ii.	Using advanced searching/ techniques e.g. electronic databases, indexes and abstracting services, full text databases, e-journals collections and e-books.	
iii.	Using Internet search engines e.g. Alta Vista, AOL search, Google	
iv.	Using Online databases and digital libraries	
v.	Able to use Subject directory	
vi.	Keeping up with current awareness alert profiles in electronic resources e.g. citation searching and tracking the academic debate in the area of interest.	
vii.	Setting up and maintaining Endnote library, import references from databases, insert formatted citations and references and to produce bibliography.	

viii. Other, (please specify) ……... ……...	

Q15.6 Are the skills benefiting your efficiency level in terms of access and retrieval of library information resources?

i. Yes	
ii. No	

Q15.7 If yes, please indicate the extent to which the skills are benefiting your efficiency level in terms of your job performance as an academic.

i. Extremely	
ii. High	
iii. Neutral/Not sure	
iv. Moderate	
v. No benefit	

If no in Q15, please answer Q15.8 – Q15.9

Q15.8 Why were you not trained?

Q15.9 Are you able to use various library retrieval tools even when you have not undergone various training sessions?

i. Yes	
ii. No	

Q16. Which of the following programmes can enhance access and retrieval of library resources? (Mark (x) **ALL** that applies).

i.	Library orientation	
ii.	Guided tours	
iii.	Advanced bibliographic instruction	
iv.	Conducted tours	
v.	Lectures	
vi.	Seminars	
vii.	Course-related instruction	
viii.	Computer or electronic resource assisted instructions	

ix. Web-based instruction	
x. Use of audio visual aids	
xi. Motion pictures	
xii. Handbooks and bibliographic aids	
xiii. Library guides	
xiv. Other, (please specify) …… ……	

Q17. What else do you think can be done to enhance access and retrieval of library information resources?

Q18. Please share any additional information of concern on this subject?

We acknowledge your time in completing the questionnaire, diverse views and opinions regarding the strategies that are used for organising library information resources at the University of Venda.

ANNEXURE 5: DATA COLLECTION TOOL FOR STUDENTS

STRATEGIES FOR ORGANISING INFORMATION RESOURCES AT THE UNIVERSITY OF VENDA IN SOUTH AFRICA: IMPLICATIONS ON ACCESS TO INFORMATION

Introduction

Dear participants

You are invited to participate in a survey which is aimed at investigating strategies adopted by the University of Venda's library in organising information resources with the view to assessing the implications on access to information. Our focus therefore, is on your experiences on the use of library services as students in this facility.

Through this study, we hope to obtain the current picture on how library information resources at the University of Venda are organised and to determine measures that could be put in place to improve the effectiveness of the organisation of library information resources thereof. Please note that it is very important for us to learn from your opinions. However, we are just as interested in negative comments as positive comments because at times negative comments are most helpful. Completion of this survey will take approximately 10-15 minutes.

Your participation in this study is completely voluntary. There are no foreseeable risks associated with this project. However, if you feel uncomfortable when answering questions, you can withdraw from the survey at any point. Your survey responses will be strictly confidential and data from this research will be reported only in the aggregate. Your information will be coded and will remain confidential.

Your cooperation in this regard will be highly appreciated.

Kind regards

Nevondo Rendani (Mrs)

Field worker contact number: 076 433 1514

Email Address :rnevondo72@gmail.com

Postal Address : PO Box 2614

Thohoyandou

0950

ANNEXURE 6: SURVEY QUESTIONNAIRE

INSTRUCTION FOR COMPLETING THE QUESTIONNAIRE

(i) Please read each question carefully and mark (x) the appropriate box to indicate your answer.

(ii) Use spaces provided to write your answer to the questions.

