Knowledge Sharing Strategies in University Libraries of Malawi

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DECLARATION

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DEDICATION

This thesis is dedicated to the almighty God; to my mother Ms. Evelyn Chilinda for raising and educating me; to my late father Mr. William Willies Chipeta; to My wife Florence and my two children, Lisa Sibongile and George Jr. who inspire me to work hard and for their support; to all my uncles and aunties, my brothers and sisters and friends for being there for me.

ABSTRACT

This study was carried out to examine the strategies of knowledge sharing in University libraries of Malawi. Four public universities were studied namely: University of Malawi (UNIMA), Lilongwe University of Agriculture and Natural Resources (LUANAR), Mzuzu University (MZUNI), and Malawi University of Science and technology (MUST). The study addressed the following research questions: (1) What types of knowledge is generated or acquired by university libraries in Malawi? (2) What is the rationale for knowledge creation and sharing by university libraries in Malawi? (3) What mechanisms and infrastructure are used for knowledge sharing in university libraries in Malawi? (4) What are the factors influencing knowledge sharing in university libraries in Malawi? (5) What is the attitude of librarians towards knowledge sharing in university libraries in Malawi? in addition (6) What framework is needed for effective knowledge sharing in university libraries in Malawi?

The Social Capital Theory (SCT) (Nahapiet and Ghoshal, 1998) complemented by Ajzen and Fishbein's (2000) theory of reasoned action (TRA), and Nonaka and Takeuchi's (1995) knowledge conversion theory underpinned the study.

Pragmatism ontology which supports mixed methods epistemology was used to collect both quantitative and qualitative data. A survey within case study research designs and self-administered questionnaires were used. Interviews, observations and document review were used to validate the results from the survey questionnaire. The target population of the study consisted of all library staff (professional and paraprofessional) with a qualification in Library and Information Science (LIS), working in public universities. A census of the entire university library staff population was reached for study. Reliability and validity of instruments were achieved using triangulation, factor analysis; adapting research instruments from previous related studies which surpassed the minimum threshold of 0.70 for Cronbach alpha values; and a reliability test using Cronbach's alpha (a coefficient of reliability or consistency) which was used to determine how well a set of items measures a single unidimensional latent construct. Quantitative data were analysed using Statistical Package for Social Science (SPSS) version 20.0 to generate descriptive and inferential statistics; while qualitative data were analysed thematically.

The study revealed that knowledge generation and acquisition of tacit and explicit type was common in the university libraries. Knowledge generation was due to endless research reports, procedure manual handbooks, circulation statistics, policy documents, curriculum documents, rules and regulations, bibliographies and indexes, workshops and conference proceedings and their reports, emails and memos, and the codification of the same in the case of explicit knowledge. Tacit knowledge generation on the other hand, was through staff socialisation, formal and informal interactions such as during tea breaks, and regular staff meetings. The study also found out that the rationale for knowledge generation and acquisition by staff was for their capacity to improve the delivery of library services and innovations. It was also established that staff were happy to share their knowledge with others outside the organisation through paper presentations at conferences and documents. The results indicated that library staff were intrinsically motivated to share their knowledge, suggesting that they were not motivated by organisational rewards for knowledge sharing.

However, the said knowledge was not codified. The study recommended that university libraries management should put in place a policy aimed at documenting, codifying and storing in databases tacit and explicit knowledge generated and acquired by staff in university libraries. The study concluded that staff did not use mentoring, improved documentation of existing knowledge, storytelling and Communities of Practice for knowledge sharing. The findings of the study also revealed a presence of Information and Communication Technology infrastructure tools like computers connected to the internet, and fixed phones that were mainly used for internal communication. Despite the presence of such Information and Communication Technology infrastructure, institutions depended on face-to-face communication to enhance social ties and collaboration between and among the workers. The study recommended that top library managers put in place a formal mechanism and Information and Communication Technology infrastructure solely for knowledge sharing. The study found out that there was lack of trust among staff, inflexible structures, budget constraints and lack of policy framework for knowledge management. The findings revealed that lack of knowledge management policies resulted in provision of inadequate budgets for organising knowledge sharing forums. This affected rewarding of staff to motivate them to share knowledge between and among themselves. The study recommended that university libraries management should establish decentralised or horizontal organisational structures and empower co-workers to freely share personal knowledge and concerns, which in turn would enhance trust and openness

in organisations thereby promoting active knowledge sharing among employees. The study also recommended an overall Knowledge Management policy that would lead to university management allocating resources for Knowledge management activities. The researcher further recommends a broader study be conducted of all university staff to determine the strategies, practices and challenges of knowledge sharing in universities. The study also recommends a comprehensive study of all private universities as well as public and private organisations, to investigate their knowledge sharing strategies, practices and to compare the findings.

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS AND ACRONYMS

AL	Assistant Librarian
CLAs	Chief Library Assistant
CL	College Librarian
CRs	College Registrar
CoPs	Communities of Practice
EKRs	Electronic knowledge repositories
ICT	Information and Communication Technology
IT	Information Technology
KM	knowledge Management
KS	Knowledge Sharing
LA1	Library Attendant
LAs	Library Assistant
LIS	Library and Information Science
LUANAR	Lilongwe University of Agriculture and Natural Resources
MUST	Malawi University of Science and Technology
MZUNI	Mzuzu University
SAL	Senior Assistant Librarian
SLA	Senior Library Assistant
SADC	Southern African Development Community
SDT	Self-Determination Theory
SCT	Social Capital Theory
SECI	Socialisation, Externalisation, Combination and Internalisation
SPSS	Statistical Package for Social Science
TRA	Theory of Reasoned Action
UK	United Kingdom
USA	United States of America
UL	University Librarian
UML	University of Malawi Libraries
UNIMA	University of Malawi
UNZA	University of Zambia
UR	University Registrar

Contents

CHAPTER ONE
BACKGROUND TO THE STUDY

1.1 Introduction

The purpose of this study was to examine the strategies of knowledge sharing in University libraries in Malawi. Knowledge sharing (KS) is a component of the wider multidisciplinary approach to attaining organisational goals by effectively applying knowledge, known as knowledge management (KM) (Jain, 2012). It refers to the interchange or distribution of overt or implied data, ideas, suggestions and expertise or know-how between people or a cluster of workers (Nooshinfard and Nemati-Anaraki, 2014). On the other hand, KM is concerned with the process of knowledge conception, corroboration, exhibition, dissemination, and use (Bhatt, 2001. In libraries, knowledge is shared to improve communication between staff and students, staff and management and among staff themselves to improve service delivery

The driving forces behind the historical perspective of KM are many. According to Wiig (2000), the first are external forces which include globalisation of commerce and internal rivalry, complex clients, complex rivals and traders. Second are the inner drivers inside businesses whose advances of various forms have formed openings for an improved handling of knowledge and in some instances in a different way. Cases in point of significance shifts encompass: business efficacy, increased technological capabilities and understanding of human cognitive functions. Third, ongoing developments which according to Wiig (2000) include: economics of ideas, information management and technology, cognitive science, customisation requirements for sophisticated customers, and sophisticated competitors. Wiig (2000) adds that the above-mentioned and other forceful drivers have encouraged businesses to concentrate interest and energies on knowledge capital as the single most important factor driving competitiveness.

Ramayah, Yeap and Ignatius (2013) point out that the concept of KM is gaining significant attention in organisations including profit making and public sector organisation such as universities. Ugwu and Ezema (2010) observe that the KM discourse is also receiving attention in the library and information sector. They point out that this is so because, of late, a substantial branch of written works has arisen that clearly address KM primarily from the librarians' point of view. Ugwu and Ezema (2010) further state that the interest of libraries in KM resulted from

the interest expressed by KM Section of IFLA in 2009 to promote a deeper understanding of many dimensions of KM by the library profession.

Nazim and Murkherjee (2013) explain that knowledge is entrenched in the procedures and documentation as explicit knowledge and in the minds of the employees as implicit or tacit knowledge, understandings or experiences. Explicit knowledge can be conveyed in formal and systematic language then distributed in the mode of facts, empirical method, provisions, instructions, and so on. It can be organised, conveyed and retained somewhat easily. Nonetheless, implicit knowledge is extremely private and inflexible to formalise. In this classification of knowledge are personal understanding and impressions. Tacit knowledge is firmly held in deeds, methods, practices, adherence, model, beliefs and feelings. It is resident in the human mind and body. It is difficult to transmit implied knowledge to others, as it is an analogue procedure involving complexities.

Within the KM field, an important sphere that is receiving increasing consideration is knowledge sharing (KS). Knowledge sharing is defined as the interchange or diffusion of expressed or implicit facts, thoughts, suggestions and expertise or scientific know-how amongst persons or group of workers (Nooshinfard and Nemati-Anaraki, 2014). Wang and Noe (2010), indicate that the concept of KS is used interchangeably with that of knowledge exchange or interchange. Knowledge sharing includes providing knowledge to others and also seeking knowledge from others. Several modes of sharing knowledge exist such as using intranets and advanced web applications, blogs, wikis, RSS, social media, face to face communication methods, telephones and emails, dialogue and individual or group interactions (Amayah, 2013). The concept of KS has long been applied in the corporate world to enhance competitive advantage. Knowledge sharing is also becoming significant in academic libraries where it is being applied to enhance information service delivery, improve communication among staff and management, better decision making, and improve efficiency by reducing response time, improving academic and administrative services which ultimately leads to a better performance, more satisfied library staff and the users (Maponya, 2004; Jain and Mutula, 2008; Mavodza and Ngulube, 2011a; Islam, Agarwal and Ikeda, 2015; Akhavan and Hossein, 2016).

Knowledge generation or creation, according to Bhatt (2001), denotes the capability to create novelty and bring forward valuable panacea. Tacit and explicit knowledge are some of the categories of knowledge of concern to libraries. Explicit knowledge is official, organised, and methodical, and is documented in books, journal articles, online databases, publications, websites, library manuals, cataloguing and indexing schedules. Explicit knowledge is also evident during meetings, workshops, and conferences. Tacit knowledge, on the other hand is individual, practical-constructed knowledge possessed by individuals and can be shared through imitations, observations, and instructions (Nonaka and Takeuchi, 1995). Wamundila and Ngulube (2011), Nyaude and Dewah (2014), Agarwal and Islam (2015), agree that documentation, training and digital repository, utilisation of expertise and meetings, gradual retirements or leaving one's job and ceasing to work, and withholding of workers past their departure age, induction, mentoring, and observing work processes were some of the methods used for acquiring knowledge by organisations.

The knowledge that some organisations create is shared for various purposes. For instance, Du Plessis (2007) in a literature research study on 'The role of KS in innovation, and some personal experiences and interpretations', found that KM provides a knowledge-driven culture within which novelties can be raised. She pointed out that KM expedites stable development of the knowledge basis by way of collecting and encapsulating of expressed and implied knowledge. In addition, KM enables partnership in the novelty undertaking. It permits teamwork throughout the functional boundaries within organisations, but also throughout organisational boundaries by means of networked partnership framework also as online collaboration forums including intranets and extranets. Furthermore, KM offers podiums, mechanisms and methods to guarantee amalgamation of an organisation's knowledge foundation, and promotes in determining disparities in the knowledge base. An empirical study by Jain (2014a), in which she investigated 'KM practices in academic libraries in developing countries: a case of Southern Africa', revealed that KM has several benefits to the library such as: to revamp library resources and out put; to develop more with less; to influence the prevailing knowledge inside an organisation by means of carrying out the knowledge requirement gap analysis, knowledge planning and knowledge appraisal initiatives; to help in handling the exponential growth of information by offering mechanisms and know-hows to manage the information that is most key and necessary; to prepare everyone with well-versed resolutions framing know-how via

furnishing the correct information and knowledge; and reduction of duplication of efforts. KM therefore performs a recognisable part in novelty.

The knowledge that some organisations generate is shared using different mechanisms including brainstorming, storytelling, communities of practice, training, workshops, seminars, telephone calls, face to face meetings, mentoring, documentation of existing knowledge, across departmental information sessions, and library newsletters (Mutula and Mooko, 2008; Jain, 2014a; Abbas, 2015; Tan, 2016). The authors note further that IT infrastructure plays an important role in KS by facilitating interaction among persons looking for knowledge and individuals who command a way to knowledge. Such IT infrastructure includes computer networks, emails, and web 2.0 applications for example, electronic bulletin boards, wikis, twitter, blogs, newsgroups and mailing lists. Muchaonyerwa (2015) recommends that library leadership should encourage staff to share knowledge through formal and informal networks at the workplace. This infrastructure is said to ease interaction among persons in search of knowledge and individuals who command the way to knowledge.

There are several factors that influence KS within organisations. These factors are of individual, organisational and technological nature (Ipe, 2003). According to Wang and Noe (2010); Nooshinfard and Nemati-Anaraki (2014) individual characteristics such as expertise influence individuals to share useful knowledge with others. Lin (2007a) in a study in Taiwan established that staffs' viewpoints and plan toward KS were positively linked by their inherent drive to contribute their knowledge. The aforementioned infers a perception of the proficiency also personal-assurance of workers that possibly could be a prerequisite for staffs to participate in KS. In other words, staffs who count on their capability to contribute knowledge incline to possess compelling reason to donate their knowledge to colleagues. Moreover, staff who consider enjoyment in contributing knowledge and consequently assisting others are most certainly to be inspired to interchange knowledge with their companion employees. Chang and Chuang (2011), expand on the preceding argument by indicating that individuals high in intrinsic motivational orientation, such as sense of achievement, respect and recognition are more inclined to exchange their knowledge with colleagues. Correspondingly, once people receive external rewards, for instance, money, benefits, bonuses and other incentives for what they do, they are most certainly to interchange knowledge with their friends (Chang and Chuang, 2011). Some of the essential factors that have been found to be influencing successful

exchange of knowledge in an organisation include scholarly communication, collaboration skills, belief, and trustworthy relationships amongst workers (Shanshan, 2014; Nooshinfard and Nemati-Anaraki, 2014).

Besides individual factors, organisational factors have been found to predispose one to share their thoughts with associates (Olatokun and Nwafor, 2012). Wang and Noe (2010), Ma *et al*. (2014) note that management leadership and support, affect both the level and quality of KS. The authors are of the opinion that with authoritarian style of management, organisational leaders give their employees no chance to participate in the decision-making process and, therefore, people are less expected to share knowledge. In contrast, they argue that democratic style of management will enable employees to have their voice heard and encourage them to share knowledge with others inside the organisation.

Furthermore, organisational culture and climate have also been found to influence KS in an organisation. Organisational climate according to Chen and Huang (2007) denotes collective procedures, communal viewpoints, and morals that an establishment espouses. Similarly, Willem and Buelens (2009), in their empirical study in Belgium, found that organisational structure affects the social interaction among organisational members. Two dimensions of structure most studied are centralisation and decentralisation. Centralisation denotes the degree to which making important decisions influence is focused at upper echelons of the organisation. This type of structure is too formalised and emphasises on authority, guidelines, and command structures which could function as a bottleneck to the formation of KS groups in organisations. Such a structure produces a non-participatory atmosphere that lessens consultation, engagement, and participation with assignments and ventures among organisational members. It also decreases the prospect for personal development and progression, and averts creative resolutions to problems (Chen and Huang, 2007). Decentralisation on the other hand allows flexible coordination during task execution and leads to increased KS. Collective exchanges amongst organisational associates are more recurrent and rigorous for realising the assignments (Willem and Buelens, 2009). Another factor identified by Nonaka and Takeuchi (1995) that influences KS is KM policy which comprises a set of practices, systems, regulations and techniques to obtain, generate, organise, share, and diffuse knowledge.

1.1.1 Public University Libraries in Malawi

5

There are four public universities in Malawi. They include the University of Malawi (UNIMA), Lilongwe University of Agriculture and Natural Resources (LUANAR), Mzuzu University (MZUNI) and Malawi University of Science and technology (MUST). These institutions are approved, regulated, funded, and accredited by government agencies (National Council for Higher Education Website, 2016) and they have all been targeted for inclusion in this study.

In terms of organisational structure, the libraries in Malawi are divided into several sections namely readers' services, which is further sub-divided into circulation, special collections, reference services and children's library; technical or acquisitions services, of which the serials services is a part and the law library. MZUNI, LUANAR and MUST, libraries are headed by university librarians, whereas UNIMA colleges are headed by college librarians. The mandate of university and college librarians is to provide management and leadership, promote the functions of their libraries, and show up at organisational strategic meetings amidst their other responsibilities. Senior library employees are additionally engaged in lecturing, research and instructing university students and employees the use of the various library resources.

The four public universities (Mzuni, LUNAR, MUST and UNIMA) are regarded as the hub of teaching, learning and research in Malawi (NCHE, 2016). As such, they are expected to provide high quality facilities and services such as libraries for use by students and staff. Developing and offering an efficient and effective library services in the digital era is a challenge for university libraries in Malawi because of several factors. Among these factors are limited Information and Communication Technologies (ICTs), poor network infrastructure, constraints in staff training and lack of skilled human resources in ICT, as a results of inadequate funding over the years (Chaputula 2012; Mapulanga, 2014). Therefore, the innovativeness of university libraries lies in turning them into learning organisations where knowledge generated within and without libraries is shared and optimally used. This requires knowledgeable, competent and innovative staff to manage the knowledge that is generated. Many university libraries in developing countries, including Malawi lack a systematic approach of managing knowledge to support the core functions of teaching, learning and research (Lwoga and Sife, 2006). This ultimately, leads to the loss of knowledge assets should the senior staff leave the organisation without their knowledge being captured (Maponya, 2004). The effective implementation of knowledge sharing will largely be determined by the knowledge management strategies that is put in place. The next section therefore, provides the research problem of the study.

1.2 Statement of the Problem

University libraries in the advanced countries are increasingly adopting KM strategies such as mentoring, education, training, and information and communication technologies in order to advance KS and upgrade information service delivery to their clientele (Level and Mach, 2005). In Africa, Jain (2014a) notes that although libraries have implemented a number of initiatives to promote KM, these are hampered by insufficient budget, inadequate staff training, insufficient technology facilities, deficiency of know-how, an absence of the indication of KM policy, an absence of incentives, limited leadership help and an absence of KS culture.

KS among library staff in university libraries in Malawi is limited. Inadequate funding of University of Malawi Libraries (UML) in the period 2004-2009 greatly affected the delivery of services to an extent of reducing or stopping subscribing to electronic resources (Mapulanga, 2012). Mapulanga (2014) identified constraints in staff training and development as a result of inadequate funding of UML. Moreover, the majority of library staff are at junior posts of the UML staffing with a Malawi Library Association certificate. Inadequate funding meant that libraries could not replace staff leaving the organisation through retirement, resignation, death, thereby losing a wealth of expert knowledge attained over the years operating in the University Library. This situation has hampered mentoring programmes because senior staff with critical expertise and skills have left the University.

Chaputula (2012), established that poor network infrastructure and limited number of personal computers, high cost of internet access, chronic energy outages, and an absence of appropriate ICT talents in Malawi university libraries impacted negatively on student and employee's use of ICTs at Mzuzu University. Chawinga and Zinn (2015) also note that Internet access continues to be the intermittent crucial staggering obstructs towards an effective acceptance of Web 2.0 technologies by lecturers at Mzuzu University. The extent to which these challenges affect KS in university libraries in Malawi is not known. Implementation of successful KM initiatives including KS in academic libraries, requires availability of KM infrastructure such as Intranets/Extranets, electronic archive management, information analysis, information warehousing, mapping tools, machine learning, workflow oversaw economy systems, groupware, majority of the data recovery tools, and web.

The impact of these issues on KS in university libraries in Malawi is unknown. This study therefore, aims at examining the strategies of KS in University libraries in Malawi. The outcomes from the study are expected to help make informed decisions regarding successful KS policies and strategies, infrastructure development, education and training; and staff retention strategies in university libraries of Malawi.

1.3 Objectives of the Study

The major purpose of this study is to examine the strategies of knowledge sharing in university libraries of Malawi with the view of providing interventions to enhance knowledge sharing. Three objectives were formulated aimed at providing a broader perspective of the research questions. From the three broad objectives, five research questions were derived. Muchaonyerwa (2015), in a doctoral study on 'knowledge sharing strategies in university libraries in KwaZulu-Natal Province of South Africa' argued that there was a paradigm shift from aligning each research question to each research objective to one or a fewer broader objectives and more specific research questions. Therefore this study aimed at addressing the following objectives:

a)   To determine knowledge sharing strategies used in university libraries in Malawi.

b)   To investigate factors affecting knowledge sharing in university libraries in Malawi.

c)   To develop a theoretical model for KS in university libraries in Malawi.

1.4 Research questions

This study sought to answer the following research questions: What Knowledge sharing strategies are used in University libraries of Malawi?

The study intended to answer some subsidiary questions as follows:

a) What type of knowledge is generated or acquired by university libraries in Malawi?

b) What is the rationale for knowledge creation and sharing by university libraries in Malawi?

c) What mechanisms and infrastructure are used for knowledge sharing in university libraries in Malawi?

d) What are the factors influencing knowledge sharing in university libraries in Malawi?

e) What is the attitude of librarians towards knowledge sharing in university libraries in Malawi?

f) What framework is needed for effective knowledge sharing in university

libraries in Malawi?

1.5 Justification of the study

Although several studies exist on knowledge sharing in private and public organisations in the United States of America (USA) (Bhatt, 2001; Argawal and Islam, 2014; Agarwal and Islam, 2015), South Africa (Maponya, 2004; Martins and Martins, 2011; Dewah and Mutula, 2016), Zimbabwe (Nyaude and Dewah, 2014), Botswana (Jain, 2014a), and Zambia (Wamundila and Ngulube, 2011), there is still a gap in literature because not much is known about knowledge sharing in university libraries in Malawi. Despite some studies being conducted elsewhere using Social Capital Models, Taiwan (Chang and Chuang, 2011), South Africa and Nigeria (Fari and Ocholla, 2015), Europe (Lefebvre *et al*, 2016), Theory of Reasoned Action, Malaysia (Ramayah, Reap and Ignatius (2013), Nigeria (Olatokun and Nwafor, 2012), USA, Kankanhalli, Tan and Wei (2005), South Korea (Bock and Kim, 2002), SECI Model of Knowledge Creation, Zimbabwe (Nyaude and Dewah, 2014), Nigeria (Abbas, 2016), Zimbabwe (Muchaonyerwa, 2016), and South Africa Dewah and Mutula (2016), have recommended the use of their models, these models cannot be taken wholesome, hence this study intends to come up with a model that would suit the Malawian context.

1.6 Significance of the study

This study aimed at providing a deeper understanding of how knowledge is being shared in university libraries in Malawi. The study arose out of the understanding that library staff is responsible for knowledge generation, creation, acquisition and dissemination. KM practices in university libraries is one of the key factors to improving library services and productivity. It is expected that the outcomes of this study would help in informed decision making regarding successful knowledge documentation, knowledge management policies and strategies, budgetary allocation, capacity building, and staff maintenance strategies in university libraries of Malawi. The study provides a significant addition in relation to the current mass of knowledge in the discipline of knowledge management in University libraries in Malawi. It is also hoped that the findings would spur on University libraries in Malawi to improve their communication among staff and between top management, and promote a culture of knowledge sharing. In so doing this would lead to the provision of effective and efficient service delivery to various university stakeholders such as academic staff, administrators and students.

1.7 Scope and Limitations of the Study

This study focussed on knowledge sharing strategies in university libraries of Malawi. The study involved professional and paraprofessional librarians with a qualification in Library and Information Science (LIS). Professional librarians included university and college librarians, senior assistant librarians, and assistant librarians. Paraprofessional library staffs included chief library assistants, senior library assistants, library assistants and library attendants. The study also targeted university and college registrars so that some factors influencing knowledge sharing and attitudes of librarians towards knowledge sharing which may have been difficult to discern could be captured from independent respondents.

The four public universities in Malawi included in the study are UNIMA, MZUNI, LUANAR, and MUST. These institutions are approved, regulated, funded and accredited by the national Council of Higher Education (NCHE). They are considered as the main sources of skilled human capital development in Malawi. The focus on public institutions offering various training and education provided the best available cases on which knowledge sharing strategies can be examined.

The study was also limited by financial constraints which restricted the researcher to covering only four public universities, excluding private universities. In view of these limitations identified, the validity and reliability of the findings was achieved through the use of a mixed method study and triangulation of data sources.

Among some challenges experienced in the course of data collection were that staff at MZUNI were on strike. This proved problematic to access and even administer some questionnaires to library staff as most of them were not available on campus. It was only towards the end of February that most staff were accessible. In other Universities, the major challenge was that the study was conducted during a very busy schedule when classes were in session. This made it difficult for the researcher to access some of the library staff for the distribution and retrieval of research instruments. In addition some of the library staff were away either on leave or out of the country studying. These limitations had an impact on the data duration. However, through the researcher's persistence, data were collected for a total of four months from December 2016 to March 2017, instead of the originally planned two months, from December 2016 to January 2017.

1.8 Definition of key terms

This section provides the working definitions of key terms used in the context of the present study. They include: knowledge management, knowledge sharing, tacit knowledge, explicit knowledge.

Knowledge Management

Knowledge management is defined as the process of knowledge conception, corroboration, exhibition, dissemination, and use (Bhatt, 2001: 58). Whereas Nonaka and Takeuchi 1995:3) define knowledge management as the capability of a company as a whole to create new knowledge, disseminate it throughout the organisation, and embody it in products, services and systems. In this study where the term knowledge management is broadly used it also incorporates knowledge sharing.

Knowledge sharing

Knowledge sharing is defined as a means and a process by which individuals and groups communicate their knowledge unconsciously or deliberately to their mutual benefit. The benefit could be the general promotion of culture or community wellbeing or it could be wealth promotion on the part of the provider and the solution of problems on the part of the recipient (Nooshinfard and Nemati-Anaraki, 2014:243). In the context of this study the terms knowledge exchange and knowledge interchange have been used interchangeably with the term knowledge sharing.

Explicit knowledge

According to Nazim and Murkherjee (2013:3) explicit knowledge is formal and systematic knowledge which can be expressed in words or numbers and can be documented or stored in databases as electronic records. Explicit knowledge can be conveyed in formal and systematic language then distributed in the mode of facts, empirical method, provisions, instructions, and so on. It can be organised, conveyed and retained somewhat easily.IN the present study the terms expressed knowledge and explicit knowledge have been used interchangebly.

Tacit knowledge

According to Nonaka and Takeuchi (1995:4), tacit knowledge is knowledge that resides in the minds of individuals. Nonaka, Toyama and Konno (2000) are of the view that since tacit

knowledge is difficult to formalise, it can be acquired only through shared experienced such as spending time together or living in the same environment and in informal social meetings between members of the organisation. In the Present study the terms implicit knowledge, implied knowledge and tacit knowledge have been used interchangeably.

1.9 Organisation of the rest of the Thesis

The report is organised into seven chapter as follows:

Chapter One: Background of the study

This chapter provides an introduction and background to the study; statement of the problem; research objectives, research questions; significance of the study; scope and limitations of the study.

Chapter Two: Theoretical Framework

This chapter provides a critical review of the theoretical frameworks including but not limited to SECI, SCT, SDT TRA and GW Models. The motivation for choosing the SECI, SCT and TRA to underpin this study is put forward. Finally, the chapter also maps the research questions to key variables of the theoretical frameworks.

Chapter Three: Literature Review

Chapter three covers an all-embracing appraisal of the relevant empirical and theoretical works in both print and electronic sources using the research questions and relevant theories/models as the framework.

Chapter Four: Research Methodology

This chapter presents a discussion of the research paradigms, research approaches, case study and survey research designs, data collection tools, reliability and validity of the instruments, and ethical issues.

Chapter Five: Data Analysis and Presentation of Findings

Chapter five presents an analysis of the outcomes of the research founded on the problem that was examined. Verbatim, inferential and descriptive statistics are used to present the findings.

Chapter Six: Discussion of Findings

This chapter discusses the outcomes of the study presented in chapter five, using extant empirical and theoretical literature and theory. The originality and contribution of the study are also presented.

Chapter Seven: Summary of Findings, Conclusion and Recommendations

This chapter presents the summary of the findings, conclusion, and recommendations. The contribution of the study to policy, practice and theory is also provided.

CHAPTER TWO
THEORETICAL FRAMEWORK

2.1 Introduction

The major purpose of this study is to examine the strategies of knowledge sharing in university libraries of Malawi with the view of providing interventions to enhance knowledge sharing. Knowledge sharing is part of the wider field of knowledge management. According to Jain (2012), the wider field of knowledge management encompasses knowledge sharing. The study is informed by Social Capital Theory (SCT) (Nahapiet and Ghoshal, 1998).

The SCT has been verified in government owned organisations, which also include universities. The SCT was supplemented in this research by the Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 2000), Socialisation, Externalisation, Combination and Internalisation (SECI) Model also known as Knowledge Conversion Theory (Nonaka and Takeuchi, 1995). Other relevant models and theories such as General Workplace Commitment Model (Meyer and Herscovitch, 2001) and Self Determination Theory (SDT) (Ryan and Deci, 2000) are also discussed to offer a broader grasp of the knowledge sharing field.

A theory according to Ocholla and Le Roux (2011) and Green (2014) is an organised and systematic set of interrelated statements (concepts) explaining phenomenon and how it interacts with others in space and time in order to broaden an understanding of a concept. Whereas, conceptual framework or model and a theoretical framework, need to be distinguished because of the confusions that they bring to students. Grant and Osanloo (2014), and Green (2014) argue that these terms are considered to be neither interchangeable nor synonymous. Grant and Osanloo (2014) and Green (2014) point out that a conceptual framework or model is a structure of theories, ideas, and philosophies that back and manage the research strategy. Particularly, the theoretical outline arranges some major facets, concepts, or factors, and claims correlations among them. The conceptual framework or model provides a coherent configuration of linked ideas that help proffer a representation or pictorial exhibition of how concepts in a study link to one another within the hypothetical structure. The hypothetical structure on the other hand is a road-map for the whole research thesis. It functions as the drive to shape and back a student's research, and offers the configuration to delineate how one will theoretically, methodically, and critically tackle the entire thesis. A hypothetical structure consists of the selected theory (or theories) that has previously been experienced and confirmed by others and is judged to be a commonly satisfactory philosophy in the academic works. It undergirds a researcher's reflecting with respect to how one understands and plans to

examine a subject, also as the ideas and meanings from the concept that are applicable to one's subject, (Grant and Osanloo, 2014).

The rest of this Chapter is arranged into the following thematic areas: 2.1 introduces the chapter; 2.2 discusses SCT; 2.3 discusses The TRA; 2.4 describes, the SECI Model; 2.5 elaborates the General Workplace model; 2.6 discusses the Self Determination Theory; 2.7 enlightens essential factors encapsulated from the theoretical frameworks; and 2.8 provides a synopsis of main concerns from theories and models discussed.

2.2 Social Capital Theory

Social capital has been conceptualised as the totality of the net worth rooted in the interconnections amongst employees and societies, (Nahapiet and Ghoshal, 1998). A great number of management researchers mostly concur that social capital symbolises the assets an individual organisation acquire by means of its set of connections of associations (Payne *et al*., 2011). Some studies on social capital and knowledge exchange have acknowledged the critical place of social capital in shaping the conduct and viewpoints of staff in sharing knowledge (Wasko and Faraj, 2005; Chang and Chuang, 2011). The dominant intentions of social capital theory are that interrelated structures of connections are a valuable asset for the individual or social entity and that worth remains both in the network bonds and in the assets that can be mobilised through these bonds (Nahapiet and Ghoshal, 1998). Social capital has been termed in various ways, it has also been conceptualised and operationalised in different ways by social researchers, (Payne *et al.*, 2011). Lefebvre *et al*. (2016) observes that the SCT framework classes the different aspects of social capital into three dimensions: structural dimension, cognitive dimension and relational dimension.

2.2.1 Structural dimension

The structural dimension refers to the configuration and pattern of connection between network actors (Chang and Chuang, 2011; Lefebvre *et al*., 2016). It has been analysed from different angles, from bond strength and significance, network firmness and scope (Lefebvre *et al*., 2016), but in this thesis, it centres on social collaboration among library members who are referred to as the affiliates of the official networks. As per this notion, the auxiliary measurement of social capital incorporates social communication ties (Amayah, 2013). Second, the social measurement of social capital depicts the sort of individual connections

individuals have created with each other through a background marked by communications. Some important viewpoints of relational capital are trust, norms, obligations, reciprocity, and identification (Lefebvre *et al*., 2016). Cognitive dimension is the third component that makes up the social capital, it is epitomised in traits such as a collective code or a shared epitome that helps a frequent perception concerning communal dreams or excellent ways regarding appearing in a collective structure (Akhavan and Hosseini, 2016). Studies by Chow and Chan (2008), and Fathi, Eze and Goh (2011) considered the presence of shared goals between employees as responsible for promoting common understanding and interchange of thoughts.

2.2.1.1 Social and network relations

The social and network associations preside over who can be reached and how relations can be realised. Factors in this component gauge the network configuration, compactness, connectivity and hierarchy (Taegoo *et al*., 2013). Social interactions have been reckoned essential for positive implied know-how exchange (Nonaka, 1994). Nonaka (1994) states that in the course of knowledge transformation, as well as formation within enterprises, tacit knowledge is shared by way of socialisation which involves tremendous communal interplay amongst staffs. Fathi, Eze and Goh (2011), in a survey, that investigated key elements that influence the exchange of knowledge in Malaysian electronics manufacturing found that with the aid of attached bond or closer ties, individuals were more contented and much more optimistic in sharing their opinions and resources.

In Spain, Cabrera and Cabrera (2005), in a theoretical analysis of 'Fostering knowledge sharing through people management practices' point out that individuals' opportunity to share their knowledge with others is increased when individuals spend more time. This is because, increased relations culminate into more repeated communication, and also because communication is more effective owing to the fact that these interfaces also develop in a communal mutual understanding. In Taiwan, Chang and Chuang (2011) conducted a survey study that examined individual motivations on knowledge sharing and found out that the more these social connections form, the better the strength, regularity, and extent of the knowledge exchange. Thus, it has been posited that social interactions can enhance knowledge sharing behaviour.

2.2.2 Relational dimension (Trust, Identification and Reciprocity)

The relational dimension impacts on the individuals' drive to exchange their knowledge with others. Granting the prospect to exchange may exist, an individual may not be enthusiastic to exchange. The readiness or inspiration to exchange will be greater when workers trust and recognise each one (Cabrera and Cabrera, 2005). Yeon *et al*. (2016: 658) defined the construct of trust as "the eagerness of organisational affiliates to be susceptible to the actions of others because of beliefs in altruism, capability and reliability". In their survey study on 'Group social capital in virtual teaming contexts: a moderating role of positive affective tone in knowledge sharing', in Taiwan, Tsai *et al*. (2013) found a connection between trust and knowledge exchange. Tsai *et al*. (2013) concluded that if management does not support the interpersonal relationships of a group, it will weaken trust and more so create distrust, which will ultimately have a detrimental effect on such interactions and the prospects for the acquisition of knowledge, knowledge generation, and knowledge exchange.

On the reverse side, a favourable degree of belief eases constructive dissemination, consideration, and contribution since trust enhances the calibre of discourse, conversation, and understanding. Trust is developed repeatedly as organisational employees embark on recurrent collaborations with their colleagues and grasp to depend on their workmates for accomplishing collective organisational aspirations and consequences. Trust is essential within the knowledge exchange environment due to the fact that people probably share knowledge with colleagues when they observe others to be honest. Tsai *et al*., (2013) discuss that inside organisational environment, diverse means of trust (such as affect-based trust, mutual trust, interpersonal trust, identification- based trust) have proven to enable complicated knowledge exchange, from the viewpoint of the pair of knowledge recipients and knowledge contributors.

Knowledge sharing is likewise aided by a robust feeling of mutuality (Chang and Chuang, 2011). Mutuality is regarded as the exchange of knowledge that is reciprocated and which both groups of individuals deem as just (Chiu, Hsu, and Wang, 2006). A Study by Wasko and Faraj (2005) confirm that mutual knowledge interchange associations intensify staffs' knowledge sharing goals. When a staff member donates knowledge to colleagues, the knowledge recipients are obligated to transmit corresponding knowledge to the knowledge contributor. Such mutuality based on a knowledge interchange connection has been put forward as a key precursor to promoting staff to exchange their ideas, experiences and thoughts. Hung *et al.* (2011) in their study found that in a group setting, staff who are agreeable to share their valuable

thoughts anticipate others to reciprocate to their thoughts and create knowledge. Thus, people who expect reciprocity will share more ideas, their ideas will be more useful and creative, and their satisfaction with the meeting will be higher. Akhavan and Hosseini (2016) stress that in an organisational setting of honesty and mutuality in the group, affiliates have a belief of both social and emotional obligations to share knowledge, particularly after they have previously acquired assistance from their colleagues.

Chang and Chuang (2011) regard identification as the technique by which people perceive themselves as one with another person or set of people. It exhibits persons' determinations to communicate and offer themselves to others, and it magnifies the magnitude of knowledge donation. The ability of social oneness and understanding of the group will encourage individuals' readiness to interchange their knowledge and develop the degree and scope of shared knowledge (Akhavan and Hosseini, 2016; Tang *et al*., 2012). Studies by Chiu, Hsu, and Wang (2006), revealed the noteworthy influence of group interdependence in virtual group environments.

2.2.3 Cognitive dimension

2.2.3.1 Shared vision

A communal consideration amongst people, such as a collective language, codes and vision are all encompassed in the cognitive dimension of social capital (Tang *et al*., 2012; Akhavan and Hosseini, 2016). According to Tsai *et al*. (2013), a shared vision encompass the communal aims and objectives of the affiliates of an establishment. It is also observed as a connecting technique that facilitates several components of an organisation to amalgamate or to pool assets. Yeon *et al*. (2016) in a survey study, examined the knowledge exchange practices of organisational affiliates in professional research information centers' in South Korea and found that the practice was firmly shaped by shared vision. The study found out further that organisational affiliates who shared a vision were more destined to develop into collaborators interchanging or donating their resources. (Tsai *et al*., 2013) mention that shared vision, in the setting of organisational work, characterises a set of theory and suppositions about organisational work and scientific knowledge and methods applied to execute that task that is generally approved by the organisational group. Shared vision encourages common insight and interchange of thoughts inside groups. Shared vision entails collective intentions and aspiration of the affiliates of a group. Collective consideration about the methods of collaboration results

into additional and superior prospects for resource exchange amongst group affiliates devoid of any disagreements. Chow and Chan, (2008), conducted a survey study that used the social capital and theory of reasoned action frameworks to examine social network among some managers of some Hong Kong companies. The study disclosed that social set-up ties and goals considerably played a role in the subject pattern on knowledge, social trust and shared goals in organisational knowledge sharing, although the two had an inverse consequences on the purpose to donate knowledge within the organisations.

According to Tsai *et al*, (2013), a shared vision offers a shared reference structure for different organisational associates to appraise the reliability and effectiveness of prevailing organisational knowledge and absorb them within their own organisational work routines in a standardised way. Tsai *et al*, (2013), notes further that in the absence of a shared vision, any learning or contribution by individual organisational affiliates is less likely to be profoundly construed, internalised, or applied by others within the same organisation. For this reason, building a shared vision among organisational affiliates is of tactical significance in knowledge-driven organisations in that each person in the organisation can acknowledge and donate knowledge (Chow and Chan, 2008). Norms of collectivism that influence a person to leave personal pursuits for the group are a requisite drive for that group (Tsai *et al*, 2013). The group affiliates' intents to donate their knowledge is further improved by communal goals, interests, and visions in a group (Chiu, Hsu and Wang, 2006; Chow and Chan, 2008).

The interconnection of shared vision and knowledge exchange has been confirmed in empirical studies by Chow and Chan (2008), Fathi, Eze and Goh (2011). Relatedly, findings in a study by Tsai *et al.* (2013) established that the collective goals, interests, visions that associates of a virtual community share assist them see the significance of their knowledge donation, and so this reinforces the amount and worth of their knowledge exchange.

2.2.3.2 Shared language

Shared language is more than the language itself. According to Chiu, Hsu, and Wang (2006:1878), the term "language" also portrays "the abbreviations, subtleties, and essential theories that are the basis of regular relations". Nahapiet and Ghoshal (1998) narrate that mutual codes and language encourage a joint understanding of communal goals and the acceptable behaviours of working in communities. Chui, Hsu, and Wang (2006) state how

shared language induces the environment for the combination and interchange of human resources in many ways. Foremost, shared language eases individual's capability to have access to other people's information and theirs. Next, shared language offers a mutual abstract tool for appraising the prospective values of interchange and merging. Lastly, shared language also supports the overlap in knowledge (Chui, Hsu, and Wang, 2006). Chui, Hsu, and Wang (2006) note that shared language therefore, enriches the ability of various groups to merge the knowledge they acquired in the course of social relations. The preceding authors further argue that shared language is necessary to gaining knowledge in knowledge-driven organisations. It affords an opportunity in which contributors understand each other and construct mutual terminologies in their fields. In this respect, shared language helps both to share the ideas as well as to enrich the proficiency of communication between people with almost identical education, experience, and social circumstances. Consequently, shared language will assist influence the group members to keenly become occupied in knowledge interchange endeavours and improve the worth of donated knowledge (Nahapiet and Ghoshal, 1998; Chui, Hsu, and Wang, 2006).

Despite social capital's benefits to organisations and its members, the theory has some limitations. Some of the limitations as claimed by Nahapiet and Ghoshal (1998), Leana and Van Buren III (1999), Stoberg (2002), and Inkpen and Tsang (2005) include, maintenance cost, foregone innovation and institutionalised powers structure. The authors argue that the formation and continuance of some mode of organisational group assets especially relational and cognitive dimensions are costly. The growth of social capital needs management to provide notable investment which entails an awareness of the comparative outlays and value expected to be resultant from such a venture. Leana and Van Buren III (1999) pointed out that one implication of group resources sustenance is that socialisation of recently recruited associates and collective identity development are obligatory if organisations are to function at best successfully. Recently recruited workers in the system require to be guided in the rules, ethics and methods of behaving in-built to the workforce and the institution. This socialisation according to Leana and Van Buren III (1999) can be high-cost with reference to time, assets and even opportunity costs. Sustaining organisational group assets needs readily available organisational resources. Organisations attracted in sustaining group assets may possibly require to handle employees as resources who can have their skills and knowledge enhanced instead of overheads to be decreased (Leana and Van Buren III, 1999). An organisation that

views its human resources as assets permits management to make investments in employees and social association development (Nahapiet and Ghoshal, 1998; Leanna and Van Buren III, 1999; Gao, Sung and Zhang, 2012).

Another down side of the social capital theory according to Leana and Van Buren III (1999) is that it can be an inhibition to novelty. Relationships occurring over a long period of time and methods of functioning, on top of powerful informal understandings that govern the behaviour of members of a group and stated roles, may well counter change as a result of institutional features such as common pattern of behaviour, and organisational fields that hold organisational affiliates occupied in established customs and techniques. Organisations do not espouse fresh strategies since organisational employees do not think of them. The tense and more well established the bonds among organisational affiliates, the less likely the entry of new information (Leana and Van Buren III, 1999). Consequently, social capital, while promoting risk taking as a result of unquestioning interactions, may well too hinder novelty because of its unfavourable influence on the initiation or deliberation of new information by affiliates (Gao, Sung and Zhang, 2012).

Lastly, the other drawback of organisational social capital according to Leanna and Van Buren III (1999) is that it can inflict overheads, in the mode of defective constant supremacy process within an organisation. Highly cohesive senior management teams may become involved in imperfect decision making not so much because affiliates cannot contemplate of different method of working, but since strong group associations compel contemplation of such alternates as soon as those in authority convey their likings (Leanna and Van Buren III, 1999). In a situation where there are not so much excesses, group arrangements and supremacy interactions have a habit of maintaining themselves which can restrict the attention and adoption of novelty and transformation (Leanna and Van Buren III, 1999; Stoberg, 2002; Gao, Sung and Zhang, 2012).

In spite of the above limitations, social capital theory is suited for this study. Since the theory focusses on variables such as social and network relations, trust, identification and reciprocity, shared vision and shared language. It is used to address research question 3: what mechanisms and infrastructure are used for knowledge sharing in university libraries in Malawi? As well as research question 4: what are the factors influencing knowledge sharing in university libraries in Malawi? In addressing research question 3, the SCT helps to establish means of knowledge

sharing from individuals within the university libraries. The SCT is also useful in addressing research question 4 by revealing ties, mutual benefits; formal and informal networks that influence knowledge sharing among individuals in university libraries.

Social capital theory has been used in related studies by Chang and Chuang (2011) to investigate the individual motivations on knowledge exchange in Taiwan. The study also used members' participation as the moderator. The study demonstrated that the dimensions of structure relational and cognition helped members to donate their knowledge to the group. Fari and Ocholla (2015) used SCT to study information and knowledge sharing in South Africa and Nigeria. The study established that activities in information and knowledge sharing are always mutual such that individuals play an important role in performing these functions. Lefebvre *et al*. (2016) in an investigation of the correlation between the group resources accrued among nexus affiliates and the execution of the affiliates with regard to their capability to improve knowledge donation among the affiliates in Europe' found that group interface has an imperative function in the growth of mutual vision and language. A diagram exhibiting the social capital theory is presented in figure 2.1.
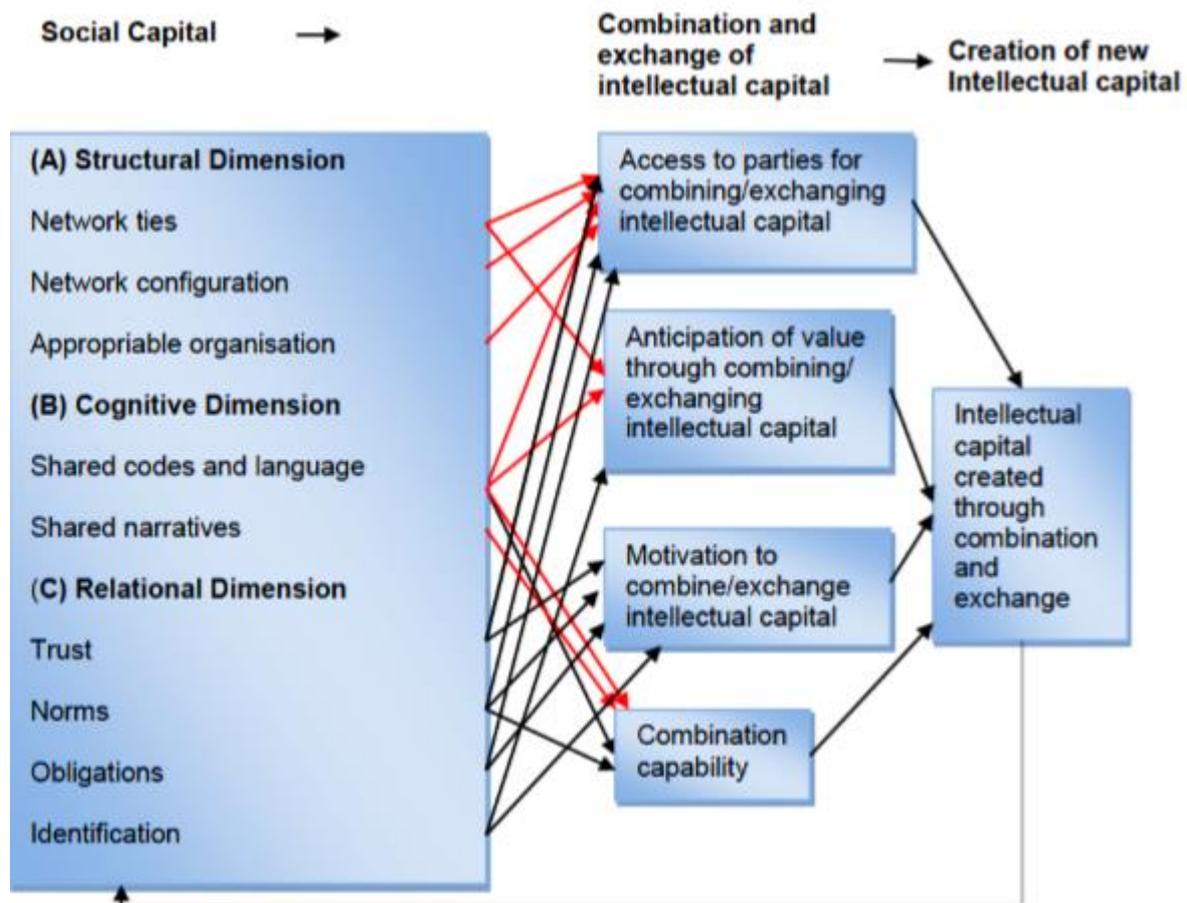
Fig 2.1 Social Capital Theory (adapted from Nahapiet and Ghoshal 1998)

2.3 The Theory Reasoned Action of (Ajzen and Fishbein, 2000)

The Theory of Reasoned Action (TRA) according to Ramayah, Yeap and Ignatius (2013), illuminates the underlying associations between beliefs, attitudes, intentions and behaviours. In social psychology, TRA has been discovered beneficial in projecting a variety of behaviours, and is generally utilised to forecast and illuminate behavioural intents and actual conduct (Lin, 2007a). The TRA belief-attitude-intention relationship integrates the role of both external factors such as anticipated organisational incentives and reciprocal gains and inherent factors such as knowledge self-adequacy, and gratification in assisting others and driving force in clarifying staff knowledge interchange intents.

2.3.1 Attitude toward knowledge sharing behaviour

Olatokun and Nwafor (2012) say that attitude factors have been tried and confirmed to be important predictors of organisational behavioural intents in TRA. An affirmative influence

of attitudes concerning knowledge interchange on people's purpose to donate knowledge has been recognised by Bock *et al.* (2005) in their study. Similarly, Lin (2007a) studied the influences of external and innate drive on workers' intents to exchange knowledge in Taiwan. The study found that employee outlooks concerning knowledge exchange considerably affected behavioural intents. In this research, attitudes regarding knowledge exchange relate to the desirable or undesirable appraisals of workers about knowledge exchange activities.

2.3.1.1 Extrinsic motivation and intrinsic motivation

The factor of work associated conduct and the main reason for knowledge interchange has been attributed to motivation. External and inherent are said to be the two wide-ranging category of motivation, which have been termed and assessed covering environments and surveys. Regarding an external motivational viewpoint, a person's conduct is governed by its supposedly morals and the worth of the activity (Lin, 2007a). Receiving organisational honours or joint incentives are the underlying purposes of externally inspired behaviours. Organisational honours are valuable for motivating persons to fulfil required behaviours. Organisational honours can vary from financial inducements such as raise of remunerations and bonuses to non-financial honours such as job advancements and job warranty (Davenport and Prusak, 1998, cited in Olatokun and Nwafor, 2012:219).

According to Olatokun and Nwafor (2012) an interchange alliance requires both factors of production (capital, properties and facilities) and social and emotional assets (class, attachment and belief). Mutual dependence conduct has been emphasised as a value of persons participating in group interchange. For instance, previous studies by Wasko and Faraj (2005) revealed that knowledge interchange by a group of people that use the Internet to communicate and work together is promoted by a strong sense of mutuality. Additionally, researchers such as Kankanhalli, Tan and Wei (2005) in their empirical study, investigated the contribution of knowledge to electronic knowledge repositories in the United States of America (USA). Their study verified that reciprocity relationship by people that exchanged their knowledge was dependent on guidelines that favoured sharing. As a consequence, it was found that when guidelines that favour exchanges are effective and there is a feeling of teamwork and support, knowledge providers do not look for mutuality when donating their knowledge to electronic knowledge repositories (EKRs). Having said that, when guidelines that favour exchanges are fragile, mutual gain is a stimulator for knowledge donation to EKRs. Basing on their findings,

Kankanhalli, Tan and Wei (2005) contend that mutual gains can render an efficacious inspiration to promote knowledge interchange and consequently attain mutual cooperation lasting for a considerable time. As a result, workers are certain that they can acquire mutual gains from their co-workers by exchanging their knowledge interchange intents (Olatokun and Nwafor, 2012). Hence, this study investigated anticipated organisational honours and mutual gains as external relevant factors with the expectation that if workers trust they can be given organisational honours by contributing their knowledge, they will cultivate more optimistic attitudes and intents in respect of knowledge interchange.

Olatokun and Nwafor (2012:220) refers to intrinsic motivation as taking part in an undertaking with something in mind, as a matter of wanting to know, or the joy and contentment received from such an involvement. For instance, by exchanging their knowledge, (Ryan and Deci, 2000 and Olatokun and Nwafor, 2012) note workers can be contented by improving their knowledge self-efficacy or conviction in their capability to contribute knowledge that is valuable to the organisation. Bandura (1986) defined confidence or self-efficacy as the "judgement of persons concerning their abilities to arrange or carry out method of working to fulfil particular degree of accomplishment". Competence or self-efficacy can assist to inspire workers to exchange knowledge with co-workers (Olatokun and Nwafor 2012). In their quantitative study, Bock and Kim (2002) explored the attitudes of knowledge sharing in four large public organisations in South Korea. The study revealed that workers that had strong beliefs in themselves in their capability to donate knowledge were more supposedly to fulfil particular assignments. The Bock and Kim's (2002) research outcomes also showed that knowledge efficacy exhibited in individual with a conviction that their understanding could facilitate to resolve problems associated with occupation and raise workers' confidence in managing work place experiences.

Wasko and Faraj (2005) in their mixed method study that examined participants' sharing of knowledge electronic networks of practice in the United States of America (USA), found that a major contributor of individual knowledge provision was the perception that participation enhanced an individual's reputation. Thus, employees were innately driven to donate knowledge as partaking in scholarly activities and resolving problems was thought -provoking or enjoyable and because they enjoyed assisting others. Individuals who donate their knowledge and trace gratification regarding assisting colleagues may be more favourably focused concerning knowledge exchange and more willing to exchange knowledge (Wasko

and Faraj, 2005). Thus, the current study adopted knowledge self-efficacy and gratification in assisting others as workers' inherent prominent trust to expound knowledge exchange behaviour.

The TRA is not without limitations as observed by scholars such as (Bock and Kim, 2002; Dutta-Bergman, 2005; Landridge, Sheeran and Connolly, 2007). Bock and Kim (2002) argue that the reward system for knowledge management may need to be re-examined. They affirm that incentives or also known as external stimuli do not appear to modify the school of thought that prompt knowledge exchange practices. They do not initiate a long-lasting guarantee to any action. Rather, incentives merely and temporarily change what individuals do (Bock and Kim, 2002). Another limitation is founded on the premise that the theory concentrates on the person instead of the association of which they belong to (Dutta-Bergman, 2005).

Dutta-Bergman (2005) submits that even if promoters of the theory might claim that a subject pattern of behaviour provides an explanation of the function of the group in a person's making of decisions, it is still compelled by a person's purpose feelings, hence maintaining the sphere of making decisions with that person. Though intuitive understandings taps into the individual actor's assessment of significance of others, it does not tap into the involvement of the group structure that forms the knowledge exchange conduct under discussion. Landridge, Sheeran and Connolly (2007) have examined the adequacy (that is, the notion of totality in providing an explanation for behaviour) of the theory. The authors propose an add-on of the theory seeing that the variables of attitude, intuitive norm and identified behavioural regulator cannot be the only variables that illuminate behaviour.

In spite of disagreements with the TRA found in literature (Dutta-Bergman, 2005; Landridge, Sheeran and Connolly, 2007), the TRA is useful, because according to Ajzen and Fishbein (2000), it is founded on the premise that individuals are logical and make orderly use of obtainable information. Individuals assess the consequences of their deeds before they choose whether or not to execute a certain behaviour such as knowledge sharing. The Theory of Reasoned Action addresses question 5: what is the attitude of librarians towards knowledge sharing in University libraries in Malawi? The theory is appropriate to address question 5 because it helps unfold the attitude, intention, and motivation of library staff in engaging in knowledge sharing behaviour. Some related studies have applied Theory of Reasoned Action

in: Ramayah, Yeap and Ignatius (2013), in a study on 'knowledge sharing among academicians in higher learning institutions in Malaysia'. The study demonstrated that a scholar's activity of contributing knowledge is conditional upon various issues which range from an individual's particular features (attitude, identified behavioural control), group influences (subjective norm), and environmental circumstances (organisational culture) (Ramayah, Yeap and Ignatius, 2013). Similarly, the study also showed that material rewards (anticipated external honours) as well as abstract benefits (expected mutual relations and feeling of self-worth) shape the establishment of attitude and intuitive norm (Ramayah, Yeap and Ignatius, 2013). Olatokun and Nwafor (2012), in a study that examined external and inherent drivers of knowledge sharing intentions of civil servants in Ebonyi state, Nigeria. The study found that knowledge belief in one's ability to succeed is a significant precursor to workers' knowledge interchange attitudes and intents. The study also showed that organisational incentives may give interim inducements for knowledge interchange but are not necessary drive in developing workers' knowledge contribution practices. A diagram displaying the theory of reasoned action is shown in figure 2.2.
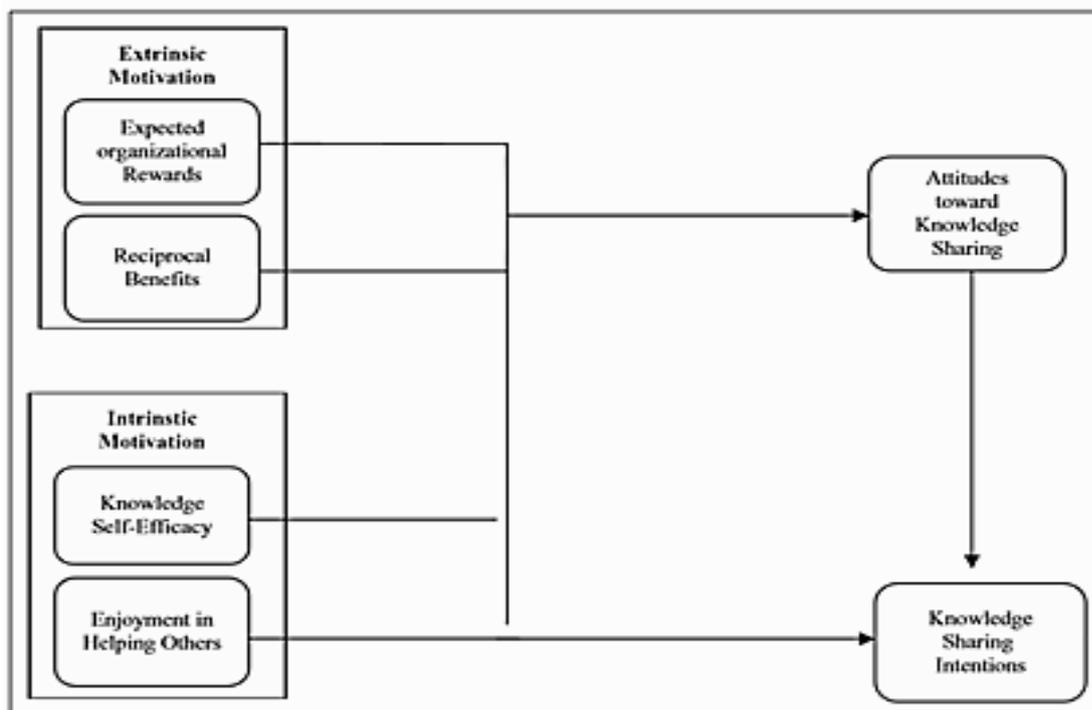
Fig 2.2: Theory of Reasoned Action (adapted from Lin, 2007a).

2.4 SECI Model of Knowledge creation (Nonaka and Takeuchi, 1995)

The SECI model of knowledge creation emphasises knowledge identification, acquisition, development, sharing, preservation and application of knowledge. The theory recognises two types of knowledge, tacit (based on intuition, accumulated experience, skill) and explicit (files, library collections, or databases). Tacit knowledge is said to be difficult to access because it resides in the minds of individuals. The theory proposes four ways that knowledge types can be combined and converted namely: socialisation, internalisation, externalisation, and combination (Nonaka and Takeuchi, 1995).

2.4.1 Socialisation

According to Nonaka and Takeuchi (1995), socialisation involves tacit to tacit knowledge exchange. In Socialisation, knowledge is passed on through practice, guidance, imitation, meetings, and observation. Nonaka, Toyama and Konno (2000) are of the opinion that because implicit knowledge is problematic to make formal, it can be obtained exclusively by exchanged encounters such as spending a period of time as a group or living in the same setting and in unofficial communal gatherings between affiliates of the company.