Q1. Please tick your course of study.

i.	Diploma	
ii.	BA/BSc bachelor's degree	
iii.	Honours degree	
iv.	MA/Philmasters degree	
v.	PhD	
vi.	Other, (please specify) ……	

Q2. Please indicate the subject area.

i.	Humanities	
ii.	Business Administration	
iii.	Social Sciences	
iv.	Sciences	
v.	Arts	
vi.	Other, (please specify)	

Q3. How long have you been using the library?

i.	1-2 years	
ii.	3-4 years	
iii.	5 and above	

Q4. How often do you use the library?

i.	Never	
ii.	Rarely	
iii.	Monthly	
iv.	Weekly	
v.	Daily	

Q5. For what purpose do you use the library? (Mark (x) **ALL** that applies).

i.	Planning and preparing for class	
ii.	For updating my knowledge	
iii.	Preparing for test or exams	
iv.	For writing paper and presenting paper	
v.	For doing research work	
vi.	Other, (Please specify) …….. ……..	

Q6. Do you find library information resources accessible?

i.	Yes	
ii.	No	
iii.	Not sure	

Q7.If no, what hinder access to the library information resources? (Mark (x) **ALL** that applies).

i.	Workload and shortage of library staff	
ii.	Technical support and security	
iii.	Volatility of journals titles	
iv.	Lack of formal orientation programmes	
v.	Few resources such as computers	
vi.	Difficulty in reservation of sources	
vii.	Limited access through the use of IP authentification	
viii.	Slow internet connectivity	
ix.	Complexity in searching and overlapping coverage of journals	
x.	Other, (please specify) …… ……	

Q8. What format do you prefer to access your library information resources?

i.	Printed	
ii.	Electronic	
iii.	Both	
iv.	Other,(please specify) ……. …….	

Q9. Do you always get library materials in that format?

Yes	

No	
Not sure	

Q10. If no, what challenges do you experience when accessing library resources of your preference? (Mark (x) **ALL** that applies).

Volatility of journals titles	
Lack of formal orientation programmes	
Few resources such as computers	
Troubleshoot basic computer	
Difficulty in reservation of sources	
Limited access through the use of IP authentification	
Slow internet connectivity	
Complexity in searching and overlapping coverage of journals	
Other, (please specify) …… ……	

Q11. Do you always get assistance from the librarians?

Yes	
No	
Not sure	

Q12. If no in Q11, what is the reason for not getting assistance? (Mark (x) **ALL** that applies).

Workload and shortage of library staff	
. Volatility of journals titles	
Few resources such as computers	
Slow internet connectivity	
Complexity in searching and overlapping coverage of journals	
Other, (please specify) …… ……	

Q13. How would you rate librarians' performance in terms of offering assistance to library users?

Very good	
Good	
Fair	
Poor	
Very poor	

Q14. If poor or very poor, please explain your answer?

Q15. Have you received training on the use of library retrieval tools?

i.	Yes	
ii.	No	
iii.	Not sure	

If yes, please answer Q15.1 – Q15.7

Q15.1 Which of the following tools do you use to access and retrieve library information resources? (Mark (x) **ALL** that applies).

i.	Online Public Access Catalogue (OPAC)	
ii.	Internet search engines e.g. Alta Vista, AOL search, Google	
iii.	Online databases and digital libraries	
iv.	Subject directory	
v.	Index	
vi.	Bibliographic records	
vii.	Thesaurus	
viii.	Semantic networks	
ix.	Ontologies	
x.	Other, (please specify) …… ……	

Q15.2 To what extent are you able to use the following information retrieval tools?

Information retrieval tools		**Very great extent**	**Great extent**	**Average**	**Hardly**	**Not at all**
i.	Online Public Access Catalogue (OPAC)					
ii.	Internet search engines e.g. Alta Vista, AOL search, Google					
iii.	Online databases and digital libraries					
iv.	Subject directories					
v.	Index and abstracting services					
vi.	Endnote library and import references					
vii.	Bibliographic records					
viii.	Other, (please specify) ……..					

……...					

Q15.3 How many times you have undergone training programmes?

i.	Once	
ii.	Twice	
iii.	Three times and more	

Q15.4 Was the training adequate?

i.	Yes	
ii.	No	
iii.	Not sure	

Q15.5 If yes, which of the following skills were you trained on? (Mark (x) **ALL** that applies).