Socialisation entails interacting with one another or living in the same environment while tacit knowledge is shared. This usually transpires in a classical initiation where interns obtain the implicit knowledge in their trade by means of practical work, in contrast to printed instruction manuals of work books. This, according to Nyaude and Dewah (2014), enhances work skills for junior members of staff. In addition, it also assures an organisation that knowledge is retained at the exit from service of the experienced members of staff.

2.4.2 Externalisation

Nonaka, Toyama and Konno (2000) point out that this mode of knowledge transfer from implicit to expressed knowledge is viewed as a very problematic but an essential change process. The authors note the process of transforming or organising implicit knowledge into expressed knowledge such as documents, manuals, is characterised by more prescribed interrelationships such as skilful dialogues or the exchange of experiences acquired in a preceding activity. The codified knowledge can spread more easily through the organisation and becomes the basis of new knowledge. Because implicit knowledge can be in essence problematic to collate, the use of metaphor is cited as an important externalisation mechanism (Nonaka, Toyama and Konno, 2000; Schulze and Hoegl, 2008). Once implicit know-how is

made expressed know-how, it can be preserved in institutional documents and databases and can be shared easily with others which allow library employees to make improvements on library processes.

2.4.3 Combination

Combination is an activity involving transforming expressed knowledge into more complicated and logical sets of expressed knowledge. Expressed knowledge is accumulated from within or without the organisation and then synthesised, improved or managed to generate novel knowledge. The new expressed knowledge is later diffused among the affiliates of the concern. Application of information technology and databanks can promote this type of knowledge transformation. Information technology, creative communication networks, and databases are the mechanisms and infrastructure used for the acquisition, integration, synthesis and processing, and dissemination of the newly created knowledge (Nonaka and Takeuchi, 1995; Nonaka, Toyama and Konno, 2000).

2.4.4 Internalisation

According to Nonaka, Toyama and Konno (2000), internalisation is the method of integrating expressed knowledge into implicit knowledge. Through this method, expressed knowledge produced is diffused in the whole organisation (Toyama and Konno, 2000). Internalisation is very much connected to practical learning. For instance, Nonaka, Toyama and Konno (2000), argue that development schedules can assist novices to know more about an organisation. By studying records or handbooks about their occupation and the organisation, and by thinking upon them, learners can acquire the expressed knowledge recorded in such official papers to deepen their implicit knowledge foundation. According to Nonaka, Toyama and Konno (2000), when knowledge is assimilated to become part of a person's knowledge foundation, in the mode of practical knowledge, it comes to be a beneficial resource. This implicit knowledge amassed at the personal level can then set out a new pattern of knowledge formation when it is distributed to others by means of socialisation (Nonaka, Toyama and Konno, 2000). After internalisation, the procedure resumes at a different stage, thus the simile of a pattern of knowledge conception commonly cited as the SECI model. A schematic representation of the SECI model is shown in figure 2.3.
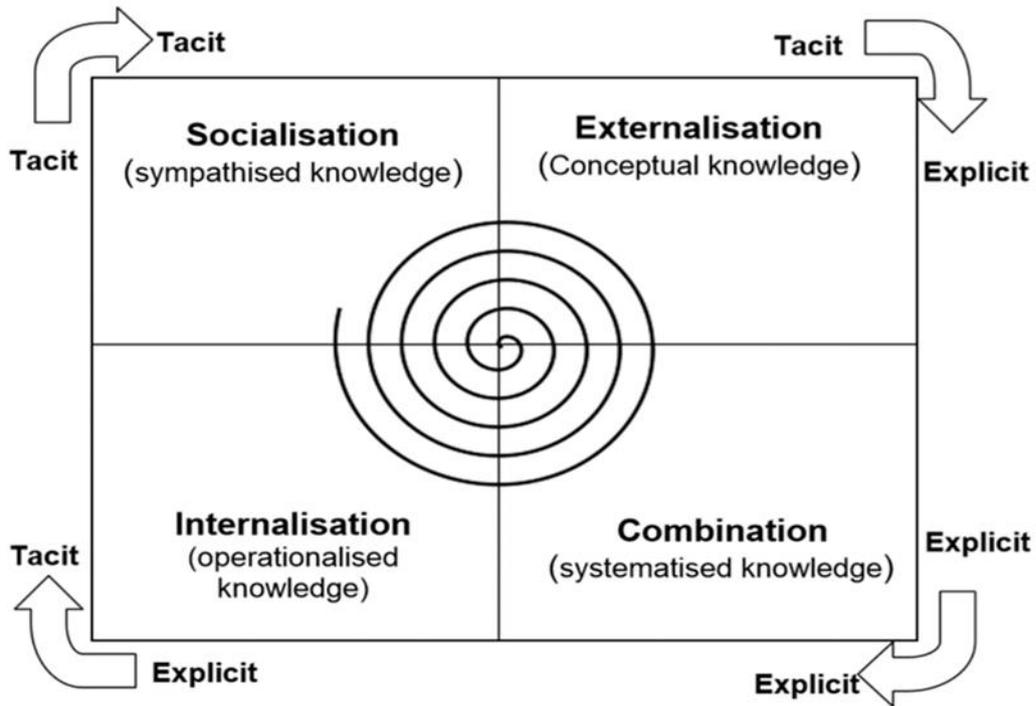
Fig 2.3: SECI Model (adapted from Nonaka and Takeuchi, 1995).

The SECI model has been subjected to criticisms from several writers. For instance, Lyude (2007), points out that Nonaka assumed that workers will only learn within the boundaries set by management and did not take into account that workers organise a great deal of learning themselves irrespective of management expectations. Glisby and Holden (2003) also observed that Nonaka's four modes of knowledge conversion are strongly embedded in traditional Japanese values and management practices. These are dependent on Japanese personal commitment to the organisation, the uses of strong inter, /external networks for the sharing of tacit knowledge and, Japanese style of communication. Thus, Nonaka assumed that the structures of the model could easily be transferred across context and culture, something that he disregarded. Despite some criticisms of Nonaka's model as demonstrated by Glisby and Holden (2003) and Lyude (2007), it is regarded as the highly cited work in the domain of knowledge management (Lyude, 2007). The SECI model of knowledge production is beneficial, because every activity is anticipated to create new knowledge to be used to improve the effectiveness of knowledge sharing by library staff thereby improving library service delivery.

The SECI model is reckoned to be suitable for this study to examine how knowledge is produced, acquired and distributed amongst library employees. The Model also assists to appreciate approaches to knowledge sharing in university libraries. The model as well, complements the social capital theory. There are two reasons for adopting the theory as a complementary framework for this study. First, the theory has been used in research studies similar to this such as: Nyaude and Dewah (2014) on 'An assessment of knowledge sharing strategies at the National Archives of Zimbabwe'; Abbas (2015), a doctoral study on 'Knowledge management strategies and practices in Nigerian Agricultural Research institutes'; Muchaonyerwa (2015), a doctoral study on 'knowledge sharing strategies in university libraries in KwaZulu-Natal Province of South Africa'; and a study of Dewah and Mutula (2014), on how government owned entities retain their knowledge in sub-Saharan Africa.

Secondly, the theory is used to address the variables of tacit knowledge, explicit knowledge, and creation of new knowledge, innovation and knowledge sharing. Specifically, the theory addresses research question 1: What type of knowledge is generated or acquired by university libraries in Malawi? The theory also complements social capital theory in addressing research question 2: What is the rationale for knowledge creation and sharing by university libraries in Malawi? And research question 3: What mechanisms and infrastructure are used for knowledge sharing in university libraries in Malawi?

2.5 General Workplace Commitment Model (Meyer and Herscovitch, 2001)

The General Workplace Commitment Model developed by Meyer and Herscovitch in 2001 is based on the earlier Model of Organisational Commitment (Meyer and Allen, 1991). The General Workplace Commitment Model can be applied to all forms of commitment in the workplace settings such as commitment to profession, commitment to leaders, commitment to unions, including commitment to organisation (Tangaraja *et al*., 2015). Meyer and Herscovitch (2001) assert that when contemplating the elements concerned with the formation of commitment, it is imperative to discern among the behaviourisms that complement that commitment. That is, any element that impacts on the formations of commitment does so by its effect on one or more of the behaviourisms that constrain an employee to a mode of behaviour of applicability to a certain desired result (Meyer and Herscovitch, 2001). Thus, Meyer and Herscovitch (2001) distinguish three dimensions for the commitment construct,

namely, affective, normative and continuance. According to the model, the major factor that differentiates these three dimensions is the mind-set of the employee.

According to Van Den Hoof and di Rider (2004), emotional dedication is connected to association and attachment with the organisation, a perception of expressive affection to that organisation. Emotional dedication points to a sensation of intending to prolong serving in the organisation. The prolongation obligation is based on the detriments related with forsaking the benefits connected with continuous involvement. While mandatory dedication is associated to the employee's sense of requirement to remain with the organisation, and conceives an impression that an employee need to remain in service.

According to Meyer and Herscovitch (2001), the behaviourisms describing affective commitment is the aspiration that people with solid affective (worth, moral) commitment crave to take a line of action such as knowledge contribution, of applicability to a desired result. The methods probably concerned in making this aspiration differ throughout the various conceptualisations but incorporate participation, shared values and identification. Meyer and Herscovitch (2001) suggested that any individual or circumstantial variable that is conducive to the prospect that a person will (a) come to be interested (inherently inspired, preoccupied) in a method of working such as knowledge sharing; (b) recognise the worth importance of attachment with an organisation or striving towards a method for achieving a specific goal such as knowledge sharing; and/or (c) attain his or her character from involvement with an organisation, or from performing toward a target, will advance the establishment of an affective commitment. Van De Hoof and di Rider (2004) note that there is a correlation between affective commitment of an individual's preparedness to devote more energy to their job; this is the type of commitment that can be anticipated to be associated to readiness of exchanging knowledge.

Maintenance commitment is symbolised by the realisation that it would be detrimental to terminate a method of working, for instance an organisation. It is largely acknowledges that maintenance commitment increases when an individual devotes time that would be lost if he or she were to terminate the project. Included in this dimension is unavailability of other possibilities as the reason for the growth of maintenance commitment. There is some debate though, with reference to whether allegiance built on danger of loss of sacrifices is the same

as, or different from, commitment built on a recognised lack of possibilities (Meyer and Herscovitch, 2001).

Normative commitment is characterised by the behaviourism that an individual has a responsibility to take a mode of conduct of significance to a desired result, for instance to continue with an organisation and/or perform for the purpose of the realisation of a desired result. Meyer and Herscovitch (2001), put forward that normative commitment improves when an individual has incorporated a set of standard of behaviour relating to suitable practices by means of socialisation and is the receiver of benefits and encounters a need to return the favour.

2.5.1 Relationship between Organisational Commitment and Knowledge sharing

A number of studies have reported on and confirmed organisational commitment as a significant feature in giving an explanation of knowledge exchange (Jarvenpaa and Staples, 2001; Van den Hooff and di Rider, 2004; Rocha, Cardoso and Tordera, 2008). The keenness to contribute and obtain knowledge is correspondingly predicted to be connected to organizational commitment. The individuals' commitment to their recent organisations impacts on the type and form of individual knowledge exchange practices (Van den Hooff and di Rider, 2004). Rocha, Cardoso and Tordera (2008) established in their study that people who have a feeling of affectional connection to their organisation are likely to contribute their knowledge whenever they ascertain that they exchange their knowledge in an atmosphere where doing so is valued and where their knowledge will be in reality utilised and ultimately be of assistance to their organisation.

Lin (2007b) conducted a study on 'To share or not to share: modelling tacit knowledge sharing, its mediator and antecedents' from different companies in Taiwan. The study established that implicit knowledge exchange is affected by organisational commitment. The author established that modest implicit knowledge interchange is presumably credited to an absence of organisational commitment. Lin (2007b) reports that people who are deeply devoted to their organisation may attach extensive value to their organisational affiliation and to their association with other members. Such people's organisational commitment according to Lin (2007b) is possible to ease their intents of implicit knowledge exchange with other members, which may value their organisation in the future. Rocha, Cardoso and Tordera (2008) in their study found that levels of organisational commitment can inhibit or facilitate knowledge

33

management processes. In addition, a strong link between employees and companies will favour knowledge management practices.

The major critique of the general work placement model is provided by Mercurio (2015). The author states that within the last 14 years, scholars studying commitment have still not come to an agreement as to the nature of organisational commitment and how it develops. This fragmentation creates a problem in a time when practitioners are looking toward organisational commitment interventions to attract and retain talent and improve performance. With organisational commitment research remaining confounding and fragmented, Mercurio (2015) suggests that further clarification of what commitment is and how it develops is warranted to guide future research and evidence-based practice. In spite of the weakness discussed, practitioners may use organisational commitment interventions to attract and retain talent and improve performance. Second, practitioners may use the model on fostering an emotional bond between the individual and the organisation within existing and newly developed human resource practices. The General Work placement model is not appropriate for this study since it stresses on commitment to be the solely means of encouraging knowledge sharing, with the hypothesis that individuals' organisational commitment is probable to advance their intents of implicit knowledge exchange with other members (Lin, 2007b).

2.6 Self Determination Theory (Ryan and Deci, 2000)

Self Determination Theory (SDT) is concerned with determining what stimulates individuals to perform towards realising a desired outcome. It was introduced by Deci and Ryan, and it has been found beneficial in explaining voluntary behaviour like knowledge exchange (Gagne, 2009). The two main types of motivation that SDT contrasts are autonomous motivation and controlled motivation (Ryan and Deci, 2000). According to Ryan and Deci (2000), self-directed drive includes both inherent drive and external drive in which individuals have recognised a pursuits' worth and flawlessly have combined it into their feeling of personality. Once individuals are self-driven, they encounter free will, meaning performing a task as a matter interest and because it is gratifying (inherent drive); and performing it because it is subjectively purposeful and suits one's value system (valuing a goal). Whereas regulated motive, in comparison, involves the pair of extrinsic regulations in which a person's conduct is the issue of exterior eventualities of incentive or retribution; and introjected control, in which the control of a deed has been in part internalised and is energised by issues for example; an endorsement

drive, evasion of disgrace, contingent self-assurance, and self-esteem concerns. Once individuals are regulated, they feel coerced to reason, or conduct themselves in certain manners. Both self-directed and regulated stimuli reinforce and guide conducts, and they can be distinguished from amotivation, which denotes a void of purpose and stimulus (Ryan and Deci, 2000). The two key important types of motivation, intrinsic motivation and extrinsic motivation, and the third, amotivation, are placed in a range of many self-determination levels (Deci and Ryan, 2008). Gagne (2009) notes SDT focusses on gratifying a person's innate drive.

2.6.1 SDT and Knowledge sharing

Workers who are more inherently inspired will embrace volition behaviour in contrast to workers who lack the self-drive (Tangaraja *et al*., 2015). Innately driven persons will participate in free-willed behaviour such as knowledge exchange behaviour because it is gratifying, pleasant, privately useful, valued, and pleasing and suits the individual's ethical values (Gagne, 2009). Inherent stimulus come from inside an individual, and is not connected to outside forces (Olatokun and Nwafor, 2012). In contrast to intrinsic motivation is extrinsic motivation, which originates from external pressure (Olatokun and Nwafor, 2012). And so, external stimulus refers to participating in an activity such as knowledge exchange behaviour because of exterior pressures such as to obtain incentives, fears of sanction, mutual benefits (Lin, 2007a; Olatokun and Nwafor, 2012). SDT has been viewed to be extremely helpful in explaining people's inherent drive to contribute their treasured knowledge willingly, especially in the public organisation settings.

Some of the limitations of SDT, according to Sheldon *et al*. (2003) are that it does not take into account individual differences in employees' needs for growth or self-actualisation. Another potential limitation of the theory according to the authors may be its assumption of a motivational continuum, and its emphasis on creating an aggregate self-determination measure that locates participants upon this continuum. SDT researchers according to Sheldon *et al.* (2003) often create a single measure of self-determined motivation by adding identified and intrinsic motivation, and subtracting external and introjected motivation. Lastly, the theory has been criticised for focusing on how autonomy-supportive contexts enhance workers' internalised or intrinsic motivation. Sheldon *et al*. (2003), claim there are other processes that can also lead to more internal motivation. The authors provide examples of some evidence which suggests that individuals who have a strong interpersonal orientation will find boring

tasks more interesting when they work with another person, perhaps because their relatedness needs are being met. In addition, it seems likely that individuals' interest in a task may be influenced by co-workers and supervisor perceptions of the task.

2. 7 Key Variables Gleaned from the Theoretical Frameworks

The present study triangulated the three theoretical frameworks in addition to the mixed method research approach which combined various data collection approaches such as survey questionnaires, interviews, document analysis and observation. The outcome of such a triangulation would provide broad and various sources of information which have been spotted as cardinal to studying knowledge sharing in university libraries. These include: structural dimensions- social and network relations; interactive components- trust, identification and mutuality; cognitive component- collective vision and collective language; attitude and intention; extrinsic and intrinsic motivation, tacit and explicit knowledge. Table 2.1 shows how the research questions are mapped onto the variables of theoretical frameworks and model.

Table 2.1: Mapping the research questions to the variables of Theoretical Framework and Model

S/No	Research Questions	Variables being addressed	Sources of Variables
1.	What type of knowledge is generated or acquired by	Tacit knowledge, explicit knowledge	SECI and SCT

	university libraries in Malawi?	Knowledge sharing	
2.	What is the rationale for knowledge creation and sharing by university libraries in Malawi?	Knowledge creation, innovation	
3.	What mechanism and infrastructure are used for knowledge sharing in university libraries in Malawi?	Infrastructure, knowledge sharing strategies	
4.	What are the factors influencing knowledge sharing in university libraries in Malawi?	Knowledge sharing factors- organisational culture, organisation climate, organisational structure	
5.	What is the attitude of librarians towards knowledge sharing in University libraries in Malawi?	Attitude, motivation	TRA
6.	What framework is needed for effective knowledge sharing in University libraries in Malawi?	Tacit knowledge, explicit, knowledge, infrastructure, organisational structure, organisational climate and culture	SECI, SCT, TRA

2.8 Summary

Relevant theories and models pertinent to studying knowledge sharing were presented. These included the SCT, TRA, SECI, GWM and SDT. The study was underpinned mainly by the

SCT, while the other models provided broad understanding of knowledge management and sharing landscape.

CHAPTER THREE
LITERATURE REVIEW

3.1 Introduction

The purpose of this chapter is to review related theoretical and empirical literature. A literature review is the footing of research projects which accomplishes various significant purposes. It positions the general setting of the research study by delineating reality and what is not about the extent of the research, and defends those findings. It as well positions current publications in a comprehensive academic and chronicled perspective. It not only reports the assertions made in the present written works but also examines analytically the examination approaches employed to clearly comprehend whether the assertions are adequate (Creswell, 2013).

Such a critique of the written works empowers the researcher to analyse what has been studied and achieved in a discipline and what else requires to be studied and achieved. In addition, a literature analysis permits the researcher to summarise the current written works and to synthesise it in some ways that provide a new viewpoint. Hence, a review of the written works is the beginning of both logical and procedural finesse, thereby bettering the value and helpfulness of successive research (Boote and Beile, 2005).

The purpose of the study was to examine the strategies of knowledge sharing in university libraries in Malawi. Research objectives addressed include to: (1) Determine knowledge exchange strategies used in university libraries in Malawi; (2) Investigate factors affecting knowledge sharing in university libraries in Malawi and (3) Develop a theoretical model for knowledge sharing in university libraries in Malawi.

The study questions answered are as follows: (1) What types of knowledge is generated or acquired by university libraries in Malawi?; (2) What is the rationale for knowledge creation and sharing by university libraries in Malawi?; (3) What mechanisms and infrastructure are used for knowledge interchange in university libraries in Malawi?; (4) What are the factors influencing knowledge sharing in University libraries in Malawi?; (5) What is the attitude of librarians towards knowledge sharing in university libraries in Malawi?; (6) What framework is needed for effective knowledge sharing in University libraries in Malawi?

The literature used in this study covers knowledge management broadly and knowledge sharing specifically from both print and electronic sources in journal articles, books, conference proceedings, book chapters, technical reports and databases such as Emerald, Ebscohost, Science Direct, Scopus and Google Scholar. The conceptual literature relating to the ideas and theories and the pragmatic literature which discusses studies related to the variables of the current study are two kinds of literature (Kothari, 2004).

Research questions and the major variables gleaned from the SCT, SECI model, and TRA underpins this research. Thematic areas addressed by the literature reviewed here include: knowledge generated or created by university libraries; rationale for knowledge creation and sharing; mechanism and infrastructure for exchange of knowledge; issues swaying knowledge exchange; and attitude of librarians concerning knowledge exchange. Other thematic areas addressed by the literature include structural dimensions- social and network relations; perceptive factor-collective vision and communal language; attitude and intention; extrinsic and intrinsic motivation, tacit and explicit knowledge. The international context is reviewed, followed by the regional and local contexts.

3.2 Types of Knowledge generated or acquired by university libraries

Knowledge generation or production implies the competence to invent original concepts and derive valuable answers (Bhatt, 2001). Nonaka, Krogh and Voelpel (2006:1179) defined organisational knowledge generation as "the practice of building existing and enlarging knowledge produced by people as well as crystallising and linking it with an organisation's knowledge structure". That is to say, what people appear to understand in their working career helps their associates and finally, the whole organisation. Whereas knowledge acquisition, according to Boateng, Dzandu, and Tang (2014), is the "process of gathering up information from different external sources and embedding it within individual's existing knowledge". Knowledge acquisition is sometimes used interchangeably with knowledge assimilation. Knowledge may be acquired from within or without an organisation. After knowledge has been produced, it needs to be acquired. Knowledge acquisition involves obtaining implicit knowledge from persons which is recorded and subsequently distributed amongst workers (Mpofu, 2011). Argawal and Islam (2015, in their study using a theoretical methodology on 'knowledge management implementation: mapping tools and technologies to phases of KM cycle', identified two types of knowledge- implicit and explicit that they regard as being of

concern to libraries. Jain (2012) makes a distinction between these sets of knowledge. Expressed knowledge is formal, codified, and systematic and is documented in books, journal articles, online databases, publications, websites, library manuals, cataloguing and indexing schedules; and is evident during meetings, workshops, and conferences. Expressed knowledge is gathered from within or exterior of the organisation; preserved in organisational documents and databases; and can be easily shared with others through information technology infrastructure to allow library employees to make improvements on library process (Nonaka and Takeuchi, 1995).

Tacit knowledge in any event, is private, practical-founded knowledge possessed by people, and is said to be difficult to access because it resides in the minds of individuals. Nonaka, Toyama and Konno (2000), and Argawal and Islam (2015) point out that since implicit knowledge is difficult to formalise, production of knowledge is the end result of a collaborative procedure that will include several people who are gathered jointly in a programme alliance or some other common arrangements such as interacting with different libraries, taking part in library occasions for instance discussion groups, meetings for training, and symposia. Equally important is that the knowledge of library functions, library customers in addition to their requirements, library information resources, library equipment and scientific knowledge needs to be assembled for creating up-to-date knowledge which can be used to improve and develop services to the customers and performance of the library (Argawal and Islam, 2015).

Tacit knowledge held by library staff is also known as valuable knowledge. Joe, Yoong and Patel (2013) in their case study of knowledge loss of older employees in knowledge intensive organisations in New Zealand found that this valuable knowledge is gained because of subject expertise. Joe, Yoong and Patel (2013:915) defined expertise as the "capability to execute with distinction in a distinct sphere, concerning intelligence and mental strength over a continued spell". The authors suggest that specialists are an influential source of wealth creation inside organisations and these are individuals who possess insightful expertise knowledge of a specialty, who are seasoned and accomplished, mainly by practical knowledge. A specialist exhibits superior degree of proficiency, executes job assignments with superior precision and economically and dominates specialty distinct knowledge, such as on techniques and processes, together with knowledge of how to attend to difficult situations (Joe, Yoong and Patel, 2013).

In their study, Joe, Yoong and Patel (2013) found that subject matter proficiency was exemplified by great dependence being heaped on a particular person in some instances, such as where there was only a sole specialist in a professional knowledge area in the organisation. Specialist theme proficiency is linked to the versatility, mastery and practical knowledge of personalities, and may be perfected by way of prescribed qualifications, practical learning on the job or experimental practice, and can be applied to workers of every age. Specialists who have joined some businesses with their proficiency can have their proficiency enhanced and tailored to their positions (Joe, Yoong and Patel, 2013). The proficiency could be in distinct, described areas such as cataloguing and classification of library materials, reference services, journals management, where a particular individual is hired exclusively for the task. When such library employees resign, retire or die they often leave with the valuable organisational knowledge which can be critical to the success of the library (Joe, Yoong and Patel, 2013).

Agarwal and Islam (2015) conducted a survey study that investigated how libraries prevented the loss of knowledge with people leaving or resigning, the strategies they adopt to retain this knowledge and to transfer organisational knowledge to new employees, from 101 academic librarians of 35 countries in 6 continents. The study found that the capacity to maintain knowledge resources within an organisation was a fundamental attribute for a productive organisation in the knowledge- based economy. New employees joining the libraries face some daunting tasks in gathering knowledge relevant to their jobs. The barriers associated with the transfer of organisation knowledge are that with knowledge either held in senior employees who do not share enough to keep themselves indispensable or thinking what they know is not important for others. With new employees joining and older employees leaving, libraries struggle to maintain organisational knowledge because of employees leaving the organisation, and transferring knowledge to new employees. It is against this backdrop that libraries need to develop and implement programmes for capturing and retaining this knowledge before their employees leave their organisations, and transferring this new knowledge to incoming employees (Agarwal and Islam, 2015).

It is for these reasons highlighted above that organisations should put in place systems for knowledge capturing. Some researchers such as Wamundila and Ngulube (2011), Jain (2014a), Agarwal and Islam (2015), Dewah and Mutula (2014) conducted some studies on strategies for knowledge generation, acquisition or capturing, and retention strategies in organisations. A

mixed method investigation of knowledge retention at the University of Zambia by Wamundila and Ngulube (2011) revealed that the acquisition of knowledge as a knowledge maintenance approach had some mixed findings. The positive part of the findings was that the acquisition of knowledge was promoted in the form of origination of proposals, exploitation of proficiency and assessments on performance (Wamundila and Ngulube, 2011). The study established further that staff that were viewed as being in good physical condition but were due for retirement at mandatory age were maintained on agreed terms and conditions. Whereas, not every one of the peripheral workers were maintained on agreed terms and conditions apart from those acknowledged to possess rare and special talents and expertise. Additionally, the authors observed that knowledge acquiring methods are effected by way of deliberations in which functioning pronouncements are formulated. On the negative side, the study found that institutional support for training and development was lacking, as well as the use of professional technologies as knowledge acquisition practices (Wamundila and Ngulube, 2011).

The Agarwal and Islam (2015) study revealed that the strategies used by most libraries for the retention, transfer, and capture of knowledge were not part of the formal knowledge management or that retention and transfer was done poorly. The authors suggest that for knowledge retention and transfer to be successful, it needs to be part of formal knowledge, a management programme, and done on an-ongoing basis and not just in the few days or weeks before an employee leaves.

In explaining knowledge capturing or acquisition through documentation, Wamundila and Ngulube (2011), Dewah and Mutula (2014) point out that it entails codifying the relevant operational information and storing it in repositories where anyone in the company can access and exploit it. The authors provide an example that, after acquiring knowledge from an individual, knowledge items are created by isolating fundamental pieces of knowledge, such as meeting manuals, task diaries, standard facts and market subdivision evaluations from the documents and depositing them in an automated warehouse for other people to use. This enables several individuals to explore and access the organised knowledge without having to communicate with the individual that initially produced it. This method renders it effortless to utilising knowledge, particularly in formulating project propositions, thereby preventing time wastage, lessening staff leaving, and assist in the training phase for newly hired staff (Wamundila and Ngulube, 2011; Dewah and Mutula, 2014).

According to Wamundila and Ngulube (2011) gradual retirement is another strategy used to retain organisational knowledge. Gradual retirement involves a variety of work agreements that permit a worker who is close to retirement, to carry on working, generally with reduced amount of work. The strategy of phased retirement has been used in circumstances where the departure of employees is recognised as a cause for knowledge loss (Wamundila and Ngulube, 2011). Martins and Martins (2011) in their theoretical study in South Africa, established that in the event the older and employees with expertise exit an organisation, they may possibly go along with the knowledge that provided the organisation a competitive edge; for example, widespread private dealings with managers in dominant consumer firms. Doing away with that skill and knowledge could expose the organisation to competitors to stealing away major accounts.

Similarly, Wamundila and Ngulube (2011) argue that the work execution of incomers usually does not measure up to the person who has retired or transferor, in the existing circumstances in the majority of organisations. Maponya (2004) conducted a mixed method study to investigate Knowledge management practices in Pietermaritzburg Libraries of the then University of Natal. The study concluded that obtaining and documenting knowledge was important to the realisation of knowledge-based organisations. This is so, because Knowledge repeatedly vanishes due to discharges, departures and usual attrition and the cause for this is that knowledge is ingrained in individuals' minds and not documented anywhere. To be of importance to the organisation, the exchange of knowledge should result in transformation in conduct; actions and strategies; and the origination of fresh concepts, systems, actions and strategies. This shows the critical need to retain the technical knowledge in the organisation from retiring or resigning employees, so that organisational performance is not affected (Maponya, 2004; Nyaude and Dewah, 2014). A survey research design by Nyaude and Dewah (2014), to assess knowledge sharing strategies of staff of National Archives of Zimbabwe, found that staff acquired knowledge from educational training and from conferences and workshops.

Jain (2014b), in a survey study in which she investigated knowledge management practice at the university of Botswana found that staff generated, published and disseminated knowledge in the form of books, articles, keynote addresses, conference papers, theses and dissertations. Similarly, a survey study by Mpofu (2011), on 'Knowledge management practices in Malawi',

revealed that very few of the organisations studied had introduced formal knowledge management systems as management tools. The study showed that managers of these organisations did not drive the knowledge management strategy, and instead, organisations focused on knowledge sharing, formal training, mentoring and documentation of work processes. Yet, in most organisations, these practices are regarded as part of managing the normal work processes in the work place. Dewah and Mutula (2014) found many challenges associated with knowledge acquisition in some government-owned enterprises in sub-Saharan Africa. These hindrances included limited understanding of knowledge management returns, scarcity of skills, absence of rewards of inducements to exchange facts, information and skills, scarcity of applicable technologies, inadequate support from executive, scarcity of desired implementation strategies to study from and an exodus of highly trained personnel. Notwithstanding the budding literature on knowledge capturing and knowledge management routines, very insignificant devotion if any has been given to knowledge capturing strategies in university libraries. Most of the studies that have been carried out in emerging nations exposed that university libraries did not document knowledge of skilled employees.

3.3 Rationale for knowledge creation and sharing

Several reasons have been advanced for organisations' engagement in knowledge creation and sharing. Dasgupta and Gupta (2009) in a theoretical review study in India, lamented that in the current unstable condition, most organisations are attentive to requirements for transformation, both drastic and gradual transformation. It warrants an enterprise that promotes trial and error, studies and adopts new ways of doing things and application of scientific knowledge, continuously scans the conditions, assesses its own achievement, and is devoted to repeatedly enhancing its operations. The organisation's plans, configuration, compensation, and exchange of information implementation must be created to promote novelty and transformation. Dasgupta and Gupta (2009:206) define innovation as the "fruitful initiation of something novel and beneficial, such as, initiating fresh process, operating procedure, systems, or fresh or improved solutions and resources". Moreover, novelty is a process of gaining skills and knowledge in which valued thoughts are converted into original forms of enhanced worth for the organisation and its interested parties. The novelty cycle is made up of people and group insights at the place of work, knowledge generation, and novelty (Dasgupta and Gupta, 2009).

Scholars such as Schiuma, Carlucci and Lerro (2012), using a review of papers in Italy, found that in the previous years, the demands of international competitiveness, the rising commodity complications, advancement in technology, the shifting customer needs and tastes have steadily pressed organisations to better their capacity to produce and provide worth. In the modern sophisticated environment, organisations have realised that the effective application of knowledge, and its speedy attainment and utilisation of fresh knowledge portrays the only basis of justifiable economical edge. In the United States of America (USA), a case study by Jantz (2012) investigated the novelty initiatives of academic libraries and Huang and Li (2009) in a survey study examined the effect that knowledge management had on novelty in Taiwan. The study by Jantz (2012) found that group cooperation promoted the collection, exchange, as well as use of valued knowledge and led to the improvement of two dimensions of innovations in libraries, technical and administrative. Jantz (2012) points out that the two high-tech practice changes included leasing of library rooms and publicising library facilities and resources.

Similarly, development of new technologies, incorporating new technologies into products, provision of scholarly journals by digital platform, and a collaboration with the university publishing house, developed into an income generating venture, improved quality of service delivery and lowering of costs; moreover, managerial novelties focused on the group configuration of the organisation and exact parts such as resource distribution and allocation of compensation and benefits system. The study by Huang and Li (2009) provided first-hand backing of the knowledge-based capabilities as determinants of competitive edge, and reinforces the argument that knowledge management promotes superior corporate performance. Managing knowledge as a valuable asset is classified as the underlying defense that makes possible a business to maintain unique specific qualities and economic gains as espoused by the SECI model (Nonaka and Takeuchi, 1995). Huang and Li (2009) note that group interrelationships with reciprocal belief, consultation, and organisations inspire mutual connections for knowledge exchange and exploitation.

Islam, Agarwal and Ikeda (2015), used a survey design to investigate novelties in academic libraries in Asia, Europe, Canada and USA. The findings of the study recognised three important strategies employed to ensure quality of service and service innovation. The first finding established that libraries focussed on being user centred and responsive to user needs. Developing the knowledge of customer needs is achieved through librarian-patron interaction.

It also ties in with most service innovation studies that recognise user involvement as a key part of service innovation.

Islam, Agarwal and Ikeda (2015), observe that the concept of a service, the client interface, the delivery system and technological options are the four-dimensional features of service innovation. Most of these dimensions deal with customer needs, customer satisfaction, what is to be done for the customer, and how it is to be achieved. The second finding by the authors is that libraries are increasingly being remodelled as spaces for blending, make spaces and learning zones where people gather not only to consume content, but to confer and collaboratively generate content. The third finding is that communication services and digital services were identified as among the most innovative. This was likely because they facilitated user interaction, and the service innovation dimensions of the client interface and technological options. The technological innovations which most libraries had implemented included e-books, online research assistance, mobile apps/web site, presence in social media, and digital libraries. The study also established the connection between knowledge management and service novelty (Agarwal and Ikeda, 2015).

Islam, Agarwal and Ikeda's (2015) findings are supported by Du Plessis (2007), whose theoretical literature study novelty initiatives, in South Africa found a set of three key influencers of the function of knowledge management. These include to initiate, develop, and sustain competitive edge by means of utilisation of resources and by collaborative processes; knowledge is a capital applied to lessen complications in the course of invention; combination of knowledge sourced from both inside and outside the organisation (or library), as a result making it capable of being accessed and used. According to Du Plessis, (2007), knowledge and its management proffers a successful knowledge environment within which advances can be raised. Moreover, knowledge and its management contributes to stable development of the knowledge source by means of acquiring and codifying of expressed and implicit knowledge. Second point is that knowledge and knowledge management facilitate teamwork in the course of invention. It permits teamwork beyond departmental confines inside firms, but also across organisational confines by way of networked partnership mediums along with organisational applications and opportunities such as internal and external networks. The third function is to provide opportunities, applications and methods to make certain combination of an

organisation's knowledge resources, and supports in detecting weaknesses in the knowledge base.

In academic libraries, applying and incorporating knowledge management would results into conception and origination, with innovative service results. Islam, Agarwal and Ikeda (2015) suggest that managing the implied and expressed knowledge of both library staff and clients is significant because it results in creating original knowledge, and a climate for designing modern or enhanced applications and library resources, activities, and plans for the clients. This could be achieved through collaboration and interaction both amongst employees and between the employee and the user. This would enable service workers to proactively understand, assess and respond to user needs through continuous innovation in services. The wide support for knowledge management is significant, and shows that libraries environments are ripe for knowledge management. However, service innovation is not all that rosy, as there are many barriers to implementation. The barriers include time, budget, and resource constraints that libraries increasingly face, which makes the implementation of knowledge management and innovation in services even more imperative (Islam, Agarwal and Ikeda, 2015).

In a case study of that examined innovation practices in an Australian university library, Wells (2014), reports that the library abandoned a system which was devised to promote a printed publications facility prototype which emphasised on physically interacting with clients on-site, workers and assets. This modifications of the system empowered the staff to cope with great speed adjustments in admission with fewer ways and means, and perform in a swift way. For instance, there are barely any tables or counters in the libraries. The thinking of the library was stimulated by the client service provision prototypes in other service organisations such as banking institutions and airports. This made it possible for customers and workers to appreciate relating in a more cordial and free ambience (Wells, 2014).

The second innovation that the library has initiated is the concept of self-help. Wells (2014) reports that this concept is a responsive approach which applies to the networked setting in which users are attracted to the comfort of surfing and conducting some dealing virtually. More and more of loaning is currently implemented by clients. The library stopped providing in person library instruction lessons and transferred it to the virtual setting since it fits the collection of documents in electronic format. It was observed that face-to-face information

literacy was not attractive to students that had sufficient knowledge and skill to use computers and instead, they often used method of instructions that were outdated. Wells (2014) notes that by modifying the system, information services and the information literacy model, the library could rechannel the substantial specialist human resources of the library's information services to build innovative services champion scientific inquiry, such as to measure the output or the impact of scientific inquiry and statistical analysis of written publications. Resources were also diverted to putting more energy in corresponding with faculty members.

Jain (2014a), conducted a survey which investigated the practice of knowledge management in academic libraries in developing countries of Southern Africa. Her findings were more elaborate and revealed that knowledge management has several benefits to the library such as: improving library services and productivity by providing well-timed and worthwhile, customer-focused and 24/7 library services in a stable way. By applying knowledge management processes, the study established that individually, clients received the uniform responses for the same requests, without which it would have been problematic to observe stability of client services. The second benefit is that it offered opportunity to mass-produce by utilising the best appropriate information and leaving out the inappropriate. The third benefit is to leverage the prevailing knowledge inside an organisation. This is done by determining the discrepancy between the current condition and the desired condition, knowledge surveying and knowledge analysis exercises to unearth the latent knowledge. The fourth benefit is to assist in handling the exponential increase in the amount of published information by making available applications and devices to organise the information that is very key and necessary. With large amounts of information to condense, an information consumer is incapable to access and put to use the information an individual requires, and this excessive information can prevent the value of information to the individual.

Due to the proliferation of information and knowledge, knowledge is becoming obsolete at a quicker pace more than previously. It is therefore imperative to apply knowledge management to prevent the speedy obsolescence of knowledge. Jain (2014a) cautions that this calls for university library staff to modernise the prevailing library climate and encourage a culture of knowledge exchange by establishing collective learning, a commitment to using all the knowledge and scientific knowledge, implementing procedures to deal with changes, organisational learning, and use of applicable knowledge exchange tools. The fifth benefit

according to Jain (2014a) is to empower every individual with knowledgeable decision making competencies by giving actual information and knowledge. Knowledge management focusses on the identification of commitment to using all the knowledge and scientific knowledge because proven solutions and methods are consistently of good quality compared to recently-initiated ones. The sixth benefit is reduction of duplication of efforts. Due to long experience accrued over a long time, best methods are well-timed and worthwhile, they afford functional value, improve working competencies, establish a learning environment, and reduce training needs. This is the reason academic libraries need to constantly search for the most effective way to performance. Knowledge management incorporates knowledge exchange as one of its most important components. Knowledge management therefore, plays a significant role in innovation.

Dasgupta and Gupta (2009) noted that to address socio-economic difficulties in the hostile environment, an enterprise is obliged to have a comprehensive gamut of competence, comprising their capability to advance the collection of knowledge. The authors contend that an organisation can improve the complexity and variety of knowledge through learning. They observe that the greater the learning capability of an enterprise, the greater the degree of a firm's effectiveness, originality and produce initiation achievement. Organisational process of improving performance deals with concerns of effectiveness by paying particular attention to organisational-setting interconnection, various stages of understanding and knowledge systems (Dasgupta and Gupta, 2009). However, Jain (2014a) noted that with budgets cuts, libraries attached to institutions of higher learning have borne the cut back from both aspects - limited funds and higher requests, they have noticed the danger of being marginalised by publicly accessible system of network information services and learners' and faculties' individual information searching skills. The author observed that finances have an effect on each item, inclusive of scarce equipment and scientific knowledge, an absence of incentive scheme, inferior training policies and a deficiency of expertise in knowledge management that would drive improvement of library services through innovations. Hence, Jain (2014a) argues that it is essential for libraries attached to institutions of higher learning to function more competently with limited monetary and/or workforce and generate enough with limited resources.

3.3.1 Learning organisation

With harsher competitive environment, scientific development and fluid client tastes, it is more critical than previously that enterprises develop into learning organisations. An organisation that intends to improve the complexity and variety of knowledge through learning, workers constantly generate, obtain and contribute knowledge thereby supporting their firm adjust to the unstable conditions quicker than their competitors can (Dewah, 2015). Garvin, Edmondson and Gino (2008) argue that learning organisations have developed through a process of natural evolution and are characterised by the ability to transform themselves through obtaining of new knowledge, talents and behaviours on the part of all staff members. This process requires the active participation of staff members in individual learning. The responsibility of individual learning must be shared between an individual and the organisation. The learning organisation aims to develop the capability of the workforce members by means of education and training, learning on the job, with the purpose of the organisation enhancing its capability for modernisation and for transformation to sustain itself and advance (Steyn, 2004). These assertions by Steyn (2004) are supported by Chipeta and Chawinga (2017) who in using a survey study investigated the Knowledge management capability of lecturers at Mzuzu University (Mzuni) in Malawi. Through the use of questionnaires, the study found that 41(66.1%) of the respondents indicated that Mzuni top management encouraged staff to continue their education or training by providing them with scholarships. While 37(59.7%) of the respondents indicated that Mzuni encourages staff local and international conferences, workshops and seminars.

Wamundila and Ngulube (2011) observe that continuous training and education is a capacity building initiative which equip workers with the requisite working knowledge valuable to an enterprise' functions. Kokt (2010) argues that encouraging and sponsoring staff to attend international conferences is regarded as part of capacity building and a huge motivation for staff in its own right. This is so because staff feel valued by the university they represent and could be seen as one way of retaining the best employees. In the end, individual competences are continuously developed, thereby making a huge contribution to organisational success.

Jain and Mutula (2008) in a study that reviewed literature from Botswana note that by promoting a culture of knowledge sharing, and that by collective learning and collaboration, libraries become learning organisations. The authors argue further that university libraries are currently operating in a digital environment in which academics have rapidly adopted digital

scholarship. Digital scholarship may include electronic submission of articles and publication; teaching using purely or blended means, assessment of academic work, collaborative research, and communication all done electronically (Jain and Mutula, 2008).

Furthermore, digital scholarship is supported by a variety, of content such as scholarly journals, electronic version of printed books, an archive for the collection of scholarly work, organised collection of data and collection of documents in organised electronic form (Mutula and Mooko, 2008). The adoption of digital scholarship in universities requires university libraries to transform themselves into learning organisations by, among other things, creating a climate of change and innovation. Libraries should establish learning environments by working collectively with other stakeholders, predominantly educators, students and community developers and be better equipped to cope with emergent technologies. Libraries must also empower their employees to be flexible to take advantage of new and transposable roles as facilitators, mentors, and coaches. Renner *et al*. (2014) add that library staff should be open to new ideas, take risks and be encouraged to explore new ways of doing things for libraries to become learning organisations. For all this to be achieved, libraries need to promote a culture of knowledge-sharing, collective learning and collaboration (Jain and Mutula, 2008).

3.4 Mechanism and infrastructure for knowledge sharing

There are various mechanisms used to share knowledge. Jasimuddin and Zhang (2009) grouped these mechanisms into two classes focussing on the type of knowledge they intend to share. The two dominant groups are the soft mechanism and hard mechanism. In using the soft mechanism, the emphasis is to share implicit understandings. Organisations employ shrewd individuals and permit them to dialogue with each other and utilise casual chats, chat rooms, and outings as instances of settings where implicit knowledge can be shared (Jasimuddin and Zhang, 2009). In other words, soft mechanism stands for knowledge sharing through personal contact between persons such as sharing a series of events, brainstorming, communities of practice, training, workshops, seminars, telephone calls, face to face meetings, mentoring, documentation of existing knowledge, across departmental information sessions, and library newsletters (Mutula and Mooko, 2008; Jasimuddin and Zhang, 2009; Jain, 2014a; Abbas, 2015; Tan, 2016). In social interactive communication, the exchange of implicit and expressed knowledge takes place by means of socialisation and externalisation presented in Nonaka's (1995) SECI model that can be customised by institutions of higher learning. During the course

of socialisation (implicit to implicit knowledge conversion), social interactive communication by means of informal group interface and shared experience by the use of consultations, tutoring and group discussion gatherings among academic staff can strengthen this category of interface (Tan, 2016).

According to Jasimuddin and Zhang (2009), the hard mechanism is used to largely share explicit knowledge, enables knowledge to be organised and shared through information and communication technology (ICT). ICT infrastructure plays an important role in knowledge sharing by facilitating exchanges between those searching for knowledge and those who manage the gateway to knowledge. Such ICT infrastructure includes emails, web 2.0 technologies for example, wikis, and social networking microblogging service, discussion website on the web, newsgroups and mailing lists. Muchaonyerwa (2015) recommends that library leadership should encourage staff to share knowledge through formal and informal networks at the workplace.

3.4.1 Storytelling

In the modern day, the study of the creation and exchange of tacit knowledge in organisations has focussed on organisational stories. Swap *et al*. (2001) conducted a literature review study on using mentoring and storytelling to transfer knowledge in the workplace. The study established that organisational stories are the detailed narratives of previous executive performances, staff interfaces, and related events in an organisation that are informally communicated within it. Normally, these stories will originate from within the organisation and will therefore reflect organisational norms, values and culture. In storytelling, participants frame their experiences in stories to explain how things are done. Storytelling is a powerful tacit knowledge transformation tool since it uncovers tacit skills by adding meaning and context to the ideas, facts, and so forth. Stories help listeners understand new experiences and develop general belief (Chennamaneni and Teng, 2011). This view is supported by SECI Model (Nonaka and Takeuchi, 1995) that narrations are influential unofficial means of exchange, since they empower personnel to share their practices and study from colleagues.

Wijetunge (2012) recognised a diversity of examples of utilising narratives as an executive mechanism. They are put to use in action research, novelty and original wares creation, as a problem-solving tool and for entertainment (Wijetunge, 2012; Colon-Aguirre, 2015).

Wijetunge (2012) investigated 'organisational storytelling as a method of tacit-knowledge transfer: case study from a Sri Lankan university'. The investigation used a case study design accomplished by use of interviews. The study found that storytelling can be used to communicate with many people rapidly and for informal education, instruction and socialisation of recently hired workers. Wijetunge (2012) further adds, that storytelling can also be utilised to uphold corporate memory, and executive decisions. Narratives are applied as a basis of several official and unofficial groups, to produce a new concept and to initiate fresh proposals, get staff involved and to stimulate the fresh ideas. Narratives and personalities produce loyalty, and direct the organisation. They are exploited to convey several types of knowledge, such as disclosing standards and ethics, cultivating trust and loyalty, and exchanging tacit knowledge (Wijetunge, 2012). Azudin, Ismail and Taherali (2009), used a survey design study that used questionnaires for data collection on 'Knowledge sharing among workers: A study on their contribution through informal communication in Cyberjaya, Malaysia'. The findings of the study were that a useful method for the exchange of knowledge occurred during employees' interface whether in the passageway, informal group interface, or a discussion during lunch break, and that it was more frequent than uncommon in those deliberations for narratives to be applied to clarify instances of ideas to be made.

In the USA, Colon-Aguirre's (2015), empirical study on 'Knowledge transferred through stories: A typology', investigated through interviews organisational stories shared among academic librarians who worked at the reference desk. The findings of the study were that, there are different kinds of knowledge that were shared through stories. The most prevalent story themes among librarians working at the reference desk were their experience dealing with unusual patrons, former supervisors, poor administrators, former employees and past crises. The study established that since the stories presented were tacit and cultural in nature, these were considered essential ingredients for innovation. By communicating meaning and best practices, the study found that organisational stories can be applied in training and development of new employees; by reiterating past events in the organisation, stories can be employed as change management tools. In addition, stories were found to serve as motivation, especially since they communicate triumphs and survival of individuals through past trials and tribulations. Lastly, the study established that organisational stories also become the history of the organisation as they are passed on from one member to another and they perpetuate belief

systems and attitudes and become the collective memory of the organisation (Colon-Aguirre, 2015).

Wamundila and Ngulube's (2011) study found a lack of narratives as a tool for knowledge sharing at the University of Zambia. The absence of narratives as a technique for knowledge sharing showed that the university's capability to uncover implicit knowledge for organisational performance was insufficient. Chigada's (2014), doctoral study in some selected banks in South Africa, found that storytelling was not a popular tool for maintaining knowledge in the banks studied. In addition, Muchaonyerwa (2015) in a doctoral study on 'Knowledge sharing strategies in university libraries in KwaZulu-Natal province of South Africa' investigated strategies available for knowledge sharing. The findings exposed a paucity of insight and unawareness with the notion of storytelling as a knowledge sharing channel among library staff in the universities studied. It was clear from the findings that storytelling as an unofficial tool for knowledge sharing was non-existent in university libraries. Comprehension of storytelling as a mechanism for knowledge sharing in unofficial environment amongst employees in institutions investigated is quiet uncertain.

3.4.3 Mentorship

Mentoring is one of the methods used to share and retain knowledge in an organisation. Three approaches to mentoring involves an official formal mentor-protégé ´model, group mentoring or mentoring circles model and peer mentoring (Level and Mach, 2005; Darwin and Palmer, 2009). A literature review study by Level and Mach (2005) on 'Peer mentoring: One institution's approach to mentoring academic librarians' in the United States of America (USA), noted that formal mentoring is whereby a mentor who is a more knowledgeable individual gives instruction and direction to the emerging beginner. The trainer or instructor shows how a task is to be done and can improve the knowledge acquisition process. As a result, as well as being an example, the trainer acts as a guide, an instructor or teacher, and a confidante. Darwin and Palmer (2009) in their theoretical study on 'Mentoring circles in higher education' in Australia, observed that mentoring circles naturally involved one trainer overseeing a circle of trainees or circles of individuals training each other. They usually have a coordinator to sustain consultations engrossed and fruitful. The gatherings produce many diverse views, with social participants integrating strengths and encounters outside what individual participants are familiar with or provide. Social participants contribute practical

knowledge, difficulties and prospects, for initiating answers to problems while associates and superior organisational staff provide support.

Mentoring circles are reported to provide some benefits. People become part of nexus, reduction in perception of separation, better connectedness, grown belief and assurance, job advancement, knowledge acquisition, and improved knowledge of the ethos and academic explanation (Darwin and Palmer, 2009). Peer mentoring is a method in which a less experienced person is teamed up with an expert individual or circle of the equivalent position (Level and Mach, 2005). The authors observe that like formal mentoring, peer training may as well employ the prescribed face-to-face method or a more unofficial circle approach. Level and Mach (2005) claim that advocates of peer mentoring approach propose that peer training supports the sharing of information, job planning, and job associated assessment. Subordinate employees of a company also possess practical knowledge, information, abilities, knowledge and viewpoints which will be useful to colleagues. Peer relations are specifically significant in surmounting the concerns of solitude and separation that new workers to the workplace repeatedly encounter. The drawback of peer mentoring is that peer advisors may have a more confined scope of practical knowledge and unable to provide any advice founded on long years of practical experience as a more experienced coach might (Level and Mach, 2005).

Sears (2014) in her literature review study on 'Mentoring to grow library leaders' in the USA, observed that coaching is a necessary element in improving and increasing capabilities of superiors, managers, and administrators inside an organisation. Successful mentoring programmes can help improve and increase the capacity of existing workers and grow the scope of the group of aspirants for upgrading. The author provides some of the benefits that some organisations can reap by establishing prescribed mentoring programmes or supporting relaxed mentoring prospects. The gains involve an increased rate of staff maintenance and more coherent integration of new workers, support people working as advisors look at the organisation with newness and discovery concerning its purposes, governance, and philosophy. Mentoring provides employees with less practical knowledge useful assessment, intuition, and support. It also permits employees inside an organisation to contribute invaluable shrewdness and institution's knowledge from generation to generation (Sears, 2014).

A literature review study by Ross (2013), on 'Purposeful mentoring in academic libraries,' in which the researcher analysed case studies in the USA, found some interesting results. The study established that there were some gaps pertaining to factors that had to be considered before mentors and mentees had to decide upon mentoring partners. Other findings were that some organisations that had created mentoring practices, were inadvertently forming gaps between trained and non-trained workers. Other areas of concern centered on the relationships between the trainer and trainee. These comprised an absence of individual obligation and dedication by one of the participating groups and the absence of assessment and feedback during the practice. In some cases, the trainees had deliberately warded off from valuable evaluation and counsel presented by trainers. This, the author argues, could result in an atmosphere of uncertainty that could wreck the efficacy of mentoring practices and pose pronounced apprehension for organisations. Besides, elements involving social order, gender, sexual identity, and race were equally perceived as posing a great challenge to the success of mentorship programmes if left undressed. The author is of the view that such features of mentoring are absolutely imperative environmental aspects that should be made part of the deliberations about mentoring problems (Ross, 2013).

Level and Mach's (2005) study in the USA found that with top-down support, the subordinate staff concerned believed they could attend meetings and donate time to the team as an element of the normal day-to-day schedule. This entailed pairing a mentor with a developing novice, where an experienced staff was to give direction and impart knowledge and know-how to the mentee. This bred into some surprising advances such as better communication amongst all staff and the development of inter-departmental collaboration. In addition, the method provided workers at every strata the prospect of being regarded for a run of happenings that would groom them for execution of new duties, or taking up management responsibilities (Level and Mach, 2005).

Darwin and Palmer (2009) in their study of 'Mentoring circles in higher education' in Australia found that mentoring circles succeeded for employees who thought they were relaxed in a collaborative team environment. Others felt uncomfortable to exchange knowledge with co-workers who had characters, ideals and intentions different from theirs. The results signify that persons who did not have one-to-one interaction with a guide were affected in their learning and sharing. Wamundila and Ngulube (2011) investigated mentoring activities at UNZA and

found that mentorship programmes and overall knowledge management policies were not in place except that each employee was stimulated to discuss with co-workers on many matters concerning processes. This imply that there might be some informal mentorship at UNZA, although circumstances indicate a scarcity of support in confirming that working knowledge at UNZA is transmitted amongst employees.

With respect to their perspective, the SECI Model (1995), regard mentorship as a means of transferring tacit knowledge from knowledgeable to inexperienced workers, from an instructor to a learner. Subsequently, the organisation benefits should the more knowledgeable employees reach the retirement age or exit from an institution through death, retirement, dismissal or for other options. There is not much empirical proof of research conducted on mentoring as a mechanism of knowledge sharing among library staff in university libraries.

3.4.4 Communities of practice

Communities of practice (CoPs) are 'developing social collectives where persons working on related tasks organise themselves to support one another and exchange views concerning performing their tasks, leading to acquisition of skills and knowledge, and novelty in the communities' (Faraj and Wasko, 2001:3). CoPs are self-forming associations that transcend business functions, distributed teams and functional confines to join people exchange corporate knowledge. The two forms of CoPs are in person and networked or electronic groups. In person communities are place-based and their membership is according to norms. They rely on face-to face meetings to increase the likelihood of a CoP growing up among practitioners. A virtual or online CoP is a group separated by geographic location and time zone using networked technologies such as the interconnected networks or restricted communications network discussion forums or other human communication using computers to promote the sharing of knowledge (Cabrera and Cabrera, 2005). The main purpose of these CoPs is the same. They permit individuals with same pursuits to form a group with unpleasant consequences and support the group to interchange thoughts and synchronise their pursuits.

Laquinto, Ison and Faggian (2011) conducted a study of communities of practice in Australia. The case study design accomplished by the use of interviews intended to investigate the type and pattern of routines, perceptions and an establishment's setup that might influence the effective creation and stability of CoPs in a provincial administration unit in Australia. The

findings of the investigation revealed that despite the presence of six CoPs that were thoughtfully made inside by the unit, some of them struggled and were on the verge of collapse. The CoPs laboured because of vague targets, members' absence of ownership, lack of participation, lack of communication, not being involved due to unsettled differences of opinion about the nature of methods and know-how to be exchanged. The success of those CoPs that kept afloat was attributed to high rate of attendance of meetings, a strong wish amongst participants to work in partnership and exchange experiences (Laquinto, Ison and Faggian, 2011). The Social Capital Theory (SCT) (Nahapiet and Ghoshal, 1998) and the SECI Model of (Nonaka and Takeuchi, 1995), advocate for social interaction among employees in knowledge sharing. The SCT and SECI Model theorise that by forging intimate associations or stronger bonds, individuals are more contented and much more optimistic in contributing their views and means. The individuals' prospect to exchange their knowledge with colleagues is strengthened as people devote most of the time as a group. This is for the reason that, improved interface results in more regular consultation, and as consultation is more powerful since these interfaces as well lead to a collective mutual understanding (Social Capital Theory (SCT) (Nahapiet and Ghoshal, 1998; SECI Model (Nonaka and Takeuchi, 1995).

In Thailand, findings from a case study by Yamklin and Igel (2012), which examined the use of communities of practice to enhance organisational performance, revealed that in one of the companies studied, CoPs were formed as groups to interchange experiences, but lacked a distinct role in utilising that knowledge to participants' work duties, and the knowledge was not effected to better organisational achievement. Whereas, the other two cases were successful because of management involvement and support. CoP members felt motivated by receiving attention from top management since their views and proposals were examined by top executive and utilised in the institution, hence inciting other donations from the associate CoP participants.

In South Africa, a survey study by Buckley (2012) investigated the use of communities of practice in an institution of higher of learning environment and discovered that the use of CoPs as a medium of exchange of ideas and knowledge had some challenges. The empirical evidence showed unwillingness by academics to share knowledge due to inhibitors such as time constraints, and absence of encouragement or involvement from managers. A plethora of literature written about communities of practice shows that chief of it concerns knowledge

sharing within communities of practice in the corporate environment and universities at the expense of university libraries. Within the studies reviewed, there is limited pragmatic investigation on knowledge exchange within CoPs among employees in university libraries.

3.4.5 Technology

As noted in the introductory part of mechanisms for knowledge sharing, information and communication technologies (ICTs) are regarded as hard mechanisms which share largely expressed knowledge, allow knowledge to be organised and shared in university libraries (Jasimuddin and Zhang, 2009; Dewah and Mutula, 2014; Tan, 2016). ICTs are effectively used to enable and improve the organisational process of generation of knowledge, repository/access, transmission and utilisation. Some studies reviewed discussing the use of ICTs to manage knowledge in the organisation revealing a set of three general uses: classifying and communication of effective procedures, the establishment of corporate knowledge repositories, and the formation of knowledge networks (Alavi and Leidner, 2001). Some of the ICTs that allow knowledge management related activities include online data storage, collaborative networks, system of interconnected computer networks, restricted private communications network, groupware, a conference by participants at different sites, e-learning, online group discussion, online chat, and electronic mail (Tan 2016).

In a study that Mavodza and Ngulube (2011b) conducted to examine the application of technology on knowledge management in library in the United States of America (USA), found that Web 2.0 platforms such as Facebook, Twitter and Myspace were in use, but there was no evidence to indicate that they were enhancing the value of the library, or knowledge sharing. The study concluded that information technology (IT) platforms for actively participating in KM activities were underdeveloped. Connelly and Kelloway (2003) are of the view that many organisations that are attempting to upsurge knowledge sharing among their staff establish or procure a database or knowledge repository or institutional repository where workers donate their knowledge by electronic means to the organisation. Jain (2011) in her study of a literature review on 'New trends and future applications/directions of institutional repositories in academic institutions' stated that a digital repository is "managed by an organisation which collects, stores and disseminates academic publications internally and externally, facilitates quick retrieval among library staff to contribute their knowledge particularly staff who are too focussed to work physically in person on matters involving research projects". The ushering in

of knowledge exchange technology may also present a favourable noticeable sign of leadership's backing for knowledge sharing. Tan (2016), conducted a survey study on 'Enhancing knowledge sharing and research collaboration among academics: The role of knowledge management' in Malaysian research universities revealed that ICTs increased both technical and social connectivity in universities by facilitating knowledge sharing.