Information retrieval skills	
i. Using library resources and services effectively e.g. library web site, books, catalogue, databases, document delivery, information services, reciprocal borrowing.	
ii. Using advanced searching/ techniques e.g. electronic databases, indexes and abstracting services, full text databases, e-journals collections and e-books.	
iii. Using Internet search engines e.g. Alta Vista, AOL search, Google	
iv. Using Online databases and digital libraries	
v. Able to use Subject directory	
vi. Keeping up with current awareness alert profiles in electronic resources e.g. citation searching and tracking the academic debate in the area of interest.	
vii. Setting up and maintaining Endnote library, import references from databases, insert formatted citations and references and to produce bibliography.	
viii. Other, (please specify) ……... ……...	

Q15.6 Are the skills benefiting your efficiency level in terms of access and retrieval of library information resources?

i.	Yes	
ii.	No	
iii.	Not sure	

Q15.7 If yes, please indicate the extent to which the skills are benefiting your efficiency level in terms of your job performance as a student.

i.	Extremely	
ii.	High	
iii.	Neutral/Not sure	
iv.	Moderate	
v.	No benefit	

If no in Q15, please answer Q15.8 – Q15.9

Q15.8 Why were you not trained?

Q15.9 Are you able to use various library retrieval tools even when you have not undergone various training sessions?

i.	Yes	
ii.	No	
iii.	Not sure	

Q16. Which of the following programmes can enhance access and retrieval of library resources? (Mark (x) **ALL** that applies).

i.	Library orientation	
ii.	Guided tours	
iii.	Advanced bibliographic instruction	
iv.	Conducted tours	
v.	Lectures	
vi.	Seminars	
vii.	Course-related instruction	
viii.	Computer or electronic resource assisted instructions	
ix.	Web-based instruction	
x.	Use of audio visual aids	
xi.	Motion pictures	
xii.	Handbooks and bibliographic aids	
xiii.	Library guides	
xiv.	Other, (please specify) …… ……	

Q17. What else do you think can be done to enhance access and retrieval of library information resources?

Q18. Please share any additional information of concern on this subject?

We acknowledge your time in completing the questionnaire, diverse views and opinions regarding the strategies that are used for organising library information resources at the University of Venda.

ANNEXURE 7: ETHICS APPROVAL LETTER

UNISA university of south africa

DEPARTMENT OF INFORMATION SCIENCE RESEARCH ETHICS REVIEW COMMITTEE

Date: 01 August 2016

Ref #: 2016_IS35427612_042]
Name of applicant: R Nevondo
Student #:x

Dear R Nevondo,

Decision: Ethics Approval

Name: R Nevondo, rnevondo72@gmail.com, 072 433 1514.

Supervisor: Prof MS Ngoepe, Department of Information Science, ngoepms@unisa.ac.za 012 429 6069

Co-supervisor: Mrs M Mhlongo, Department of Information Science, mhlonma@unisa.ac.za 012 429 2644.

Proposal: Strategies for organising information resources at the University of Venda in South Africa: Implications on access to information

Qualification: Masters

Thank you for the application for research ethics clearance by the Department of Information Science Research Ethics Review Committee for the above mentioned research. Final approval is granted for the duration of the project.

For full approval: *The application was reviewed in compliance with the Unisa Policy on Research Ethics by the Department of Information Science RERC on 01 August 2016.*

The proposed research may now commence with the proviso that:

1) *The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.*
2) *Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the Department of Information Science Ethics Review Committee. An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.*

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Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
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ANNEXURE 8: PERMISSION TO CONDUCT RESEARCH

Research and Innovation
Office of the Director

16 August 2016

Mrs R Nevondo

P O Box 2614

Thohoyandou

0950

Dear Mrs. Nevodo

Permission to conduct Research at the University of Venda

The Directorate of Research and Innovation has hereby granted you permission to conduct research at the University of Venda.

Masters Research Project titled: ***Strategies for organizing resources at the University of Venda in South Africa: Implications on access to information.***

The conditions are that all the data pertaining to University of Venda will be treated in accordance with the Ethical principles and that will be shared with the University. In addition consent should be sought by you as a researcher from participants.

Attached is our policy on ethics.

Thank you

UNIVERSITY OF VENDA
DIRECTOR
RESEARCH AND INNOVATION
2016 -08- 16
Private Bag X5050
Thohoyandou 0950

Prof. G.E. Ekosse

Director Research and Innovation

Cc: Prof JE Crafford (DVC Academic)

UNIVERSITY OF VENDA
PRIVATE BAG X5050, THOHOYANDOU, 0950. LIMPOPO PROVINCE. SOUTH AFRICA
TELEPHONE 015 962 8313 / 8504. FAX 015 962 9060
Email: research@univen.ac.za

University of Venda

"A quality driven, financially sustainable, rural-based comprehensive University"

ANNEXURE 9: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

P.O Box 2614, Thohoyandou 0950 076 433 1514

mevondo72@gmail.com

Nevondo Rendani

To: The Director

University of Venda

Private Bag X5050

Thohoyandou

Limpopo Province

0950

Sir/Madam

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

This serves as an application to conduct research study on **"Strategies for organising resources at the University of Venda in South Africa: implications on access to information".**

I RENDANI NEVONDO presently studying Masters in Information Science degree at the University of South Africa (UNISA) under the supervision of Prof Ngoepe M and Ms Mhlongo M, of the said university.

The purpose of the study is to determine the strategies adopted at the University of Venda to organise information resources with the view to assess the implications on access to information. To achieve this purpose, librarians working in various library sections such as technical services, acquisition section, periodicals section, cataloguing section, law library, special collections, reference section, user services, circulation section, main issue desk, reserve collection, inter library loan, shelving, reserve collection, evening staff, systems librarian, information literacy together with information users such as students and academics at the University of Venda will be recruited to participate in the study.

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ANNEXURE 10: PARTICIPANT INFORMATION SHEET

UNISA university of south africa

PARTICIPANT INFORMATION SHEET

Date: .....

Title : Strategies for organising resources at the University of Venda in South Africa: implications on access to information

INFORMATION SHEET

Dear Prospective participant

RE: REQUEST FOR CONSENT FROM PARTICIPANTS

My name is RENDANI NEVONDO, a student at the University of South Africa (UNISA) studying Masters in Information Science degree under the supervision of Prof Ngoepe M and Ms Mhlongo M, in the department of Information Science of the said university. I am presently engaged in a research study entitled: **"Strategies for organising resources at the University of Venda in South Africa: implications on access to information"**. The study is to be conducted at the University of Venda in South Africa.

The purpose of the study is to determine strategies adopted at the University of Venda to organise information resources with the view to assess the implications on access to information. To achieve this purpose, librarians working in various library sections such as technical services, acquisition section, periodicals section, cataloguing section, law library, special collections, reference section, user services, circulation section, main issue desk, reserve collection, inter library loan, shelving, reserve collection, evening staff, systems librarian, information literacy together with information users such as students and academics at the University of Venda will be recruited to participate in the study.

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ANNEXURE 11: CONSENT TO PARTICIPATE IN THE STUDY

CONSENT TO PARTICIPATE IN THIS STUDY

I………………………………………………. hereby voluntarily consent to participate in the following project:

I realise that: The study deals with the nature of "**Strategies for organising resources at the University of Venda in South Africa: implications on access to information**"

1. The procedure or treatment envisaged may hold some risk for me that cannot be foreseen at this stage;
2. The experimental protocol, i.e. the extent, aims and methods of the research, has been explained to me
3. I will be informed of any new information that may become available during the research that may influence my willingness to continue my participation;
4. Access to the records that pertain to my participation in the study will be restricted to persons directly involved in the research provided that anonymity is assured.
5. Any questions that I may have regarding the research, or related matters, will be answered by the researchers;
6. If I have any questions about, or problems regarding the study, or experience any undesirable effects, I may contact a member of the research team
7. Participation in this research is voluntary and I can withdraw my participation at any stage.

I …………………………………………….................. voluntarily consent to participate in the study. I understand that my participation is voluntary and that I may withdraw at any time.

Name and surname (participant): …………………………………………….
Signature (participant): ……………………………………….
Date: …………………………………………..

Name and surname (researcher): …NEVHONGO RENDANI………
Signature (researcher): …[signature] R………
Date: …04 - 07 - 2016……

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