Jain (2011) in her literature review study revealed that institutional repositories had increasingly become an approach for unconventional dissemination of literature framework and their growth had been accomplished mostly in establishments in the advanced nations. Jain's (2011) study found that emerging nations were still backward. Some potential impediments to setting up and successfully developing institutional repositories in the less developed countries included: maintenance costs, difficulties in generating content due to low deposits blamed on paucity of established procedures and requisite specifications; lack of incentives to motivate staff to deposit their academic work; and time constraints lack of respectability publishing in institutional repositories. The study recommended that a firmer and robust support role was necessary by libraries in institutions of higher learning in the emerging countries and still the advanced institutional repositories should take on a mentoring role to advise the emerging institutional repositories.

Tan's (2016) study also found that universities did not have an ICT infrastructure that could promote knowledge management initiatives such as knowledge creation, repository/retrieval, transfer and application. The author noted that universities that engage in extensive research must determine on the best suitable knowledge management framework structures and facilities that can be offered as a policy, which is made up of digital media, computer storage, Web technologies, system software, application software, networks, and information technology applications. These findings are consistent with those of Jain (2014a) who established that although libraries have implemented few initiatives to promote knowledge management, these are hindered by insufficient budget; inadequate staff training; insufficient technology facilities and lack of knowledge management expertise among others. Nazim and Mukherjee (2013) in their study on 'Librarians' perceptions of knowledge management in developing countries: A case with Indian academic libraries', found a paucity of policies on knowledge management enforcement; absence of incentives; limited top leadership support; and an absence of knowledge sharing culture.

Similarly, a survey study by Chaputula (2012), investigated the utilisation ICTs by university students and faculties in Mzuzu University, Malawi and established some obstacles that negatively impacted learners' and faculties' utilisation and adoption of ICTs at the institution. These included meagre network infrastructure and restrained number of computers; prohibitive fee get entry; chronic energy outages; an absence of appropriate ICT talents and computer viruses. Equally, Dewah and Mutula (2014), in a literature review study, found many hurdles for managing knowledge resources in government owned- organisations in sub-Saharan Africa that include insufficient appropriate technology; absence of expertise; lack of inducements or compensations to share knowledge; and partial assurance from top leadership and management. They found that technology was correspondingly perceived as a stumbling block to knowledge sharing particularly if unfriendly to the user or not custom-made to an organization's or sections' exact requirements.

The literature reviewed shows that specific concerns regarding ICT use in knowledge sharing and its usage in university libraries have not been evidently tackled. There has been insignificant realistic investigation precisely into ICT use in knowledge production and exchange that might impact on library employees. Other issues that are openly connected to the use of ICTs in sharing knowledge are sufficiency or insufficiency of budgets; adequacy or inadequacy of staff training; availability of technology facilities or lack of it; management support or lack of it among others (Dewah and Mutula, 2014).

3.5 Factors influencing knowledge sharing

Ipe (2003) and Cabrera and Cabrera (2005) in their conceptual literature review studies in the United States of America (USA) and Spain respectively, assessed the qualitative inquiry on knowledge exchange and associated practices and identified several aspects that affect knowledge exchange within organisations. The identified factors include organisational culture, leadership and management support, organisational structure and technological factors.

Organisational culture includes individuals' perceptions about the encouragement that management team provide towards exchange of knowledge, their opinions about a progressive exchange between individuals, trust, self-efficacy and reciprocal benefits, organisational size, and the rewards system. Organisational structure includes centralisation, formalisation and decentralisation. Technological factors include the presence of online data storage,

collaborative networks, system of interconnected computer networks, restricted private communications network, groupware, video conferencing, online chat, online group discussion, portal technology, instant messaging and email that facilitate knowledge sharing.

3.5.1 Organisational Culture

Beliefs of organisational ownership of knowledge is said to be related to or reinforced by organisational culture. Jarvenpaa and Staples (2001:156) in their survey study on 'Exploring perception of organisational ownership of information and expertise' in the USA, defined corporate culture as "the common ethics and attitudes of the members of an institution". Organisational culture has in a little while been argued to impact on the exchange of knowledge in an organisation and by forming an atmosphere in which there are effective group standards concerning the significance of exchanging an individual's knowledge with colleagues (Cabrera and Cabrera, 2007). One of the ways in which culture is said to influence the practice of knowledge management is by forming standards as regards knowledge sharing. Another method where organisational ethos impacts knowledge interchange is by leadership and top management founding an atmosphere of considerate, openness and trust which cultivate and promote teamwork, networking and collaboration (Howell and Annansingh, 2013).

Syed-Ikhsan and Rowland (2004) in a survey study investigated some factors that influence the transfer of knowledge in a public organisation in Malaysia, and established an affirmative correlation between knowledge sharing culture, dissemination of knowledge implementation, and intellectual capital. The study demonstrated that a sharing culture was cardinal for organisations implementing knowledge management strategies. The study as well established that there was no noteworthy negative connection concerning self-direction and dissemination of knowledge implementation and intellectual capital. Lin (2007b) and Burke (2011) caution management to be on the lookout for people who apply intellectual wealth as their basis of influence. To this end, Syed-Ikhsan and Rowland (2004) and Burke (2011) advise that executives have to stimulate a philosophy that inspires people to exchange their knowledge, instead of hoarding it.

Kim and Lee (2006) in a survey that investigated 'The impact of organisational context and information technology on employee knowledge-sharing capabilities' in South Korean public and private organisations, established that trust was related to knowledge sharing. The

organisations studied had previously formed knowledge management systems and updated IT infrastructures which enabled researchers to use social networks as autonomous factors for clarifying staff's knowledge sharing capabilities in the organisations they studied. Kim and Lee (2006) argue that trust and openness in organisations encourage lively contribution of knowledge by staff and that dependable behaviour improves interaction tempo by way of empowering co-workers to exchange individual knowledge and concerns freely. The authors observe that reliable and unquestionable partnerships remove dishonesty, deceiving, and the propensity among workers to fault colleagues for organisational failings. High levels of trusting relationships among employees can result in better knowledge interchange, common targets, and reduced expenses during the course of doing business. Without belief, official knowledge-exchange exercises remain inadequate to inspire employees to exchange knowledge with colleagues in the same organisation. Common trust can promote knowledge interchange and can subsequently upsurge successful partnerships amidst persons in an organisation or among organisations. The connection concerning the origin and the beneficiary is expected to encourage the person's mutual support and motivation to transfer knowledge. Trust is a variable that plays an important role inside the relationship. Trust is also said to be an inducement or mediator of exchanging knowledge (Nooshinfard and Nemati- Anaraki, 2014).

Kim and Lee (2006) observed that in social networks or informal networks within the group is one other trait of organisational culture that drives employees to contribute knowledge. Methods of exchanging within groups involve consultation, interchange, and singular or interfaces in a team that support and promote practices connected to knowledge by employees. Both formal and informal relationships besides exchanges between employees are believed to be imperative for exchanging views as well as knowledge inside organisations. Even though prescribed relations or interfaces, involving instruction programmes and arranged job groups, perform a central part in enabling staff knowledge exchange, the considerable volume of knowledge is distributed in unofficial interfaces. Even with the presence of evidently assigned mediums of transmission in organisations, people have a habit of depending more on unofficial associations for exchanges. The behaviour shown by co-workers, particularly senior managers who use their occasion to donate their knowledge, plainly hint the existence of a knowledge-contribution culture. Organisational culture performs an important function in determining workers' behaviour, as well as affecting their intuitive understanding of knowledge management (Chen and Huang 2007). Whenever personal relations of a group are ill supported,

it will weaken trust and to some extent cause distrust, which will ultimately harm such relations and the prospects for learning, knowledge creation and knowledge sharing (Kim and Lee, 2006). Increased social ties, frequent communication, mutual understanding, and trust have been known to influence knowledge sharing by the Social Capital Theory (SCT) (Nahapiet and Ghoshal, 1998; Nonaka and Takeuchi, 1995).

3.5.2 Leadership and Management Support

Steyn (2004) posits that dedicated and active management, tied with strategic plans, have to exist in university libraries to enable executive management take charge of formulating guidelines, projects and plans. Limited executive encouragement hampers the effective realisation of knowledge management performance. Connelly and Kelloway's (2003) study, which investigated 'Predictors of employees' perceptions of knowledge sharing cultures' at four Canadian universities, found that opinions about top leadership and management backing for knowledge exchange is an important predictor of perceptions about an optimistic knowledge sharing culture. The study suggests further that workers are inspired to in act in agreement with leadership directions. A successful knowledge management policy is credited to commendable executive that appreciates learning from mistakes and exhibits a devotion to novelty and constant perfection. This notion is supported by Jain (2014b), who in a study of Knowledge Management practice among academic staff at the University of Botswana found that top leadership and management support can improve the success of knowledge management initiatives in an organisation. The author cautions that to develop appropriate capabilities and a conducive environment, organisational leaders need to play active role in knowledge management by translating the organisation's vision and mission into a knowledge management vision and mission, and helping people realise that knowledge management is a behaviour not a project and maintaining employees' morale.

Tan's (2016) survey of five Malaysian universities, found that top management encouraged and provided finances that enabled faculty members to share their knowledge at symposiums. Executive encouragement in institutions of higher learning also take account of communicating messages that knowledge sharing is necessary to an establishment's operation, for instance contribution in relation to monetary backing and other monies for structures and facilities and for drastically growing its know-how base.

The above findings are consistent with a theoretical study by Wang and Noe (2010), who investigated 'Knowledge sharing: A review and directions for future research' in the USA and found that leadership encouragement affect both the extent and worth of contributing knowledge. The authors established that with authoritarian style of management, organisational leaders give their employees no chance to participate in the decision-making process; therefore, people are less likely to share knowledge. In contrast, they argue that democratic style of management will enable employees to have their voice heard and inspire them to interchange knowledge with co-workers inside the organisation.

Empirical evidence shows that encouragement from leadership and senior executives plays a key part in making certain the successful implementation of knowledge management initiatives in institutions of higher learning, as reviewed in the above literature. However, findings by Jain (2014b) revealed that there was not a strong knowledge management leadership at the university, with no clear directions defined for knowledge management. Additionally, there was no visible leadership and commitment of top management, which provided inadequate budget for knowledge management initiatives. These are indicators that the top management did not seem to appreciate and give adequate support to knowledge management. Effective leadership can certainly improve the success of knowledge management initiatives in an organisation. The lack of leadership and management interest was attributed to many other areas requiring attention. Similarly, the author found that knowledge sharing up to now is not regarded as a priority as previous studies had revealed that there has been limited executive bother and dedication concerning knowledge management activities, as indicated in the insignificant urgency placed on the advancement and growth of knowledge management policies in institutions of higher learning.

3.5.3 Organisational Structure

Organisational structure is defined as the system posts are designed in the organisation and how employees are meant to execute their effort according to the guidelines, processes and conventions of the organisation (Syed-Ikhsan and Rowland, 2004). Willem and Buelens, 2009:152) defined structure as "the totality of the methods where it apportions its work into different tasks and then accomplishes organisation amidst them". Coordination has been defined as "the process of informing each as to the planned behaviour of others" (Willem and Buelens, 2009:152). Willem and Buelens (2009), in their empirical study on 'Knowledge

sharing in inter-unit cooperative episodes: The impact of organisational structure dimensions' in Belgium, found that organisational structure affects the social interaction among organisational members. Two dimensions of structure most studied are centralisation and decentralisation. Centralisation denotes the extent to the authority to make strategic decisions is vested at the highest echelons of an institution. This type of structure is too formalised and emphasises on guidelines and procedures, and authority arrangements which may act as a hindrance to the formation of knowledge exchange groups in organisations. Such a structure produces a non-participatory atmosphere that decreases consultation, dedication, and participation with responsibilities and assignments amongst organisational members, lessens the prospect for personal development and progression, and inhibits creative answers to concerns (Chen and Huang, 2007). Syed-Ikhsan and Rowland (2004) in their study in Malaysia did not establish a meaningful connection between knowledge transfer/sharing and organisational configuration within the government owned organisations they studied. However, the authors observed that knowledge exchange flourishes with configurations that promote simplicity of flow of ideas with less barriers between departments. Hence, a decentralised or horizontal organisational structure encourages collaboration, coordination of teams, mutual adjustments, networking and integration roles in an organisation and, thereby, allows flexible coordination during task execution and leads to increased knowledge sharing.

Al-Alawi, Al-Marzooqi and Mohammed (2007) used a mixed method to investigate 'Organisational culture and knowledge sharing: Critical success factors' of public and private sector organisations in Bahrain. The study found that out of the 231 employees that were surveyed 53% indicated that the structures were decentralised, flexible and allowed them to participate in decision making processes, only 22% disagreed and 25% were neutral. The study further established that the system allowed for face-to-face communication with their colleagues and free flow of information throughout organisational levels. Al-Alawi, Al-Marzooqi and Mohammed (2007) caution that despite the important role of communication between colleagues, excessive interaction may cause some staff to waste time socialising with others instead of completing their tasks, which can sometimes harm professionalism and ethics.

In studies conducted in the USA, Cabrera and Cabrera (2005) in using social capital theory, found that the individuals' prospect to exchange their knowledge with associates grows when people spend some period of time with each other. This is because, improved interface results

in further regular consultation, and since consultation is more powerful since these interfaces likewise effect common mutual understanding. Amayah's (2012) survey design which used quantitative method, investigated some factors that influence knowledge sharing in public sector organisations in the United States of America. The study established that the rigid environment of several government organisations where free exchange of knowledge between some units does not exist, is not favourable to the exchange of knowledge as well as across-the-board organisational assets ingenuities. Recognising elements that promote exchange of knowledge may possibly facilitate experts develop a knowledge exchange philosophy that is required to promote the exchange of knowledge and knowledge management in the government owned organisations (Amayah, 2012). Leadership in government owned organisations could facilitate the establishment of informal groups to enhance the sharing of knowledge.

These findings are echoed by those done in Europe by Nonaka, Krogh and Voelpel (2006) who reviewed the organisation knowledge creation theory's central elements and how it is being applied in the academia. The study established that a decentralised structure was more superior to a centralised and formalised structure as an organisational form for knowledge creation and sharing among organisational members. Empirical evidence shows that having a limited formalised institutional configuration may promote the exchange of knowledge by; establishing a work setting that supports interrelationships among staff by using an open workspace; use of fluid occupation classifications, job interchange; promoting interdepartmental interactions and unofficial gatherings. Such a structure is also influenced by an establishments', procedures and plans of honours and inducements, which dictate the mediums where knowledge can be retrieved and the way it circulates (Kim and Lee, 2006; Nonaka and Takeuchi, 1995).

Senaji and Nyaboga (2011) using an empirical review of literature to study 'Knowledge management process capability' in Kenya, suggests that organisations that disperse decision-making are likely to be flexible, more visionary and are more proficient to deal with complicated atmospheres compared to organisations that practice centralised decision-making and coordination. Jain (2014b) established that organisational structure was not appropriate for the execution of successful knowledge management initiatives at the University of Botswana. Muchaonyerwa (2015) in her doctoral study in which she investigated the flexibility of library's

configuration to promote knowledge sharing, ascertained that the libraries mirrored the universities' configurations, which is extremely rigid and hierarchical, and hence not appropriate for knowledge exchange. Such structures slow the processes, usually utilise a lot of time for knowledge to flow to every level, and raise constraints on information flow.

From the studies reviewed, a lot of attention on the effect of the configuration of institutions on exchange of knowledge initiatives has been placed on the business corporate world at the expense of libraries. The studies provide a mixture of findings. Whereas in the USA, Europe, and Asia, the studies have established organisational structures which are mostly favourable for knowledge management initiatives in African firms, the structures are more centralised, thus hampering knowledge management initiatives. The reasons for African firms favouring a centralised structure are not known. Hence the present study addresses this gap, by examining strategies that might enhance organisational operations, knowledge generation and exchange amongst library employees in university libraries.

3.6 Attitude of librarians toward knowledge sharing

Gagné (2009) is of the view that knowledge sharing is an intentional behaviour and as such it can be studied using the Theory of Reasoned Action (TRA) in which intents are expected to encapsulate the driving features that encourage behaviour. The author identifies trio of features that encourage intents: (1) attitude towards the behaviour, (2) common benchmark concerning the behaviour, and (3) convictions about an individuals' restraint about the behaviour. Attitude is the extent to which an individual appraises the behaviour favourably or unfavourably. Subject benchmark is the identified collective demand to carry out or not carry out the behaviour. Restraint convictions are associated with possessing the required abilities, capitals, and prospects to take part in a behaviour. TRA is regarded as being helpful in anticipating a variety of actions, and is broadly applied to envisage and illuminate behavioural intents and real behaviour in social science (Lin, 2007a). This study followed the belief-attitude-intention correlation which integrates the function of both external stimulus such as anticipated establishments' honours and mutual incentives and inherent stimulus such as knowledge self-efficacy, and pleasure in supporting partner associates and stimuli in clarifying workers knowledge exchange intents.

The key factor that is recognised for behaviour connected to work and which is the major reason for knowledge sharing is motivation. The general constructs of intrinsic and external motivation to share within the intentions and attitudes category, influence knowledge exchange activities. These two general categories of motivation, external and innate have been explained as well as tested over varied settings and investigations. External motivation concentrates on the target-directed purposes like incentives or advantages received once employees engross in knowledge exchange, while innate motivation suggests the joy and innate gratification caused by such a pursuit. Jointly, external and inherent motivation inspire personal intents to participate in interchange of knowledge as well as their actual knowledge exchange behaviour (Hau et *al*., (2013). Employees' externally generated stimulus to exchange knowledge is a feeling that is usually grounded on employees' perceptions of the worth of relationship in regard to the exchange of knowledge (Kankanhalli, Tan, and Wei, 2005). Workers participate in knowledge sharing built around a worthwhile consideration, associating the compensations (value) anticipated regarding an interchange using the exertion (efforts) concerned in that exchange. If the identified remunerations match or surpass the efforts then the interchange activity will endure, if not it will halt. The fundamental goals of externally generated stimulus are to obtain organisational incentives or creating obligations for colleagues to reciprocate.

Institutional incentives can vary from financial or tangible inducements in the form pay increases, windfalls or promotion to verbal rewards which refers to positive feedback that employees expect because of engaging in knowledge sharing behaviour. The source of verbal feedback has been distinguished as colleagues and superiors. Lin, Wu and Lu (2012) used a survey design on a study entitled 'Exploring the affect factors of knowledge sharing behaviour: The relations model theory perspective', in Taiwanese companies. Wasko and Faraj (2005) also note that reciprocity constitutes the conviction of personnel that contributing their knowledge accord them the advantage of imminent support from partner associates. Such a relationship is grounded on the premise that when the extent of effort interdependence is more demanding, the more apparent it reinforces the relationships in which individuals consider that to be part of a team in which each person is at the same level and where it is naturally envisaged to exchange their thoughts and ideas. According to Lin, Wu and Lu (2012) such an impression of mutual benefit results in the involvement of interchange behaviours inside and amongst teams and to a greater extent leads to communally cooperative affiliations produced as a result of such dependence. The authors further note that in such a relationship, knowledge bearers

need those demanding knowledge provide equivalent support in exchange at some point whenever needed. Under such an agreement, the individual who possesses knowledge will be more agreeable to put in their energies and exploits in interchange of their knowledge. That is why reciprocity has been regarded to be among the progressive tenets of knowledge sharing, suggesting that if workers appreciated knowledge sharing in a good way, the behaviour of interchanging will then be conformed to more regularly (Lin, Wu and Lu, 2012).

From an inherent motivational viewpoint, conduct is induced by the necessity of personnel to perceive proficiency and freedom in transacting with their situation. Confidence is termed to be judgement of an individual's skills to organise or fulfil method of work to attain optimal results (Bandura, 1986). Competence may assist to inspire staff to exchange experiences with co-workers (Wasko and Faraj, 2005). Knowledge Competence is normally exhibited in individuals trusting that their knowledge can assist to unravel job-associated challenges and enhance job effectiveness. The expectations of individuals of the efficacy of their intellectual capital and conviction that by contributing their knowledge can, contribute to organisational performance, and make relations better with partner associates, have been disclosed to be associated to favourable attitudes toward and intentions regarding knowledge sharing (Ryan and Deci, 2000). Wang and Noe (2010) and Nooshinfard and Nemati-Anaraki (2014) also note that individual characteristics such as expertise influence individuals to share useful knowledge with others. This suggests that a belief of the capability and self-assurance of staff perhaps is a necessity for staff to participate in contribution of knowledge. Wasko and Faraj (2005) and Chang and Chuang (2011) argue that employees that are high in intrinsic motivation orientation such as sense of achievement, respect and recognition are more likely to contribute their knowledge to partner associates since participating in knowledge management activities and resolving difficult situations is exciting or pleasurable and for the reason that they appreciate in assisting other persons.

Factors connected to attitude have been verified and flaunted to be major predictors of behavioural intents in TRA, this relationship has received mixed results. In relation to the preceding point, in the USA, Witherspoon and others (2013), analysed 46 studies spanning North America, Asia and Europe, to investigate antecedents of knowledge exchange purposes and activities of people in organisations. The study found that knowledge sharing intention had the largest influence on knowledge sharing behaviour, and that attitude concerning knowledge

exchange had the greatest impact on knowledge exchange intentions. This positive relationship was influenced by individuals' expectation to have their salaries raised, and promoted, and creating a good image. However, the study found that projected communal interchange did not shape knowledge sharing behaviour. This was attributed to the manifestation of impressions causes, whereby a person imagines he or she may gain by pretending disposition to reciprocity, although not contributing knowledge.

In the United Kingdom (UK), Fullwood, Rowley and Delbridge (2013), conducted a survey study that examined the attitudes of and intents regarding knowledge exchange of scholars. The findings were that academics had undoubted optimism attitude regarding knowledge exchange, thus, signifying that the positive attitudes transformed into robust affirmative intents regarding knowledge exchange. This was attributed to the belief that by engaging in knowledge exchange, academics would promote and spread their interactions with co-workers and that they were willing to be considered for inward elevation and exterior engagements. Similarly, Todorova and Mills (2014) conducted a study on 'The impact of rewards on knowledge sharing' which used a survey design to investigate the impact of different types of rewards on attitude towards knowledge sharing knowledge workers of across- discipline organisations in New Zealand. The study found a positive correlation of employees' attitude concerning the exchange of knowledge and employees' intent to interchange knowledge. A positive connection was also established of employees' self-efficacy and attitude toward the exchange of knowledge. However, the study found that financial incentives did not influence employees' attitude to contribute their knowledge. Pertaining to the function of reaction to an action as an oral social recognition, the findings demonstrated that constructive reactions from co-workers besides superiors inspires people to contribute knowledge. Still, the study found that verbal rewards did not directly influence employees' attitude to exchange knowledge. Similarly, the study found that supervisors' reaction to an action did not have an affirmative immediate influence on attitude though there was substantial effect over status.

Bock *et al.* (2005), conducted a survey using the TRA framework on 'Behavioral intention formation in knowledge sharing: Examining the roles of extrinsic motivators, social-psychological forces, and organisational climate' of some firms in South Korea to test the knowledge sharing model. The study established a connection between attitudes concerning knowledge exchange and people's intent to interchange knowledge. But, the study did not

support the hypothesis that the better the expected external incentives prevail, the more favourable the attitude regarding the exchange of knowledge will be. Bock and Kim (2002), in a related survey on 'Breaking the myths of rewards: An exploratory study of attitudes about knowledge sharing' in South Korea provided some probable reasons for the negative connection concerning incentives and interchange of knowledge. First, inducements have a negative consequence as they are manipulative like direct sanction. Also, not obtaining an inducement that an individual had anticipated to get is just as good as being sanctioned. Secondly, rewards break off relationships. For each person who wins, there are many others who feel they have missed. When worker strive against an inadequate number of inducements, they will very probably start viewing one another other as competitors to their individual accomplishment. Finally, rewards like punishment may compromise inherent enthusiasm. The more they feel being moderated, the more they are likely to fail in the activities they are performing. The larger the incentives they are offered, the more negatively they view the activity for which the bonus was received (Bock and Kim, 2005).

Lin's (2007a) survey study of the 50 firms in Taiwan, found that workers' outlook regarding knowledge exchange have a progressive influence on knowledge behaviour exchange intents. The study also provides some indication that an individual's knowledge competence, and gratification in supporting others positively impact on staff attitude towards exchange of knowledge, and that knowledge competence, and gratification in supporting others positively influence knowledge contribution intents. However, the research established that organisational financial incentives were not critically correlated to workers attitude or intents regarding knowledge exchange. Possible reason provided by Lin (2007a) is that more than 67% of the participants were managers who may not have valued organisational incentives. Rather, these respondents may have been inspired by other purposes such as the conviction that reassuring staff to share knowledge with co-workers was a requirement. Other conceivable explanations provided by Lin (2007a), are that knowledge interchange takes place largely in unofficial interfaces, and due to the problem of quantifying knowledge exchange behaviours, it is problematic to effect organisational inducements conditional on knowledge exchange behaviours. The author also suggests that external incentives flourish merely in getting short-term conformity. Finally, the author acknowledges that with inherently driven workers, the creation and transmission of implied knowledge is more significant than with externally driven workers (like those driven by financial reward).

A quantitative survey study by Bello and Oyekunle (2014), on 'Attitude, perceptions and motivation towards knowledge sharing: views from universities in Kwara state, Nigeria', found that attitude towards knowledge is connected to the intent to exchange knowledge. This positive correlation was attributed to the belief that by sharing their knowledge, it would ensue in well-versed development, improved executions in their job, and would lead to gaining new knowledge and knowledge creation. The study also found that staff were innately driven to exchange their knowledge because they believed that it could lead to achievement and success, they enjoyed helping others, and solving colleagues' work related problems. A similar study by Olatokun and Nwafor (2012) on the 'Effects of extrinsic and intrinsic motivation on knowledge sharing intentions of civil servants in Ebonyi State, Nigeria', provided some interesting outcomes. The statistical investigation discovered no substantial connection between workers' attitudes and knowledge exchange intents. These results are contradictory with the TRA which holds that attitudes predict intentions. The findings likewise disagree with studies by Fullwood, Rowley and Delbridge, (2013); Witherspoon *et al*. (2013); Bello and Oyekunle (2014) and Todorova and Mills (2014) who taken together concur that attitude impacts knowledge exchange intents. The author's plausible explanation for the phenomena is that employees' different cultures and perceptions, and the uniqueness of the organisation affected the outcomes of the studies. The study moreover established that anticipated institutional incentives did not considerably effect workers attitudes and intents regarding knowledge exchange as the correlation results revealed unrelated associations between the variables. In an instance of Olatokun and Nwafor's (2012) study, the possible explanation provided for this negative correlation is that the government departments were the study population from where the respondents have negligible inducements by the employers for knowledge exchange, and that employees were driven by different intentions such as the trust that knowledge exchange with co-workers would produce improved organisational performance.

The study established that worker attitudes and intention to exchange knowledge were related with their inherent drive to exchange knowledge. This suggests that the expertise and self-assurance of workers may be a condition for workers to participate in knowledge exchanges. Buckley (2012), in her study in South Africa, established that rewarding academics for knowledge creation can be controversial, since academics in universities are supposed to be

creators of knowledge. She posits that there is no conclusive evidence that rewarding academics is critically correlated to knowledge exchange and as such there is no point in rewarding academics in any form. However, she encourages the use of incentives such as recognition; duty or need; a good frame of reference; a sense of give and take (quid pro quo); feedback mechanisms for letting knowledge sharers know their knowledge is being used; and the pleasure of helping someone attain their goals.

In her study, Jain (2014b) ascertained that constant budget decline impacted on everything including an absence of reward system, and lack of incentives. Lack of incentives was found to be a critical issue and challenge among staff that she investigated. The author claims that incentives are good drivers to knowledge management acceptance and fostering organisational trust among librarians. It is for the same reason that organisations require to set in place suitable inducements to inspire library employees for knowledge exchange. Muchaonyerwa (2015) in a survey that she examined attitude and opinions of library employees regarding knowledge exchange in South Africa uncovered that respondents had an affirmative outlook regarding knowledge sharing. This positivity was credited to the fact that sharing knowledge with co-workers was viewed as being good and wise. Studies reviewed have shown mixed results towards rewards as to whether they are good promoters to embrace knowledge management and building organisational trust among library. Most of the studies, did not show any connections between obtaining rewards and an encouraging outlook regarding knowledge management.

From the written works studied it is apparent that there is a dearth of literature from Malawian perspective which suggests a research problem on the attitude of librarians towards knowledge sharing, and organisational reward and recognition for knowledge sharing in university libraries. Little is known about how university libraries in Malawi reward and recognise their staff for contributing knowledge. This research study expects to address the research problem by investigating the attitude of librarians towards knowledge sharing in university libraries in Malawi.

3.7 Summary of the Literature Review

This chapter analysed empirical and theoretical works relating to many viewpoints of knowledge management. The main tenets discussed in this chapter were the creation and

acquisition of knowledge; the rationale for knowledge creation and sharing by university libraries; mechanisms and infrastructure used for knowledge sharing in university libraries; factors influencing knowledge sharing in University libraries; and the attitude of librarians towards knowledge sharing in university libraries in Malawi.

Review of the related literature on knowledge creation and acquisition suggests global representation of studies in the USA and Japan (Nonaka, Toyama and Konno, 2000; Bhatt, 2001; Argawal and Islam, 2015; Agarwal and Islam, 2015); New Zealand (Joe, Yoong and Patel, 2013); Switzerland and Germany (Nonaka, Krogh and Voelpel, 2006); UK and Ghana (Boateng, Dzandu and Tang, 2014); South Africa (Maponya, 2004; Martins and Martins, 2011; Dewah and Mutula, 2014); Zimbabwe (Nyaude and Dewah, 2014); Botswana (Jain, 2014b); Malawi (Mpofu, 2011); Zambia (Wamundila and Ngulube, 2011).

The literature on knowledge sharing revealed that institutions needed intellectual capital in addition to appropriate tactics which facilitate the acquisition, maintenance, depositing of intellectual assets in institutional repository and sharing it to leverage organisational competitive advantage. However, the literature reviewed indicates limited studies on knowledge creation and acquisition in the context of Malawian universities and that many organisations in Africa, universities inclusive, face knowledge management implementation challenges due to lack of the knowledge management policies and strategies. However, this limitation of literature has been assuaged in the present study through research question 1 namely, what types of knowledge is generated or acquired by university libraries in Malawi?

Literature was reviewed on the rationale for knowledge creation and sharing. The literature includes: India (Dasgupta and Gupta, 2009); China (Huang and Li, 2009); Japan (Nonaka and Takeuchi, 1995; Islam, Agarwal and Ikeda, 2015); USA (Garvin, Edmondson and Gino, 2008; Jantz, 2012); The UK and Italy (Schiuma, Carlucci and Lerro, 2012); Australia (Renner *et al*., 2014; Wells, 2014); South Africa (du Plessis, 2007; Steyn, 2011); Botswana (Jain and Mutula, 2008; Jain, 2014a). Some of the benefits of knowledge management implementation included improved service delivery; creation of a knowledge culture; optimal use of organisational knowledge assets; creation of a climate conducive to knowledge sharing; and development of learning organisations through innovative knowledge management strategies. The literature reviewed showed a meagreness of related works from Malawi which suggests a gap in the

literature on the rationale for conception and interchange of knowledge in university libraries. This gap in the literature is addressed by research question 2 of the present study, namely, what is the rationale for knowledge creation and sharing by university libraries in Malawi?

Literature on mechanisms and technological infrastructure used for knowledge sharing covered global and African environment and they include: Australia (Darwin and Palmer, 2009; Laquinto, Ison and Faggian, 2011); USA and UK (Jasimuddin and Zhang, 2009); USA (Alavi and Leidner, 2001; Mavodza and Ngulube, 2011b; Swap *et al*., 2001; Level and Mach, 2005; Cabrera and Cabrera, 2007; Chennamaneni and Teng, 2011; Ross, 2013; Sears, 2014; Colon-Aguirre, 2015); UK (Nahapiet and Ghoshal, 1998); Jamaica and Canada (Jarvenpaa and Staples, 2001); Japan (Nonaka and Takeuchi, 1995); Sri Lanka (Wijetunge, 2012); Malaysia (Azudin, Ismail and Taherali, 2009; Tan, 2016); Thailand (Yamklin and Igel, 2012; Bahrain (A-Alawi, Al-Marzooqi and Mohammed, 2007); Nigeria (Abbas, 2015); Botswana (Mutula and Mooko, 2008; Jain, 2014a); South Africa (Buckley, 2012; Chigada, 2014; Muchaonyerwa, 2015; Dewah and Mutula, 2014); Zambia (Wamundila and Ngulube, 2011); and Malawi (Chaputula, 2012). The literature reviewed showed that capacity building through mentorship programmes, storytelling, and through CoPs is not taking place which results in organisations struggling to fill up some openings left by staff who leave the service through attrition. Successful implementation of knowledge management practices banks on the strategies that some organisations have fashioned for encouraging and enhancing knowledge sharing. The literature reviewed also showed a lack of comprehension and appreciation with the utilisation of informal mechanisms for knowledge sharing. University libraries in Africa have not been able to adopt informal mechanisms such as mentoring programmes, storytelling, and CoPs. Neither have they embraced ICT based tools such as online data storage, collaborative networks, system of interconnected computer networks, restricted private communications network, groupware, instant messaging, and e-mail which library staff can use to share ideas, knowledge and collaborate informally. The reviews indicate the paucity of literature in Malawi which this study intends to address through research question 3, what mechanisms, and infrastructure are used for knowledge sharing in university libraries in Malawi?

Factors such as organisational culture of social relation ties, trust, open communication, leadership and management support and organisational structure were identified as influencing knowledge sharing among staff in some organisations surveyed. Literature on factors

influencing knowledge sharing include: USA (Ipe, 2003; Cabrera and Cabrera, 2007; Wang and Noe, 2010; Amayah, 2012); Canada (Connelly and Kelloway, 2003); UK (Howell and Annansingh, 2013); Belgium (Willem and Buelens, 2009); Switzerland and Germany (Nonaka, Krogh and Voelpel, 2006); Jamaica and Canada (Jarvenpaa and Staples, 2001); Japan (Nonaka, 1994; Nonaka and Takeuchi,1995); South Korea (Kim and Lee, 2006); Malaysia (Syed-Ikhsan and Rowland, 2004; Tan, 2016); Taiwan (Chen and Huang, 2007); Iran (Nooshinfard and Nemati- Anaraki, 2008); Bahrain (A-Alawi, Al-Marzooqi and Mohammed, 2007); Botswana (Jain, 2014b); Kenya (Senaji and Nyaboga, 2011) and South Africa (Muchaonyerwa, 2015). The literature reviewed exposed a lack of literature on issues influencing knowledge exchange in university libraries of Malawi. The current research intends to address the gap through research question 4 namely, what are the factors influencing knowledge sharing in University libraries in Malawi?

Literature on attitude of librarians towards knowledge sharing intentions covered studies from: USA (Ryan and Deci, 2000; Wasko and Faraj, 2005; Wang and Noe, 2010; Witherspoon *et al.*, 2013); UK (Fullwood, Rowley and Delbridge, 2013); Canada (Gagné, 2009); Taiwan (Lin, 2007a,b; Chang and Chuang, 2011; Lin, Wu and Lu, 2012); New Zealand (Todorova and Mills, 2014); South Korea (Bock *et al.*, 2005; Bock and Kim, 2005), Singapore (Kankanhalli, Tan and Wei, 2005); Iran (Nooshinfard and Nemati-Anaraki, 2014); Nigeria (Olatokun and Nwafor, 2012; Bello and Oyekunle, 2014); Botswana (Jain, 2014b); and South Africa (Buckley, 2012; Muchaonyerwa, 2015). Most studies indicated a positive attitude of employees towards knowledge sharing intentions as it enhanced employees' social relations with colleagues and that it resulted in staff's proficiencies, and superior execution in their job, led to discovering new knowledge and knowledge creation. However, the studies reviewed indicated a negative correlation between knowledge sharing and rewards. Participants were of the opinion that knowledge exchange should not be rewarded since, they were inherently inspired to exchange their knowledge as they believed that it could lead to achievement and success, enjoyed helping others, and solving colleagues' work related problems. The literature reviewed indicated that there is a dearth of literature on attitude of employees towards knowledge sharing in university libraries in Africa. The study fills the gap in literature through research question 5: what is the attitude of librarians towards knowledge sharing in university libraries in Malawi?

This study intended to comprehend the knowledge sharing strategies in university libraries of Malawi by probing strategies that promote knowledge sharing, and consequently suggested a policy framework that advocates for knowledge sharing. The next chapter discusses methodology applied in carrying out the study. The paradigms, research design, selection procedure and approaches of gathering and analysing data.

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CHAPTER FOUR

RESEARCH METHODOLOGY

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4.1 Introduction

The term methodology encompasses two nouns: method and ology, which entails an aspect of knowledge; therefore, methodology is a field of knowledge that involves the common professed rule of conduct or proposition of the creation of new knowledge. It relates to the logic and the framework for understanding theories that motivate any predictable, societal or human life study, whether connected or not. States in simple language, methodology makes reference to how each of reasoning, realism, beliefs and what regards as knowledge inform research (McGregor and Murnane, 2010).

Research is underpinned by various philosophical beliefs or schools of thoughts. These philosophical beliefs or schools of thoughts are referred differently in literature. Whereas, Creswell (2014) refers to them as world views, Berg (2008), and Williams and Morrow (2009, prefer to call them paradigms. Thus, Berg (2008:828) defines a paradigm as "essentially a worldview, a whole set of ideas, rules or beliefs, ethics, and procedures in the context that research is conducted." Some of the research paradigms include interpretivism, positivism, post-positivism and pragmatic paradigms among others (Creswell, 2014). These paradigms provide the ontological and epistemological stance of a study for any chosen methodology that a researcher decides to employ in doing social research, be it qualitative, quantitative or mixed method. This section provides methodological justification for the study. It provides an insight into how this study was carried out, including the specific procedures followed in obtaining, organising, and analysing data (Mouton, 2001; Polit and Hungler, 2004).

The purpose of the study was to examine the strategies of knowledge sharing in university libraries of Malawi. The objectives of the research were to: (1) Determine knowledge sharing strategies used in university libraries in Malawi; (2) Investigate factors affecting knowledge

sharing in university libraries in Malawi and (3) Propose a theoretical model for knowledge exchange in university libraries in Malawi.

The following research questions were addressed: (1) What types of knowledge is generated or acquired by university libraries in Malawi?; (2) What is the rationale for knowledge creation and sharing by university libraries in Malawi?; (3) What mechanisms and infrastructure are used for knowledge sharing in university libraries in Malawi?; (4) What are the factors influencing knowledge sharing in University libraries in Malawi?; (5) What is the attitude of librarians towards knowledge sharing in university libraries in Malawi?; (6) What framework is needed for effective knowledge sharing in University libraries in Malawi?

This chapter is organised into the following thematic subdivisions: research paradigm, research methods, research plan, population of study, sampling techniques, data gathering techniques, data analysis tactics, validity and reliability of data gathering tools, ethical concerns and a summary.

4.2 Research Paradigm

The current research is informed by the pragmatic paradigm; other paradigms such as interpretivism and positivism paradigms are also discussed to put the research problem into context.

A paradigm or worldview is an overall theoretical orientation about the humankind and the characteristics of investigation that an investigator brings to a study. They develop based on subject foci, scholars' consultants'/mentors' preferences, and previous research involvements. The type of attitudes possessed by particular researchers based on these factors will usually direct to adopting a qualitative, quantitative, or mixed methods approach in their research (Creswell, 2014). The quantitative thinking comes from an empiricist tradition while, qualitative research is also known as the social constructivism in which individuals seek understanding of the world in which they live in (Creswell, 2014).

4.2.1 Interpretivism paradigm

Interpretivism paradigm also known as social constructivist, hold the view that social realism is communally built and that the objective of social researchers is to comprehend what

interpretations people give to realism, not to control how realism works apart from those understandings (Schutt, 2006; Creswell, 2009; Hesse-Biber, 2010. Put differently, advocates of interpretivism proclaim that to illuminate physical and emotional behaviour that human beings engage in, social scientists require to comprehend the significance and analyses that people ascribe to events in the universe of discourse (Creswell, 2014). This viewpoint rebuffs the positivist notion that there is a tangible, object existence that scientific approaches help us to comprehend. Research conducted by social scientists cannot progress by merely utilising the procedures that are employed in the branch of knowledge that deals with the physical world. The ontological standpoint of the interpretivists is that scientists construct an image of realism based on their own viewpoints and biases and their collaborations with others; while the epistemological standpoint is that there is no definite subject-object split in knowledge building. Individuals are the experts. The rationale of social investigation is to develop an appreciation of the purposes and reasons that support social research (Hesse-Biber, 2011). In other words, research is conceived to investigate the motives, insights and practices of social actors. Interpretivism is predominantly connected with qualitative methods (in-depth interviews, observation studies, and so on) that place a great importance on credibility (Schutt, 2006; Creswell, 2009; Hesse-Biber, 2010). Since interpretivism paradigm is qualitative research-based, it is unsuitable for this study which has used pragmatism paradigm, which advocates for mixed methods of qualitative and quantitative methods for data gathering (see section 4.2.4).

4.2.2 Positivism paradigm

Creswell (2007) asserts that a positivist method is the conventional quantitative method to social and educational investigation, whose investigation approaches largely belong to several possible alternatives concerning natural phenomena; which is quantitative method, or empirical investigation, that regards realism as an existing construct. From a nature of reality viewpoint, the scientific evidence method holds the view that realism is neutral, distinct as it does not rely on the views of individuals. From an epistemological view, the rationale of qualitative and quantitative research is to ascertain the methodical regulations of the social order (causal relationships) which are achieved by investigating research assumptions.

So, no individual can claim domination of knowledge; rather researchers are regarded as the experts (Creswell, 2007; Hesse-Biber, 2010. The scientific evidence method is founded on

utilisation of the logical procedure applied in the branch of knowledge that deals with the natural phenomena and it is connected predominantly with scientific approaches (surveys, experiments and so on). Quantitative methods employ numerical descriptions of patterns, views and beliefs of a well-define collection of individuals or objects by the study of a data sample of that statistical population. Researchers then generalise claims of the said population from sample results (Bryman, 2001). Due to its reliance on quantitative approach, positivist paradigm was considered unsuitable for this study. Rather, for this research investigation to realise its targets, a mixed paradigm was considered appropriate for use in the study (See section 4.2.4).

4.2.3 Postpositivism paradigm

The postpositivist theories have epitomised the common method of enquiry, and these theories are more applicable in quantitative research than qualitative research (Creswell, 2014). Sometimes it is called the scientific method, or doing a scientific investigation, and evidence based research. It is also known as postpositivism as it characterises the movement after the concept that only scientific knowledge is the true knowledge of the world, this was in response to the common concept of the complete accuracy of facts. Postpositivist posits that social reality can be discovered by identifying and assessing the factors that affect results that are found in experimentations. It is as well reductionist for the reason that its intention is to condense the concepts into a small, distinct objects to investigate, such as the factors that make up assumptions and research questions. Proponents of postpositivist point out that the knowledge that breeds within a postpositivist lens is built on cautious examination, and evaluation of object realism that exist in the universe. They argue further that establishing numeric distribution measure of observations and examining the way individuals behave turns out to be predominant for a postpositivist scientists. The protagonists also narrate that there is a body of rules or beliefs that regulate the world, and these need to be tried or proved and perfected so that we can appreciate humanity (Creswell, 2014). Just like the positivism paradigm in the preceding section, postpositivist was not considered suitable in the present study because of its reliance on quantitative approach.

4.2.3 Pragmatism paradigm

Pragmatic world view emerges out of deeds, circumstances, and outcomes instead of preceding circumstances as is the case in scientific method (Creswell, 2014). Pragmatism ontology

supports mixed methods epistemology and converges concentration on the condition to be improved using diverse methods to develop understandings about the condition. Denscombe (2008) adds that pragmatism reinforces the use of both qualitative and quantitative methods and differentiates the method from entirely quantitative methods that are grounded on a thinking of (post) positivism as well as from absolutely qualitative methods that are founded on a philosophy of interpretivism or constructivism. To this end, Creswell (2014), in support of Denscombe's (2008) viewpoint about pragmatism's non-commitment to neither of the two logic of ideas and realisms (positivism and interpretivism), elaborates that pragmatism relates to mixed methods approaches in the sense that the researcher draws from both theories, quantitative and qualitative, when they conduct their studies. Researchers have an opportunity and autonomy to select the approaches, methods, and processes of research that is good enough for their requirements and intentions. Creswell (2014) says that in mixed methods a social researcher gathers or combines quantitative and qualitative data to allow for a complete examination of the research problem.

In this design, the social researcher normally gathers both types of research data at almost the same period and then incorporates the information in the analysis of the whole outcomes. Inconsistencies or contrasting results are illuminated or further queried in this design. Pragmatist researchers also determine an intention for their integration, a basis for the justifications why quantitative and qualitative research data necessitates to be merged at the outset. In the same vein, proponents of pragmatic view concur that research consistently takes place in social, historical, political and other perspectives. For social researcher using the mixed methods, pragmatism provides an opportunity to use various methods, diverse world views, and diverse theories, as well as several kinds of gathering data and analysis. Since pragmatic approach encompasses mixed methods for data collection, the approach was considered suitable for the current study. This enabled the collection of both sets of data, qualitative and quantitative, from the population of professional and paraprofessional librarians, and university registrars in the four public university libraries to provide answers on issues such as types of knowledge generated or created, rationale for knowledge creation and sharing, mechanisms and infrastructure for exchange of knowledge, factors that are affecting exchange of knowledge, and attitude of librarians concerning exchange of knowledge.

The collection of both sets of data qualitative and quantitative, in the present study, was accomplished using a questionnaire, interviews, observation and document analysis. This mixed method flouts the principle of the use of interpretivism and positivism paradigms single-handedly in a study, hence their unsuitability for the present study.

4.3 Research methods

Three different approaches to research approaches that have been advanced by research scholars Creswell (2009), Ngulube, Mokwatlo and Ndandwe (2009) and Onwuegbuzie and Leech (2006). These are quantitative, qualitative and mixed methods. The choice of a philosophical underpinning will determine the research approach or method to be employed in a particular study. Positivist paradigm is the conventional quantitative method to social and educational investigation, whose research approaches largely belong to several possible alternatives concerning natural phenomena; which is quantitative method. On the other hand, interpretivism is predominantly connected with qualitative methods (in-depth interviews, observation studies, and so on) that place a great importance on credibility (Schutt, 2006; Creswell, 2009; Hesse-Biber, 2010). Lastly pragmatism ontology supports mixed methods epistemology and converges diverse methods (both qualitative and quantitative methods) to develop understandings about the condition.

The present study adopted the mixed methods approach where the quantitative and qualitative aspect were intergrated within it. The quantitative approach was used to allow for quantification of the variables under study, while the qualitative data was used to collect the opinions and general perspectives of the respondents on knowledge sharing in university libraries in Malawi. The section that follows justifies the use of on mixed methods approach.

4.3.1 Mixed methods research (MMR)

Descombe (2008) and Hesse-Biber (2010) assert that social scientists that utilise mixed methods make use of a research strategy which utilises both quantitative and qualitative data to provide answers to an inquiry or set of inquiries. The blending of approaches encompasses the gathering, analysis, and combination of quantitative and qualitative data in a particular study or iterative design to cater for a thorough analysis of the research (Hesse-Biber, 2011; Creswell, 2014). In this design, the researcher normally gathers both kinds of data roughly concurrently and then incorporates the information in the explanation of the general results.

Inconsistencies or dissimilar results are clarified or further investigated in this design. Creswell (2009) emphasises that both quantitative and qualitative procedures can be applied developmentally as the first helps inform the second, while the second can provide additional information to support the first. Meanwhile, Ngulube, Mokwatlo and Ndandwe (2009) argue that the utilisation of MMR provides a possibility of bridging the ontological, epistemological, axiological, rhetorical and methodological divides between qualitative and quantitative paradigms. The qualitative or quantitative approach may be inadequate to investigate in full the complex issues facing researchers. The assumption, according to the preceding authors is that mixing or integrating methods can add insights and understanding that might be missed when a single-method (qualitative or quantitative) strategy is used. Using MMR provides researchers with the possibility of addressing issues from a large number of perspectives. That in turn may enrich and enhance the research findings. In other words, besides producing better research, mixed methods might also help heal professional rifts between qualitative oriented researchers and quantitative study proponents.

Creswell (2014) identified four major strategies used in MMR studies: convergent parallel strategy; explanatory sequential strategy; exploratory sequential strategy; and transformative strategy. On their part, Creswell and Clark (2011) identified six MMR strategies, namely: convergent parallel strategy; explanatory sequential strategy; exploratory sequential strategy; embedded strategy; transformative strategy and multiphase strategy. This study adopted the convergent parallel strategy which typically involves collecting quantitative and qualitative data concurrently, though the qualitative data is embedded within the quantitative data. According to Creswell (2014) the purpose of a convergent parallel strategy is to merge the two databases to show how the data converge or diverge.

The five major rationales of using MMR suggested by Creswell and Clark (2011), Ngulube (2012), Ngulube, Mokwatlo and Ndandwe (2009), and Onwuegbuzie and Leech (2006) are triangulation; complementarity; development; initiation; and expansion. According to Babbie (2004), triangulation seeks convergence and corroboration of findings through the use of more than one method of gathering and analysing data about the same phenomenon in order to eliminate the inherent biases associated with only using one method. Onwuegbuzie and Leech (2006) argue that complementarity seeks elaboration, enhancement, illustration, and clarification of the results from one method with the results from the other method;

development seeks to use the results from one method to help develop of inform the other method. Ngulube, Mokwatlo and Ndandwe (2009) observe that initiation seeks contradictions and new perspectives of frameworks in order to find out why such inconsistencies and paradoxes exist, while expansion aims at extending the breadth and range of inquiry by using different methods for different inquiry components (Creswell and Clark, 2011; Ngulube 2012; Ngulube, Mokwatlo and Ndandwe, 2009; and Onwuegbuzie and Leech, 2006).

The present study used MMR for the following reasons: the first reason is to seek convergence and collaboration of findings through the use of multiple data collection tools and data analysis about knowledge sharing strategies in university libraries thereby elimination the inherent biases associated with using only a mono- method. The second reason is that MMR allowed the researcher to gain a deeper and broader perspective by using the mixed methods as opposed to using one predominant method only. The third reason was to enable the results from one method to be enhanced by the results from another method. In this scenario, quantitative data from senior and assistant librarians and paraprofessional library staffs (chief library assistants, senior library assistants, library assistants, library attendants) were in some instances enhanced by qualitative data from professional librarian (university and college librarians). Quantitative methods were used to collect statistical data from senior and assistant librarians and from paraprofessional library staffs (chief library assistants, senior library assistants, library assistants and library attendants (see Appendices 2 and 3). The qualitative methods were used to collect data from university and college librarians that pertained to strategies for staffs' capacity building, policy for knowledge sharing, incentives to encourage staff to share knowledge, and leadership and top management support provided to encourage staff to share knowledge and also through observations and document review (see Appendices 1, 4 and 6). The strong point with the mixed method approach lies in its ability to allow the researcher to gather two types of data concurrently hence, providing the advantages of both the qualitative and quantitative data. The researcher therefore, gained different perspectives from the different types of data and from the different levels within the study.

By simultaneously collecting quantitative and qualitative data, merging the data, and using the findings to appreciate the research problem, the study achieved triangulation. The basic justification for this design was for one data gathering form provides strength to compensate the flaws of the other form (Creswell, 2008). In the triangulation strategy, an investigator

gathers the mixed data, examines both datasets independently, assesses the outcomes from the analysis of both datasets, and comes up with an explanation as to whether the results support or contradict each other. The study adopted triangulated designs as used by Darwin and Palmer (2009), Wang and Noe (2010), Wamundila and Ngulube (2011), Wijetunge, (2012), and Wells (2014), to gather quantitative and qualitative data simultaneously, combine the data and use the findings to appreciate the research problem.

4.4 Research design

A research design, according to Henn, Weinstein and Foard (2009), essentially refers to the plan or strategy of shaping the research. It specifies how the data will be collected and analysed. The research designs in use include: experimental, surveys, phenomenology, case study, and ethnographies, convergent, explanatory sequential, exploratory sequential, transformative, embedded, or multiphase Creswell (2014). The present study integrated case study and survey research designs in examining knowledge sharing strategies in university libraries of Malawi. The element of investigation in the case study might be several incidents (a multisite study) or a distinct case (a within-site study) (Creswell, 2013; Yin, 2014). Specifically, the present study used a multisite study. The use of multiple research design is in accordance with pragmatism paradigm which advocates for the use of mixed methods in gathering of data and interpretation of data. According to Creswell (2013), case study is a qualitative design where the social researcher scrutinises a real-life, contemporary confined case or multiple confined cases gradually, using exhaustive, in-depth gathering of data concerning several origins of information: for instance, observations, interviews, audio visual materials, and documents and reports. Thomas (2011) adds that the in-depth examination from several sources could be about the complication and rareness of a research, plan, organisation, programme or system in a real-life context. It is enquiry based, complete of various methods and is evidence led. The principal drive of a case study is to produce in-depth understanding of a particular subject (as in the proposal), project, plan, organisation or system to produce knowledge and /or inform policy formulation, specialised practice and public or communal action (Thomas, 2011).

As already stated, the element of investigation in the case study might be several incidents (a multisite study) or a distinct case (a within-site study) (Creswell, 2013; Yin, 2014). The present study used a multisite study at the four institutions as follows: Mzuzu University located in Mzuzu City in the Northern Malawi; Lilongwe University of Agriculture and Natural

Resources (LUANAR) located in the outskirts of City of Lilongwe in Central Malawi; Malawi University of Science and Technology located in Thyolo district, Southern Malawi; and four constituent colleges of the University of Malawi namely: Kamuzu College of Nursing (KCN) located within the City of Lilongwe in Central Malawi, The Polytechnic College located within the City of Blantyre in Southern Malawi, and College of Medicine (COM) located within the City of Blantyre in Southern Malawi. The case study design was used to get a deeper understanding of issues surround knowledge sharing from university and college librarians.

Though these cases were studied as discrete units, it was anticipated that outcomes drawn from each of these cases would provide a basis for comparison with the other cases because they were generally similar in that they are funded by the government, and also have comparable administrative structures. Since the study used a mixed methods, a survey design within the case study was adopted. It was, therefore, hoped that results drawn from this study could be similar in certain aspects.

Yin (2014) points out that the chief advantage of case study design is that, it concentrates on one case or a small number of cases from which a large amount of detailed information can be collected from each case using multiple methods and data sources (as discussed elsewhere in this section). The choice of a case study was largely informed by the need to develop a rich narrative and reveal knowledge management practices based on an in-depth, real time and retrospective analysis which is made possible by a case study.

However, the main drawback of relying on a case study only is its inability to generalise from case findings. Yin (2014) proclaims that case studies are applied to theoretical propositions and not to populations or universes. In other words, the goal of a case study is to develop and apply theories, analytical generalisations and not statistical application (Yin, 2014).

To overcome the shortcomings of a case study, the current study integrated it with a survey design. The rationale for using the survey within the case study was to collect standardised data from senior and assistant librarians, and paraprofessional library staffs (chief library assistants, senior library assistants, library assistants and library attendants within the four universities. The key element of a survey research is standardisation, which includes the gathering of data from a representative sub-set using a standardised questionnaire in which same questions are

asked to all respondents (Muijs, 2012; Creswell, 2009; Schutt, 2006). Babbie (2004) adds that surveys are predominantly applied in researches that have human beings as the units of investigation. Though this technique can be utillised for more elements of investigation, for example teams or collaborations, people must function as participants. Babbie (2004) lauds survey enquiry as undoubtedly the best technique obtainable to the social science investigator who is concerned in gathering primary data for giving a detailed account of a population too large to scrutinise directly using a carefully constructed standardised questionnaire. Surveys are outstanding means for assessing opinions and perceptions in a large population. Survey investigation offers a quantitative explanation of tendencies, feelings, or thoughts of a populace by investigating a representative sub-set of that populace with an intention of inferring from a sample to a population (Creswell, 2014).

The survey inquiry strategy is very attractive when sample generalisability is a principal inquiry purpose. Generally, it is the only techniques existing for creating a characteristic feature of the attitude and attributes of a large populace. Surveys likewise are the best methods when many subjects are a key interest, because they permit a variety of physical and social environments and smaller groups to be tried. The stability of affiliations can then be studied throughout the different subcategories (Schutt, 2006). Advantages of using a survey research is that they are versatile in that they enrich our appreciation of problems that influence individuals within a society since they cover a range of topics. It also allows the collection of large quantities of data from large populations that are in different geographical zones.

Surveys are also attractive as they allow the gathering of data from several individuals at reasonably low expense, and subject to the quantitative strategy, somewhat speedily (Schutt, 2006). Hence, in this present study, a survey design was used to enable the gathering of pragmatic data using questionnaires from the respondents gotten in four public university libraries in Malawi which are dispersed along three provinces of: the Northern province, Central province and Southern province. The application of the survey design was cost effective and appropriate for collecting data for the study. Survey design has been used in similar studies by (Abbas, 2016; Dewah and Mutula, 2016; Muchaonyerwa, 2015; Tan, 2016; Colon-Aguirre, 2015; Islam, Agarwal and Ikeda, 2015; Jain, 2014a; 2014b; Wamundila and Ngulube, 2011; Chen and Huang, 2007; Lin, 2007).

4.5 Population of study

There are four public universities in Malawi. They include the University of Malawi (UNIMA), Lilongwe University of Agriculture and Natural Resources (LUANAR), Mzuzu University (MZUNI) and Malawi University of Science and technology (MUST). These institutions are approved, regulated, funded, and accredited by government agencies (National Council for Higher Education Website, 2016) and they were all surveyed. The set of units comprised all library employees (professional and paraprofessional) with a qualification in Library and Information Science (LIS). The set of units were selected from throughout the library sections which include special services collection, readers' services, acquisitions, technical services (cataloguing and classification), and library management. In this study, a professional librarian (University and College Librarians, Senior Assistant Librarians, Assistant Librarians) is described as an employee of a library trained in LIS with a higher qualification such as a Bachelors' degree, postgraduate diploma, Honours, Masters or Doctorate (Boone, 2003, cited in Muchaonyerwa, 2015:86). Paraprofessional library staffs (chief library assistants, senior library assistants, library assistants to library attendants) refer to library workers with an inferior qualification such as a certificate or diploma in LIS who assist the senior librarians in their work (Oberg, 1992, cited in Muchaonyerwa, 2015:86).

The study also targeted university and college registrars so that some factors influencing the exchange of knowledge and attitudes of librarians concerning the exchange of knowledge which could be difficult to discern were captured from independent respondents. The relative population of the universities is provided in Table 4.1.

Table 4.1: Relative Distribution of Population

	Category of Population	

Institution	ULs	CLs	SALs	ALs	CLAs	SLAs	LAs	LAs 1	URs/ CRs	Total
UNIMA		5	4	10	17	9	59	8	4	116
MZUNI	1		1	3		4	8		1	18
LUANAR	1			2	3	14	5		1	26
MUST	1						6		1	8
Total	3	5	8	12	20	27	78	8	7	168

(**Source: Data provided by University and College Librarians, 2016 and Institutional websites, 2016**)

Note: ULs denotes university librarians; CLs denotes college librarians; SALs denotes senior assistant librarians; AL denotes assistant librarians; CLAs denotes chief library assistants; SLA denotes senior library assistants; LAs denotes library assistants; LAs1 denotes library attendants, URs denote university registrars and CRs denote college registrars.

4.6 Sampling procedures

Two major categories of sampling namely probability and non-probability sampling are used in mixed method research. Probability sampling involves determining the likelihoods each member in the list of those within the populace must be incorporated in the representative sub-set (sample). It provides each unit of the populace an identical possibility of being picked for the representative sub-set. Non-probability sampling is whereby the social scientist has no means of defining the likelihoods of selection to the representative sub-set of a unit in the populace (Cohen, Manion and Morrison, 2003:153; Neuman, 2000:195-196). A census of the entire university library staff population was reached for study. Israel (2012) states that a census is attractive for small populations of 200 or less. Israel (2012) points out that there is no point in sampling and the whole population should be selected to provide data on all the individuals in the population. The total population of all library staff with a LIS qualification was 161, less than 200 and the researcher considered it appropriate to conduct a census as suggested by Israel (2012). Staff lists provided by university and college librarians were used as the sampling frame spot and select the respondents.

The professional and paraprofessional library employees were selected seeing that the investigator intended to target every library employee with a LIS qualification. Professional librarians were chosen for the reason that as managers of their respective libraries, they are responsible for capturing and obtaining new knowledge. Paraprofessional library staffs help professional librarians with library tasks. Questioning library leadership was inspired by the fact that management and leadership has been cited in literature as being responsible for creating an environment for knowledge sharing. By interviewing this category of staff, the researcher unearthed their responsibilities and level of support in knowledge sharing. The study also targeted university and college registrars who provided an independent opinion on some factors influencing knowledge sharing and attitudes of librarians towards knowledge sharing which could have been difficult to discern, directly from the library personnel.

4.7 Data collection techniques

The research employed survey questionnaires, interviews, observation and document analysis to gather data from the four universities. Data gathered by each mode is explained in subdivisions 4.7.1 to 4.7.4.

4.7.1 Survey Questionnaire

A questionnaire contains a set of interrogations for proffering to several people to collect data and are largely classified as flexible or unstructured questionnaires and closed-ended or structured questionnaires (Onyango, 2002; Babbie, 2004). The strength of using a self-administered questionnaire is that, it permits free responses from participants, it provides for a great depth of responses and that responses are anticipated to be anonymous and confidential. In the case of closed-ended or structured questionnaires, the participant is requested to pick a response from the list presented by the social scientist. Closed-ended or structured questionnaires are very prevalent in research involving human subjects as they afford a superior homogeneity of answers and are more clearly dealt with compared to open- ended ones (Babbie, 2004). The questionnaire developed largely contained closed-ended questions with an allowance of open-ended questions (Onyango, 2002). The major drawbacks of a self-administered questionnaire are that the would-be respondents may be unwilling to answer, thereby resulting in low response rate. In cases where respondents are not competent enough to answer the questionnaire, it may result in biases, inaccuracies and incompleteness (Babbie, 2004). In this research, the units of the investigation comprised professional librarians,

paraprofessional librarians and university and college registrars who are all competent in terms of reading and writing, because they possess LIS qualifications to different ranges and administrative qualifications for the university registrars.

A self-administered questionnaire comprising largely closed-ended and to some extent open - ended questions, was handed out to professional librarians (senior assistant librarians, assistant librarians, see Appendix 2); paraprofessional librarians (chief library assistants, senior library assistants, library assistants and library attendants, see Appendix 3) and to university and college registrars (see Appendix 4).

The questionnaire was organised into sections A-F. Section A of the questionnaire contained characteristics of the respondents such as the name of the university, department/section, rank, number of years served in the current position, gender, age, and the highest level of education attained. Section B included questions on the types of knowledge generated or acquired by university libraries in Malawi. Section C had questions on rationale for knowledge creation and sharing in university libraries in Malawi. Section D contained questions on mechanisms and infrastructure for knowledge exchange. Section E covered questions on factors influencing knowledge sharing. Section E contained questions on attitude of librarians towards knowledge sharing. Section F had questions on challenges of knowledge sharing.

A matrix question format was designed in which several questions asked the same had set of answers. The format was employed to examine variables in the questionnaire involving knowledge exchange strategies. The format or technique, permits respondents to choose an option that best shows their level of concurrence with a provided statement. The self-administered questionnaire was organised on a feedback order of agree, disagree and neutral, (Babbie, 2004). There were three to five statements beneath each question, with one question having 12 statements, which addressed attitude towards knowledge sharing. The respondents were expected to indicate their answers from 1 to 5 beside each statement. In other parts, the participants were requested to indicate or pick the most suitable statements relevant to their environment.

Other sections of the questionnaire had open- ended questions, where participants provided their own thoughts. In terms of reliability, the survey questionnaire items used for this study

were adapted from previously related studies whose Cronbach's alpha co-efficient values ranged from 0.777 to 0.926, showing strong consistency of variables examining knowledge sharing. These studies include those of Tan (2016), Islam, Agarwal and Ikeda (2015), Ramayah, Yeap and Ignatius (2013) and Chen and Huang (2007).

4.7.2 Interview schedule

Authors such as Coleman (2012), Creswell (2013) and Yin (2014) tend to agree that interviews are one of the most important sources of qualitative data. An interview involves the social researcher posing a number of questions to the target population either by phoning or in a face to face situation. The interviewees are probed and responses are audio or tape recorded by the interviewer (Force, 1997). Cohen, Manion and Morrison (2003) note that standardised open-ended interviews are used in which the particular phrasing and arranging questions are decided in beforehand if a researcher requires interviewees to be probed the same simple questions in a similar sequence.

The standardised interview schedule with uniform questions (See Appendix 1) was employed in the current research study to collect data from the university and college librarians to gain an insight of knowledge exchange strategies and challenges in university libraries of Malawi. Specifically, oral interrogations were effected for illuminating queries which interviewees did not comprehend. University and college librarians were selected because, as leaders of their respective libraries, they have the experience and knowledge about the operations of their organisations. As such, they offered an insight of their organisational climate for knowledge sharing. Seven interviews were conducted with three university librarians and four college librarians. The questions mirrored those administered in the survey questionnaire, however answers were not given, permitting respondents to express their views and expound on the matter as they saw appropriate; centre on specific features of the questions asked and to relate to their own experiences. In addition, the interview allowed for prospects of soliciting identical evidence in a number of techniques at several times during the face-to face interaction, thus verifying the correctness of the answers (Onyango, 2002). The interviewer also intervened to seek clarifications or further explanation, but not to give directives.

4.7.3. Observation

The study also employed observation to collect qualitative data. According to Caldwell and Atwal (2005), observation is an extremely esteemed and powerful investigation method. It permits investigators to enrich their grasp of various facets of social interactions in an organisation. Observation can be blended with other investigative approaches and is a technique that permits investigators to examine what people do, as against to what they think they do. Observation investigation requires researchers to be able to see, document, explain, and assess information (Caldwell and Atwal, 2005). Two major types of observation in use are participant and non-participant observation. Whereas, participant observation includes the procedure of absorbing oneself into the natural situation of the population from which the observer is not too dissimilar or from which the observer may already be a part of. The observation is conducted either secretly (where the researcher's identity as an investigator is kept secret) or openly (where the population is told that the observer is studying the members). The main purpose of participant observation is to have an appreciation of the many happenings and know-hows of those being observed in their natural environment (Berg, 2008:829). On the other spectrum of observation, is non-participant observation, in which the goal of the investigator's intention is not recognised by the team members, even if the team members are aware about the investigator's showing up (Onyango, 2002). A recognised investigator deliberately does not take part in any of the normal goings-on of the population being investigated, maintaining rather a sort of observant and professionally detached part and association with the population during observations. The researcher remains detached (Berg, 2008:829). The present study used a structured, non-participant observation to obtain the entire social background where employees operate, by detailing the environment in which they perform their duties (Mulhall, 2003).

Aspects that were observed include the layout of the organisational structure, availability of communication tools such as notice boards, discussion rooms, computers, internet and intranet, and fixed phone, a schedule of training programmes (workshops, seminars, and conferences) placed on notice boards. An observation checklist (see Appendix 5) was used to supplement the findings obtained through questionnaires and interviews.

4.7.4 Document analysis

The study also used document review to support evidence from other sources. This is a logical practice for studying or assessing official records in print and electronic format (Bowen, 2009:27). Just as comparable to other systematic approaches in qualitative research, document

analysis requires that data be scrutinised and clarified to obtain sense, gain discernment and produce realistic knowledge. Documents that may be applied for logical assessment as segment of a research take an array of types. They consist of announcements; plans, attendance tools, and written records of formal discussions; instructions; books and leaflets and fliers; calendars and periodicals; planned series of events (such as printed outlines); mails and communications; drawings and diagrammes; newspapers; a company's account of events; media releases; survey data; and several public information (Bowen, 2009. In this study, assessing institutional documents was part of the qualitative information that was gathered on knowledge sharing in the university libraries surveyed. Documents that were reviewed include library handbooks, library reports, and databases of information, policies, procedure manuals, mission statements, annual reports and memoranda to uncover issues surrounding policies on knowledge sharing. A document review checklist is attached as Appendix 6. Document review is usually applied jointly with other qualitative research approaches as a method of corroborating the evidence gathered using a variety of techniques. The qualitative researcher is expected to draw upon multiple (at least two) sources of evidence; that is, to seek convergence and corroboration with different data sources and methods. Aside from document analysis, this study has also used other data sources including interviews, and observation (Yin, 2014). Table 4.2 below maps research questions to sources of data, respondents and data analysis strategy.

Table 4.2: Mapping research questions to sources of data, respondents and data analysis strategy.

Research question	Respondents	Data sources	Data analysis strategy
What types of knowledge is generated or acquired by university libraries in Malawi?	University and college librarians	Appendix1: Interview schedule for University and college librarians Appendix:5 Observation schedule	Thematic analysis
	Senior assistant librarians and assistant librarians, chief library assistants, Senior library assistants, library assistants and library attendants	Appendix 2: Survey questionnaire for senior assistant and assistant librarians Appendix 3: Survey questionnaire for chief library assistants, senior library assistants, library assistants and library attendants Appendix 5: Observation schedule	SPSS and thematic
What is the rationale for knowledge creation and sharing by university libraries in Malawi?	University and college librarians,	Appendix 1: Interview schedule for University and college librarians Appendix 5: Observation schedule Appendix 6: Document analysis	Thematic analysis
	Senior assistant librarians and assistant librarians, chief library assistants, Senior library assistants, library assistants and library attendants	Appendix 2: Survey questionnaire for senior assistant and assistant librarians Appendix 3: Survey questionnaire for chief library assistants, senior library assistants, library assistants and library attendants Appendix 5:Observation schedule Appendix 6: Document analysis	SPSS and thematic analysis
What mechanisms and infrastructure are used for knowledge sharing in university libraries in Malawi?	University and college librarians	Appendix 1: Interview schedule for University and college librarians Appendix 5: Observation schedule Appendix 6: Document analysis	Thematic analysis
	Senior assistant librarians and assistant librarians, chief	Appendix 2: Survey questionnaire for senior assistant and assistant librarians	SPSS and thematic analysis

Research question	Respondents	Data sources	Data analysis strategy
	library assistants, Senior library assistants, library assistants and library attendants	Appendix 3: Survey questionnaire for chief library assistants, senior library assistants, library assistants and library attendants Appendix 5: Observation schedule Appendix 6: Document analysis	
What are the factors influencing knowledge sharing in University libraries in Malawi?	University and college librarians	Appendix 1: Interview schedule for University and college librarians Appendix 5: Observation schedule	Thematic analysis
	Senior assistant librarians and assistant librarians, chief library assistants, Senior library assistants, library assistants, library attendants and university and college registrars.	Appendix 2: Survey questionnaire for senior assistant and assistant librarians Appendix 3: Survey questionnaire for chief library assistants, senior library assistants, library assistants and library attendants Appendix 4: Survey questionnaire for university and college registrars Appendix 5: Observation schedule	SPSS and thematic analysis
What is the attitude of librarians towards knowledge sharing in University libraries in Malawi?	University and college librarians	Appendix 1: Interview schedule for University and college librarians Appendix 5: Observation schedule	Thematic analysis

Research question	Respondents	Data sources	Data analysis strategy
	Senior assistant librarians and assistant librarians, chief library assistants, Senior library assistants, library assistants, library attendants and university and college registrars.	Appendix 2: Survey questionnaire for senior assistant and assistant librarians Appendix 3: Survey questionnaire for chief library assistants, senior library assistants, library assistants and library attendants Appendix 4: Survey questionnaire for university and college registrars Appendix 5: Observation schedule	SPSS and thematic analysis
What framework is needed for effective knowledge sharing in University libraries in Malawi?		Literature review, Theoretical framework and Research findings	

4.8 Data collection procedures

This section present an account of how the researcher prepared for and undertook the data collection. Before the beginning of data collection, the researcher prepared research tools to be used in the gathering of data including the questionnaire for senior and assistant librarians and paraprossionals library staff, interview schedules for university and college librarians, an observation schedule and document review schedule. The research tools were subjected to a scrutiny of peers, academics, and researchers. The idea of such a scrutiny was that the diverse perspectives offered by peers, colleagues and academics, allowed the researcher to refine the tools. Yin (2011) and Creswell (2014) recommend that an instrument should be subjected to criticism, support or refinement by a diverse group of people such as a participant in one's qualitative research, peers, academics and researchers. Once the gatekeepers' letters and ethical clearance were granted, the researcher phoned and emailed the heads of libraries, university and college registrars to book an appointment for data collection. The respective university and college librarians and university and college registrars provided the dates when they and their staff would be available for the researcher's distribution of the questionnaires, interviews, observation and document review. During the data collection exercise, the researcher identified some influential individuals at each institution to help with the distribution and collection of

questionnaires. Concurrent mixed methods procedure was used in this study which means that both quantitative and qualitative data were collected at the same time (Creswell, 2009). During the interviews, all discussions were audio recorded in addition to the researcher taking down some notes as backup to the audio recording. No discussions were videotaped during the interviews despite the consent letter seeking audio and video consent (see Appendix 7). The data collected was integrated in the interpretation of the overall results.

4.9 Data analysis strategies

The use of mixed methods in the current study inferred that the researcher ended up with both qualitative and quantitative data after field work which needed to be analysed. Specifically, the use mixes methods were used to achieve completeness, corroboration, compensation and diversity. The data collected was organised, labelled, and analysed quantitatively and qualitatively. For this study, two approaches namely quantitative and qualitative complemented each other to generate different kinds of knowledge and allow for the comparison of data. The limitations of one approach was covered by the strengths of the other and the other way around.

4.9.1 Quantitative data

The analysis of numeric data was achieved by using International Business Machines Corporation (IBM) Statistical Package for Social Science (SPSS) version 20.0 to generate descriptive and inferential statistics. Descriptive statistics were used to obtain percentages and frequencies. Pie and bar charts were used to complement the descriptive statistics and results that were obtained. The frequency and Cross-tabulation was carried out to generate a Chi-Square test regarding the differences and relationships that exist between the four universities knowledge sharing activities.

4.9.2 Qualitative data

Qualitative data that was collected using interviews, observation and document reviews was analysed thematically. This was done to derive significances conveyed by way of statements in addition to the application of theories. According to Creswell and Clark (2011) this entails transforming the data, distributing the transcript into small parts such as sentences, expressions or passages, allotting identities to each part, then categorising the codes into patterns.

4.10 Validity and reliability

Neuman (2007) points out the two above terms are fundamental concerns in each computation. They all involve how actual computations are linked to concepts. Validity and reliability are prominent since concepts in frameworks of empirical evidence are usually unclear, scattered, as well as not exactly noticeable. Every scientific researcher wants their computations to be consistent and accurate. The two concepts are significant in determining the correctness, trustworthiness, or authenticity of outcomes. Both terms also have several connotations. At this point, they denote to connected, anticipated features of computations. Thus, Neuman (2007:115) proclaims, "reliability means trustworthiness or regularity. This indicates that if a test is done several ways under same or very like circumstances, the test should give same results. The reverse of reliability is a computation that produces irregular, ambiguous, or unpredictable outcomes". Validity on the other hand, implies "truthfulness and stands for the fit concerning a concept, or the method an investigator creates an idea in a theoretical explanation, and a computation. It points to how clearly a theory about realism "matches" with definite realism. The lack of validity happens given that there is a discrepancy between the concepts an investigator applies to illustrate, conceive, or examine the universe of discourse and anything that happens in the universe of discourse".

4.10.1 Qualitative data

To address validity and reliability of the instruments such as trustworthiness, authenticity, and credibility of the research, the following were adhered to; the research triangulated interviews, observation, and document analysis and survey questionnaire for data collection. This strategy enabled the researcher to counter check the truthfulness of one group of participants' responses to the questions posed in the different data collection tools. Neuman (2007) and Creswell (2014) advise researchers to triangulate various data instruments of information by probing proof about the origins also applying it to shape a logical basis for patterns. If patterns are determined founded on congregating multiple origins of data or viewpoints from respondents, in that case this method can be asserted in view of augmenting to the authenticity of the research.

The researcher spent prolonged periods at each institution under study during the data collection exercise to familiarise himself with the culture of participating institutions and gain a deeper insight into the organisation. Creswell (2014) advises that by spending lengthy period

in the field, the investigator establishes a comprehensive comprehension of the experience under study and gets full information about the place and the individuals that lend integrity to the description of events. The more involvement that an investigator has with respondents in their settings; the more likely it is that the findings will be accurate and valid.

Noble qualitative inquiry encompasses remarks by some investigators regarding the way their explanation of the results is moulded by their characteristics, such as their gender- specific, philosophical, historical, and socioeconomic origins. The researcher maintained a professional approach during data collection by not absorbing himself into organisational politics. Creswell (2014) emphasises that, clarifying the biases that the researcher carries to the research by way of self-reflection, makes an open and truthful account that resonates well with readers.

To achieve trustworthiness and credibility of the research study, the researcher documented qualitative research procedure by keeping an audit trail for the study, in the form of a research journal to determine the reliability of the study. Authors such as Yin (2011) and Creswell (2014) suggest that qualitative researchers need to do their qualitative research methodically. By being methodical, Yin (2011) states that it entails documenting the procedures of the case studies. The preceding authors note that by documenting as many phases of the processes as possible, and by developing a comprehensive case study procedure and database, the researcher is being transparent in that it allows other people to review, follow the procedures and try to understand them (Yin, 2011; Creswell, 2014).

The interview guide was subjected to a scrutiny of peers, academics, and researchers. The idea of such a scrutiny was that the diverse perspectives offered by peers, colleagues and academics, allowed the researcher to refine the interview guide. Yin (2011) and Creswell (2014) recommend that an instrument should be subjected to criticism, support or refinement by a diverse group of people such as a participant in one's qualitative research, peers, academics, researchers and feedback from seminars and conferences.

The study also adhered to an explicit set of evidence. Since the goal of the qualitative research was to have participants describe their own decision- making processes, the evidence consisted of participants' actual language as well as the context in which the language was expressed. In these situations, participants' words are viewed as self-reports about their behaviour. The language is valued as the representation of reality. The words cannot be literally accepted but

require further corroboration, for instance, to determine whether the behavior occurred (Yin, 2011).

4.10.2 Quantitative data

Regarding reliability in quantitative investigation, Golafshani (2003) terms reliability as the degree to which findings are constant as time passes and a precise demonstration of the total population being examined. Represented in this excerpt is the notion of replicability or repeatability of findings or observations. Golafshani (2003) identifies three varieties of reliability discussed in quantitative study: (i) extent a computation, performed frequently, stays the same way (ii) consistency regarding computation repeatability; as well as (iii) resemblance of computations during a particular period of time. A factor analysis was run in order to assess the consistency and truthfulness of the questionnaire. It was also conducted to isolate latent concepts or elements that illuminate the connections amongst a number of units. Usually, they are used to summarise or reduce many items to fewer units known as factors. The purpose of the factor analysis in this study was to group or organise some items (organisational structure and climate, and attitudes for knowledge sharing) into smaller set of factors. In addition, Cronbach's alpha (a coefficient of reliability or consistency) was also used to measure how good a group of variables measures a particular unidimensional latent concept. As per Tavakol and Dennick's (2011) assertion, Cronbach's alpha runs a computation concerning the inner constancy of a gauge; it is stated as a digit ranging from 0 to 1. A score value of between 0.7 and 1.0 denotes the reliability of the data, and a low alpha is considered the opposite. The degree in which each of the elements in an investigation compute the similar idea or hypothesis and therefore linked to the connectedness of the elements in the investigation is called internal consistency. Table 4.3 show the summary of the reliability test of the items in the questionnaire used in the study. Items used in this study had Cronbach values closer to 0.7 or higher. This research demonstrated high levels of internal consistency of items in the questionnaires measuring knowledge sharing.

Also, research instruments, from related studies which exceed the required starting point of 0.70 for Cronbach alpha values were adopted for the study (see section 4.7.1).

Table 4.3 Reliability analysis

Items	Cronbach's Alpha scale

Communication	0.701
Storytelling	0.744
Factors affecting KS	0.770
Attitude of librarians	0.689
Organisational culture	0.890
Innovation	0.774

Source: Field data 2017

4.11 Ethical Considerations

Ethics is defined as a "a number of honest values proposed by a person or society, consequently generally assented, and which provides guidelines and goals for behaviour regarding the proper practice concerning human experimentation by establishments, promoters, social researchers, and scholars" (Strydom, 2005:57). According to the preceding author, ethical regulations perform as benchmarks, and a groundwork upon which each investigator must assess one's own behaviour. As such, this is an aspect which should be borne in mind continuously. Ethical principles should thus be assimilated in the individuality of the investigator to a level that morally driven making of decisions develops into one's complete research habit (Strydom, 2005).

Ethical issues were adhered to in this study. Authorisation to carry out research at the universities where the study was conducted was sought from the respective university registrars. The researcher was granted institutional gate keepers' letters permitting him to conduct research at the four universities. By being granted the institutional gatekeepers' letters, and by seeking clearance from the ethical clearance committee, the researcher adhered to and complied with the University of KwaZulu-Natal ethical policy (See Appendix 12: University of KwaZulu-Natal Ethical Clearance Approval Letter). Anonymity and confidentiality of respondents was ensured during data collection and reporting the results as advised by Babbie (2004). This was done by informing the respondents that partaking was discretionary and that they were at liberty to pull out from the research if they so wish without any sanctions. The

researcher also clarified the essence of the study to the participants to illuminate and put them at ease that the researcher was going to handle information in a confidential and anonymous manner, and to develop their trust. The respondents were also assured that their identity and the data gathered were going to be treated with extreme care and application for no other intention than scholarly.

Ethical compliance was also accomplished by using a standardised informed consent statement of the University of KwaZulu-Natal which was attached to the questionnaire and required the respondents to read, understand and sign before answering the questionnaire. All conceivable or sufficient information on the purpose of the study, the protocols adhered to in the course of the study, as well as the behaviour of the investigator was displayed to the would-be respondents. Similarly, in the course of the interview, the interviewer made it a point that participants' assent was gotten before the taping took place. This was in consonant with Strydom's (2005) writing, who argued that attention must be put on precise and comprehensive information, so that subjects completely understand the investigation and consequently make a deliberate, completely rational choice about their probable involvement. Participants must be lawfully and emotionally capable to provide a go-ahead and they must be conscious that they would be free to pull out from the research at any time.

4.12 Summary

Chapter Four charted the methodology used in this research. The chapter deliberated on the research paradigms applied in social investigation and settled for pragmatic paradigm which is in consonant with the mixed method approach used for the investigation. The research blended quantitative and qualitative methodologies (mixed methods) in conducting the study. Population, census, techniques for gathering of data, instruments for gathering data, analysis of data, consistency and truthfulness of the research tools, in addition to ethical concerns, were presented and deliberated to provide an understanding of how the study was conducted.

CHAPTER FIVE
ANALYSIS OF DATA AND PRESENTATTION OF FINDINGS

5.1 Introduction

This chapter analyses and presents the findings from data that were collected through questionnaire, structured interviews, document review and non-participant observation. Some scholars agree that mixed methods data analysis consists of analytic techniques applied to both the quantitative and qualitative data as well as to the mixing of the two forms of data concurrently and sequentially in a single project or a multiphase project. It also involves certain steps undertaken by the researcher and key decisions made at different steps. Once analyses are complete, mixed methods interpretation involves looking across the quantitative results and the qualitative findings and making an assessment of how the information addresses the mixed methods question in a study (Creswell, 2014; Ngulube, Mokwatlo and Ndwandwe, 2009). The blending of approaches encompasses the gathering, analysis, and combination of quantitative and qualitative data in a particular study or iterative design to cater for a thorough analysis of the research (Hesse-Biber, 2011; Creswell, 2014). In this study, although quantitative and qualitative data were collected concurrently, quantitative data was analysed first using IBM SPSS software package was used to analyse quantitative data gathered through the questionnaires to generate tables, charts, figures, and verbal descriptions. Qualitative data from interviews, document review, and observation were first summarised and arranged into topics for easy analysis (Leedy and Ormond, 2005). Then the two data sets were merged and quantitative results are first presented followed by qualitative results in the form of narratives. A comment then follows specifying how the qualitative results either confirm or disconfirm the quantitative results.

The purpose of this study was to examine the strategies of knowledge sharing in University Libraries in Malawi. The study sought to investigate the overarching research question: What Knowledge sharing strategies are used in University libraries of Malawi? Six specific research questions were addressed:

1) What types of knowledge is generated or acquired by university libraries?
2) What is the rationale for knowledge creation and sharing by university libraries?
3) What mechanisms and infrastructure are used for knowledge sharing?
4) What are the factors influencing knowledge sharing in University libraries?
5) What is the attitude of librarians towards knowledge sharing?
6) What framework is needed for effective knowledge sharing in University libraries?

Four universities were studied namely; the University of Malawi (UNIMA), Mzuzu University (MZUNI), Lilongwe University of Agriculture and Natural Resources (LUANAR) and Malawi University of Science and Technology (MUST).

The findings presented in this chapter are preceded by response rates and demographic details of respondents. Thereafter, research questions are used to present and organise findings of quantitative data followed by qualitative data. Only in some instances where quantitative data were not solicited, qualitative data is presented only.

5.2 Response rates

Three groups of respondents were targeted namely: Professional librarians (University and College librarians, Senior Assistant Librarians, and Assistant Librarians); Paraprofessional Librarians (Chief Library Assistants, Senior library assistants, Library assistants) and Library Attendants; Senior Assistant Registrars, College and University Registrars from the four public universities of UNIMA, MZUNI, LUANAR and MUST. University and College Librarians were reached through interviews, while the rest of the respondents were reached through questionnaires. The survey questionnaires were distributed to respondents as follows: 127 to paraprofessional librarians; 5 to Senior Assistant Librarians and 15 to Assistant Librarians. In addition, 3 survey questionnaires were delivered to the University Senior Assistant Registrars, and 4 were dispensed to the College Senior Assistant Registrars. Three interviews were administered to University librarians and 4 to college librarians. The response rates are presented in Table 5.1.

Table 5.1: Response rate (n= 114)

Population	Institution	Sample size	Response rate	Data collection method
	MZUNI	1	1(100%)	

University Librarians	LUANAR	1	1(100%)	In-depth interviews
	MUST	1	1(100%)	
College Librarians	UNIMA	4	4(100%)	
Subtotal		**7**	**7(100%)**	
College registrar or Assistant Registrar	UNIMA	4	3(75%)	Survey questionnaire
University Registrar or Assistant Registrar	MZUNI	1	1(100%)	
University Registrar	LUANAR	1	0(0%)	
University Registrar or Assistant Registrar	MUST	1	1(100%)	
Subtotal		**7**	**5(71.4%)**	
Senior assistant librarians	UNIMA	5	4(80%)	Survey questionnaire
	MZUNI	1	1(100%)	
	LUANAR	2	2(50%)	
	MUST	0	0(0%)	
Assistant librarians	UNIMA	6	6(100%)	
	MZUNI	3	3(100%)	
	LUANAR	3	0(0%)	
	MUST	0	0(0%)	
Subtotal		**20**	**14(70%)**	
Paraprofessional librarians	UNIMA	79	53(67.1%)	Survey questionnaire
	MZUNI	20	16(80%)	
	LUANAR	22	15(68.2%)	
	MUST	6	4(66.7%)	
Subtotal		**127**	**88(69.3%)**	
Grand Total		**161**	**114(70.8%)**	

The data provided in Table 5.1 shows that 7 university and college librarians were interviewed, providing a response rate of 100%. Of these, 4(100%) were college librarians from UNIMA and the rest were university librarians, 1(100%) from MZUNI, 1(100%) from LUANAR and 1(100%) from MUST. Regarding senior and assistant librarians, out of the 20 that were surveyed, 14 responded, giving a response rate of 70%. From this figure, 4(80%) of the senior assistant librarians were from UNIMA, 2(50%) from LUANAR and none from MZUNI and MUST. For assistant librarians, 6 (100%) were from UNIMA, 3 (100%) from MZUNI, and none from LUANAR and MUST. Similarly, of the 127 paraprofessional librarians that participated in the study, 88 responded, giving a response rate of 69.3%. Of these respondents, 53 (67.1%) were from UNIMA, 16(80%) from MZUNI, 15 (68.2%) from LUANAR and 4 (66.7%) from MUST. Likewise, out of 7 university and college registrars that were reached for the study, 5 responded giving a response rate of 71.4%. This category of respondents consisted of 3(75%) college and assistant registrars from UNIMA, 1(100%) assistant registrar from

MZUNI, 1(100%) assistant registrar from MUST and none from LUANAR. Overall, the study achieved a response rate of 70.8%. Furthermore, data were collected through document reviews and observation. Babbie and Mouton (2001) claim that the general proportion of response is a pointer to the representativeness of the sample of participants. They point out that a response rate of 60% is acceptable and considered good, but 70% is phenomenal (Bryman, 2012). Based on this benchmark, the response rates attained in this study were considered adequate.

5.3 Results of demographic data analysis

To understand the characteristics of the respondents, the research sought the demographic profiles of the respondents. This section therefore, provides a synopsis of the demographic distribution of the participants that took part in the study. Such demographic information included institutional affiliation of the respondents, department, or section of the respondents, rank of the respondents, number of years served in the department or section, gender, age and educational qualification of the respondents.

5.3.1 Demographic profile of respondents' institutional affiliation

The participants were requested to specify the institution, department they work for, and their rank and work experience. Table 5.2 provides a cross-tabulation of the ranks and departments of the respondents from UNIMA, MZUNI, LUANAR and MUST.

Table 5.2. Cross-tabulation of department/section, university and rank (n=102)

Rank			Institution				
			Unima	Mzuni	Luanar	Must	Total
CLA	Department/Section	Technical Services	3(2.94%)	1(0.98%)	5(4.90%)	0(%)	9(8.82%)
		Acquisitions	1(0.98%)	0(0%)	0(0%)	0(0%)	1(0.98%)
		Special Collection	1(0.98%)	0(0%)	0(0%)	0(0%)	1(0.98%)
		Readers Services	2(1.96%)	0(0%)	1(0.98%)	0(0%)	3(2.94%)
		Law Library	2(1.96%)	0(0%)	0(0%)	0(0%)	2(1.96%)
		Reference	0(0%)	1(0.98%)	0(0%)	0(0%)	1(0.98%)
		Serials' collection	1(0.98%)	0(0%)	0(0%)	0(0%)	1(0.98%)
	Total		**10 (9.8%)**	**2 (1.96%)**	**6 (5.88%)**	**0 (0%)**	**18 (17.64%)**
S L A	Department/Section	Technical Services	3(2.94%)	0(0%)	5(4.90%)	0(0%)	8(7.84%)
		Special Collection	2(1.96%)	0(0%)	0(0%)	0(0%)	2(1.96%)
		Readers Services	7(6.86%)	2(1.96%)	1(0.98%)	0(0%)	10(9.8%)
		Reference	0 (0%)	1(0.98%)	0(0%)	0(0%)	1(0.98%)
	Total		**12(11.76%)**	**3(2.94%)**	**6(5.88%)**	**0(0%)**	**21(20.58%)**
L A	Department/Section	Technical Services	9(8.82%)	5(4.90%)	2(1.96%)	4(3.92%)	20(19.6%)
		Special Collection	4(3.92%)	2(1.96%)	0(0%)	0(0%)	6(5.88%)
		Readers Services	13(12.74%)	3(2.94%)	1(0.98%)	0(0%)	17(16.66%)
		Law Library	1(0.98%)	0(0%)	0(0%)	0(0%)	1(0.98%)
		Reference	1(0.98%)	1(0.98%)	0(0%)	0(0%)	2(1.96%)
	Total		**28(27.44%)**	**11(10.78%)**	**3(2.94%)**	**4(3.92%)**	**46(45.08%)**
L A1	Department/Section	Technical Services	2(1.96%)	0(0%)	0(0%)	0(0%)	2 (1.96%)
		Readers Services	1(0.98%)	0(0%)	0(0%)	0(0%)	1(0.98%)
	Total		**3(2.94%)**	**0(0%)**	**0(0%)**	**0(0%)**	**3(2.94%)**
SAL	Department/Section	Technical Services	2(1.96%)	0(0%)	0(0%)	0(0%)	2(1.96%)
		Acquisitions	1(0.98%)	0(0%)	0(0%)	0(0%)	1(0.98%)
		Readers Services	1(0.98%)	0(0%)	1(0.98%)	0(0%)	2(1.96%)
	Total		**4(3.92%)**	**0(0%)**	**1(0.98%)**	**0(0%)**	**5(4.9%)**
AL	Department/Section	Technical Services	3(2.94%)	0(0%)	0(0%)	0(0%)	3(2.94%)
		Special Collection	1(0.98%)	0(0%)	0(0%)	0(0%)	1(0.98%)
		Readers Services	1(0.98%)	2(1.96%)	0(0%)	0(0%)	3(2.94%)
		Children's Library	0(0%)	1(0.98%)	0(0%)	0(0%)	1(0.98%)
		Reference	1(0.98%)	0(0%)	0(0%)	0(0%)	1(0.98%)
	Total		**6(5.88%)**	**3(2.94%)**	**0(0%)**	**0(0%)**	**9(8.82%)**
Total			**63(61.76%)**	**19(18.62%)**	**16 (15.68%)**	**4(3.92%)**	**102**

KEY: CLA denotes chief library assistant; SLA denotes senior library assistant; LA denotes library assistant; LA1 denotes library attendant; SAL denotes senior assistant librarians; AL denotes assistant librarians.

The findings in Table 5.2 show that most of the participants 63 (61.76%) came from UNIMA, 19(18.62%) from MZUNI, 16 (15.68%) from LUANAR and 4 (3.92%) from MUST. Respondents were further asked to state the positions they held and departments or sections in which they worked. The distribution of the ranks of the respondents shows that: paraprofessional staff dominated the echelons of the libraries. The majority of 46 (45.08%) respondents were library assistants, with most of them 20(19.6%) from the technical services, and 17 (16.6%) from the reader's services sections; 21(20.5%) were senior library assistants, of these, 10 (9.8%) were from reader's services and 8 (7.8%) from the technical services section; 18 (17.6%) were chief library assistants, with half 9 (8.8%) of these from the technical services section and the other half from different sections; and 3(2.9%) were library attendants of which 2(1.9%) were from the technical services and 1(1%) from the reader's services section. At the other end of the library strata, 9(8.8%) respondents were assistant librarians, of which 3 (2.9%) worked in the technical services and the other 3(2.9%) worked in the reader's services and the rest worked in various sections. There were 5(4.9%) senior assistant librarians who worked in the technical services 2(1.9%), reader's services 2(1.9%) and 1(1%) who worked in the acquisitions section.

Table 5.3. Cross-tabulation of rank/ university, librarians and registrars (n =12)

	UNIMA		MZUNI		LUANAR		MUST		Total	
Rank	F	%	F	%	F	%	F	%	F	%
University Librarian	M R	M R	1	8.33	1	8.33	1	8.33	3	25
College Librarian	4	33.33	M R	M R	M R	M R	M R	M R	4	33.33
University Registrar	M R	M R	M R	M R	M R	M R	M R	M R	M R	M R
College Registrar	2	16.67	M R	M R	M R	M R	M R	M R	2	16.67
Senior Assistant Registrar	1	8.33	M R	M R	M R	M R	M R	M R	1	8.333
Assistant Registrar	M R	M R	1	8.33	M R	M R	1	8.33	2	16.67
Total	**7**	**58.33**	**2**	**16.67**	**1**	**8.33**	**2**	**16.67**	**12**	**100**

Note: M R, denotes Missing responses

Results in Table 5.3 show a cross-tabulation of the ranks of university and college librarians, and university registrars in the universities studied. Of the 12 respondents, 3 (25%) occupied the position of university librarian and they were 1(8.33%) from MZUNI, 1(8.33%) from LUANAR and 1 (8.33%) from MUST. There were 4 (33.33%) college librarians, all from UNIMA. As regards administrative respondents, there were 2(16.67%) college registrars all from UNIMA, 1(8.33%) senior assistant registrar from UNIMA, and 2 16.67%) assistant registrars, 1(8.33%) from Mzuni and the other 1(8.33%) from MUST. Most of the 7 (58.33%) respondents were from UNIMA.

5.3.2 Work experience

Respondents were also asked to state their work experience and their results are provided in Table 5.4.

Table 5.4. Work experience (n=105)

Work experience	frequency	%
0-5 years	45	42.86
6-10 years	19	18.09
11-20 years	32	30.48
21 years and above	9	8.57
Total	**105**	**100**

Relating to the work experience of the respondents, the findings in Table 5.4 show that: the most of 45 (42.86%) had worked for less than five years, 32(30.48%) had worked between 11-20 years, 19(18.09%) had worked between 6-10 years and 9(8.57%) had worked for over 21 years.

5.3.3 Gender of respondents

The participants were requested to state their gender. Their responses are depicted in Figure 5.1.
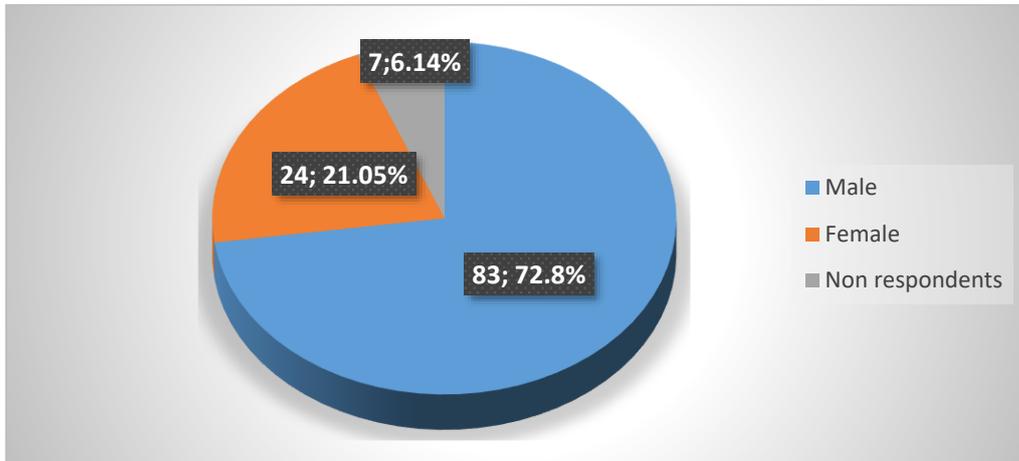
Figure 5.1: Gender of respondents (n= 114)

The distribution of the respondents based on gender revealed that 83 (72.8%) were males and 24(21.05%) were females. Based on these results, it can clearly be seen that the majority of respondents were males. While 7 (6.14%) of the non-respondents did not indicate their gender.

5.3.4 Age of respondents

This segment provides the age of the respondents in the four universities studied (see Figure 5.2)
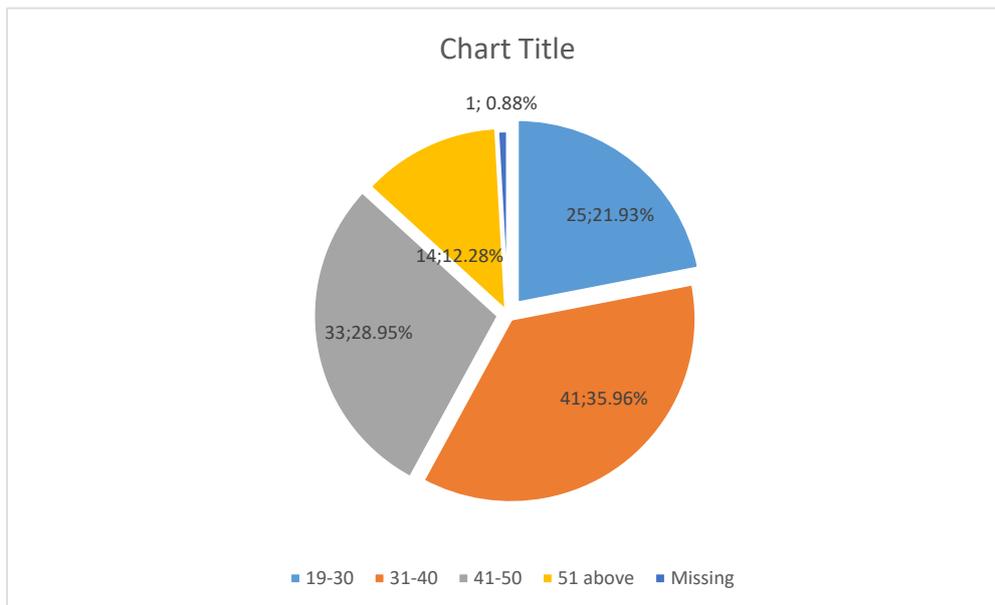
Figure 5.2 Age of respondents (n=114)

The findings revealed that the highest number of respondents, 41 (35.96%) belonged to the age bracket of 31-40 years, followed by 33(28.95%) in the age bracket of 41-50 years, while 25

(21.93%) were in the age category of 19-30 years and 14 (12.28%) were in the age bracket of 51-60 years. It is evident from the findings that most of the respondents were 31 years and above. Only 1(0.88%) of the non-respondent did not indicate age.

5.3.5 Educational qualifications of respondents (n= 114)

The results are presented in Figure 5.3. The results show that: 37 (32.46%) of the respondents had a certificate in LIS, followed by 27 (23.68%) who had a diploma, 25 (21.93%) held a Bachelor's degree, closely followed by 22 (19.29%) who held a Master's degree. Only 1 (0.88 %) each held an honours degree and a doctorate degree respectively.
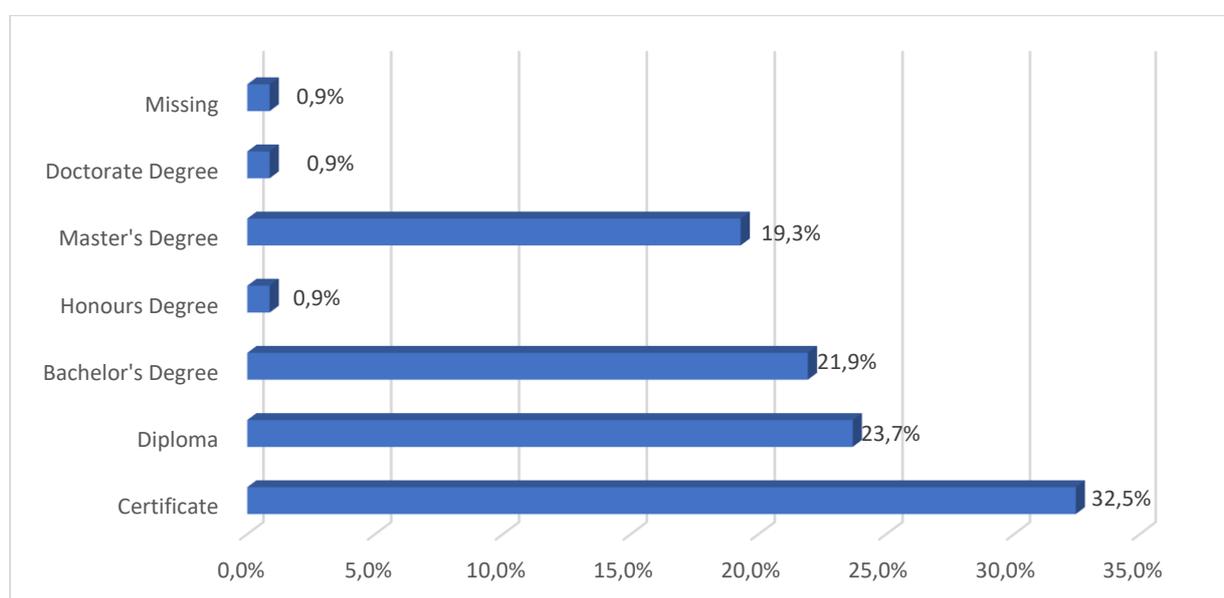
Figure 5.3 Educational qualifications of respondents (n=114)

5.4. Strategies used for capacity building and retention of staff

This question did not provide for paraprofessional librarians to answer through the questionnaire. Rather, the question only catered for university and college library managers who were interviewed on what strategies are used for capacity building and retention of staff, see Section A (question 10: Appendix 1) of the library managers' interview schedule. In response to the question, a range of responses was elicited. Capacity building was achieved through academic training (Certificate, Diploma, Bachelors, Masters and Doctorate programmes) and short term training through attendance of workshops, seminars and conferences. The respondents indicated that recruitment of qualified staff with specialised knowledge was one of the strategies university libraries used to build capacity of staff. A

variety of perspectives were expressed pertaining to how staff were retained. These include motivation of staff through promotion based of performance, delegation of staff to committee meetings, sharing of responsibilities job rotation and placement of staff in their rightful positions. In another instance, at one university, the respondents indicated that staff retention was the prerogative of the central office, of which they had no control. Surprisingly, none of the respondents mentioned mentorship as a strategy for capacity building. A document review (See Appendix 6) shows that internal records for capacity building are in the form of minutes of staff development meetings which discuss, and approve staff to go for training to attain higher qualifications. Whereas, internal records for attendance of workshops, conferences and seminars were unavailable. An observation of programmed workshops, seminars and training programmes (See Appendix 5) discovered that it was only available for long term trainings.

5.5 Types of knowledge generated or acquired

The main aim of the research was to examine knowledge sharing strategies in university libraries of Malawi. This section addresses research question 1: *What types of knowledge is generated or acquired by university libraries in Malawi?*

Items to capture data on research question one were presented in Sections B (see question 9: Appendices 2 and 3) of the survey questionnaire, and Section A (question 12: Appendix 1) of the library managers' interview schedule. The Knowledge Creation Model (Nonaka and Takeuchi, 1995) considers two main types of knowledge that are created: implicit and expressed knowledge. The results on the above question are presented as follows:

- Types of knowledge generated or acquired by university libraries.
- Sources of knowledge acquisition.

The findings revealed that the following knowledge is generated or acquired by university libraries of Malawi:

- Minutes of meetings within the library and with library stakeholders,
- Library rules and regulations,
- Proceedings of library staffs' papers at conferences,
- Bibliographies and indexes,
- Audio visual production of inaugural lectures and graduations ceremonies,
- Workshop reports circulated to library staff,

115

- Library information resources and services,

- Customer care,

- Operational procedure manuals handbook,

- Emails and memos,

- Circulation statistics,

- Research publications,

- Institutional repositories,

- Books and journals acquired from publishers,

- Open access documents shared to staff through for instance Koha library software,

- Databases.

An interview with the university and college librarians also revealed several types of knowledge that were generated. The knowledge generated include policy documents such as research and publications, curriculum documents, conference reports, rules and regulations, prospectuses, research papers, operational knowledge and emails. The knowledge generated or acquired by university libraries in Malawi suggests that it is both tacit and explicit knowledge. One college librarian summed up:

> *The library generates marketing and promotional knowledge that and sells the library's commodity to the client. The other knowledge that the library generates is advocacy knowledge which promotes something valuable that the faculty are not aware about, such as the legal use of information, plagiarism and so on.*

5.5.1 Sources of knowledge acquisition

The findings on this question is presented in Sections B (see question 10: Appendices 2 and 3) of the survey questionnaire. The researcher intended to find out the sources through which staff acquired knowledge in their libraries. The question required respondents to provide multiple responses. Findings from the respondents in university libraries are presented in form of cross tabulation in Table 5.5.

Sources of knowledge acquisition	Institution	F	%
Experienced members of staff	UNIMA	56	54.90
	MZUNI	18	17.64
	LUANAR	14	13.73

	MUST	4	3.92
Sub total		**92**	**90.19**
Internet and the library's databases	UNIMA	52	50.98
	MZUNI	18	17.65
	LUANAR	16	15.68
	MUST	4	3.92
Sub total		**90**	**88.23**
Collaboration and teamwork	UNIMA	45	44.12
	MZUNI	17	16.67
	LUANAR	16	15.68
	MUST	3	2.94
Sub total		**81**	**79.41**
Colleagues	UNIMA	42	41.18
	MZUNI	18	17.64
	LUANAR	15	14.71
	MUST	4	3.92
Sub total		**79**	**77.45**
Learn by doing	UNIMA	40	39.21
	MZUNI	17	16.67
	LUANAR	16	15.68
	MUST	1	0.98
Sub total		**74**	**72.54**
Networking	UNIMA	31	30.39
	MZUNI	7	6.86
	LUANAR	15	14.71
	MUST	3	2.94
Sub total		**56**	**54.9**
Procedure manuals	UNIMA	26	25.49
	MZUNI	4	3.92
	LUANAR	14	13.73
	MUST	0	0
Sub total		**44**	**43.14**

Table 5.5. Cross-tabulation of librarians' sources of knowledge acquisition (n=102)

A Cross-tabulation of librarians' sources of knowledge presented in Table 5.5 shows that the chief sources in which the respondents acquired their knowledge were through: experienced members of staff 92(90.19%), of these, 56 (54.90%) were from UNIMA, 18(17.64%) from MZUNI, 14(13.73%) from LUANAR and 4 (3.92%) from MUST; internet and the library's databases 90(88.23%), of which 52 (50.98%) were from UNIMA, 18 (17.65%) from MZUNI, 16 (15.68%) from LUANAR and 4 (3.92%) from MUST; collaboration and teamwork 81(79.41%) of these, 45(44.12%) were from UNIMA, 17(16.77%) from MZUNI, 16(15.69%) from LUANAR and 3(2.94%) from MUST.

Other sources that respondents acquired their knowledge were through: colleagues 79 (77.45%) of which, 42 (41.18%) were from UNIMA, 18 (17.64%) from MZUNI, 15 (14.71%)

from LUANAR and 4 (3.92%) from MUST. Learning by doing 74 (72.54%), of these 40 (39.21%) were from UNIMA, 17 (16.67%) from MZUNI, 16 (15.68%) from LUANAR and 1 (0.98%) from MUST; networking 56 (54.9%) of which, 31 (30.39% were from UNIMA, 7 (6.86%) from MZUNI, 15 (14.71%) from LUANAR and 3 (2.94%) from MUST; and through procedure manuals 44 (43.14%) of these, 26 (25.49%) were from UNIMA, 4 (3.92%) from MZUNI, 14 (13.73%) from LUANAR and none from MUST. The findings show that the main source of knowledge acquisition by library staff is through experienced members of staff. This may suggest that older staff transferred their expertise to new employees in order to prevent loss of organisational knowledge (Agarwal and Islam, 2015). It could also be because most of the staff is young with less than 5 years of work experience (See sections 5.3.1; 5.3.2 and 5.3.4).

5.6 Rationale for Knowledge Creation and Sharing

This section deals with the research question 2: *What is the rationale for knowledge creation and sharing by university libraries in Malawi*? The question intended to find out why knowledge generated or acquired in the libraries is shared. See Section C (question 11: Appendices 2 and 3) of the library staff's survey questionnaire and (questions 15 to 20) of the library managers' interview schedule. For the questionnaire, the researcher provided multiple options from which respondents were required to choose multiple responses. The SECI Model asserts that the rationale for knowledge production and sharing in firms is to maintain noteworthy proficiencies and favourable business edge. While, Islam, Agarwal and Ikeda (2015), argue that knowledge creation and sharing leads to service innovation, creation of new or improved tools and library services for user communities. A Cross-tabulation of the results is presented in Table 5.6.

Table 5.6. Cross-tabulation of the rationale for knowledge creation and sharing (n=102)

Reasons for sharing knowledge	Institution	Freq	Percent (%)
Knowledge sharing improves team building	UNIMA	30	29.41
	MZUNI	12	11.77

Reasons for sharing knowledge	Institution	Freq	Percent (%)
	LUANAR	11	10.78
	MUST	0	0
Subtotal		**53**	**51.96**
Knowledge sharing improves training, education and connecting of recently hired employees	UNIMA	43	42.15
	MZUNI	17	16.67
	LUANAR	16	15.69
	MUST	3	2.94
Subtotal		**79**	**77.45**
Knowledge sharing enables each person to make conversant decision making	UNIMA	45	44.12
	MZUNI	13	12.74
	LUANAR	15	14.71
	MUST	2	1.96
Subtotal		**75**	**73.53**
Development of new products/services	UNIMA	40	39.21
	MZUNI	19	18.63
	LUANAR	13	12.74
	MUST	2	1.96
Subtotal		**74**	**72.54**
Knowledge sharing increases partnership among staff	UNIMA	43	42.15
	MZUNI	14	13.73
	LUANAR	14	13.73
	MUST	3	2.94
Subtotal		**74**	**72.54**
Knowledge sharing improves communication skills	UNIMA	45	44.12
	MZUNI	15	14.71
	LUANAR	13	12.74
	MUST	1	0.98
Subtotal		**74**	**72.54**
Knowledge sharing improves the provisions of library resources and output e.g. well-timed and worthwhile, customer-focused and 24 hours library services in a stable way	UNIMA	41	40.19
	MZUNI	15	14.71
	LUANAR	14	13.73
	MUST	2	1.96
Subtotal		**72**	**70.59**
Knowledge sharing is an answer to produce more with less during stagnant and declining budgets in academic libraries in general	UNIMA	37	36.27
	MZUNI	12	11.77
	LUANAR	10	9.80
	MUST	0	0
Subtotal		**59**	**57.84**
Knowledge sharing influences the existing knowledge within an organisation	UNIMA	28	27.45
	MZUNI	14	13.73
	LUANAR	14	13.73
	MUST	1	0.98
Subtotal		**57**	**55.89**
Knowledge sharing helps in managing information explosion	UNIMA	34	33.33
	MZUNI	9	8.82

Reasons for sharing knowledge	Institution	Freq	Percent (%)
	LUANAR	11	10.78
	MUST	0	0
Subtotal		**54**	**52.94**
Innovation	UNIMA	30	29.41
	MZUNI	12	11.77
	LUANAR	11	10.78
	MUST	0	0
Subtotal		**53**	**51.96**

A cross-tabulation of the multiple responses show that the rationale for knowledge sharing were for: the improvement of team building 53 (51.96%) of which 30 (29.41%) were from UNIMA, 12 (11.77%) from MZUNI, 11 (10.78%) from LUANAR and none from MUST; enhancement of training, education and connecting of recently hired employees 79 (77:45%) from which 43 (42.15%) were from UNIMA, 17 (16.67%) from MZUNI, 16 (15.69%) from LUANAR and 3 (2.94%) from MUST; enabling each person to make conversant decision making 75 (73.53%) of which, 45 (44.12%) were from UNIMA, 13 (12.74%) from MZUNI, 15 (14.71%) from LUANAR and 2 (1.96%) from MUST; development of new products/services 74 (72.54%) from which, 40(39.21%) were from UNIMA,19 (18.63%) from MZUNI, 13 (12.74%) from LUANAR and 2 (1.96%) from MUST; enhancement of partnership among staff 74 (72.54%) of which, 43(42.15%) were from UNIMA,14 (13.73%) from MZUNI, 14 (13.73%) from LUANAR and 3 (2.94%) from MUST.

The other rationale that respondents identified for knowledge sharing were for the purposes of: improvement of communication skills 74(72.54%) of which 45 (44.12%) were from UNIMA, 15 (14.71%) from MZUNI, 13 (12.74%) from LUANAR and 1 (0.98%) from MUST; improvement of the provision of library resources and ouput e.g. well-timed and worthwhile, customer-focused and 24 hours library services in a stable way 72(70.59%) of these, 41 (40.19%) were from UNIMA, 15 (14.71%) from MZUNI, 14 (13.73%) from LUANAR and 2 (1.96%) from MUST; finding answers to produce more with less during stagnant and declining budgets in academic libraries in general 59 (57.84%) of which 37 (36.27%) were from UNIMA, 12 (11.77%) from MZUNI, 10 (9.80%) from LUANAR and none from MUST. Influencing the existing knowlegde within an organisation 57 (55.89%) of these, 28 (27.45%) were from UNIMA, 14 (13.73%) from MZUNI, 14 (13.73%) from LUANAR and 1 (0.98%) from MUST. Managing information explosion 54 (52.94%) of which 34 (33.33%) were from UNIMA, 9 (8.82%) from MZUNI, 11 (10.78%) from LUANAR and none from MUST; and for innovation

53 (51.96%) of which 30 (29.41%) were from UNIMA,12 (11.77%) from MZUNi, 11(10.78%) from LUANAR and none from MUST.

The library managers, indicated that knowledge sharing was mostly for improving the delivery of library services, provision of databases, bibliographies and indexes to their clientele, mobilisation of resources through grant opportunities, innovations, and to assist the universities to fufill their mandate. The library managers were further asked to statee what innovations libraries had wholly conceived and successfully implemented. Most of them indicated that they had conceived and successfully implemented the provision of electronic books, automation of the library services, point of sale machines, electronic book detection system and the closed circuit television camera system. One of the librarians commented:

> *Before the introduction of turnitin, plagiarsims was rife at the college. But once th elibrary acquired the trunit software, it has intensified its use to both staff and students. This is done by teaching information lteracy to both students and faculty.*

5.7 Mechanisms and Infrastructure used for Knowledge Sharing

The section addresses the research question 3: *What mechanisms and infrastructure are used for knowledge sharing in university libraries in Malawi?* The relevant questions to answer this study's question are addressed in Section D, (question 12: Appendices 2 and 3) of the library staff's survey questionnaire, and (questions 21 to 28: Appendix 1) of the library managers' interview schedule, and observation checklist (Appendix 5) and document review schedule (Appendix 6). There are various mechanisms and infrastructure used for sharing knowledge. These mechanisms for sharing knowledge include: storytelling, brainstorming, communities of practice, training, workshops, seminars, telephone calls, face to face meetings, mentoring, and documentation of existing knowledge, cross-departmental information sessions, and library newsletters. The infrastructure part includes ICT infrastructure such as emails, web 2.0 tools such as, wikis, twitter, blogs, newsgroups and mailing lists (Mutula and Mooko, 2008; Jasimuddin and Zhang 2009; Jain, 2014b; Abbas, 2015; Tan, 2016). The results are presented under two headings as follows:

- Mechanism for knowledge sharing
- Technological Infrastructure

5.7.1 Mechanisms for knowledge sharing

This question is presented in Sections D (see question 12) of the survey questionnaire, and question 21 of the interview schedule and Appendix 6 of the document review. The question

sought to find out mechanisms available for knowledge sharing in university libraries. The results are illustrated in Table 5.7 below.

Table 5.7. Mechanisms for knowledge sharing (n=102)

Mechanisms for knowledge sharing	Frequency	Percent (%)
Attending workshops	77	75.49
Training (either recent or current staff)	74	72.55
Communication networks (internet, intranet and extranet)	67	65.69
Partnership and cooperation	67	65.69
Making use of knowledge exchange tools (e.g. e-mails, document management systems, groupware)	66	64.70
Formal and informal discussion	63	61.76
Attending conferences	61	59.80
Knowledge management training and education	44	43.14
Mentoring	42	41.18
Improved documentation of existing knowledge	39	38.23
Brainstorming	38	37.25
Staff retention	30	29.41
Community of Practice	24	23.53
Cross -functional project teams	14	13.73
Story telling	11	10.78

It is apparent from the results presented in Table 5.7 that the most common mechanisms for knowledge sharing as indicated by the respondents are attending workshops 77 (75.49%); training either recent or current staff 74 (72.55%); communication networks (internet, intranet and extranet) 67 (65.69%); partnership and cooperation 67 (65.69%); making use of knowledge exchange tools such as e-mails, document management systems, groupware, 66 (64.70%); formal and informal discussion 63 (61.76%) and attending conferences 61 (59.80%). The lower end of the responses pertaining to mechanisms for knowledge sharing include knowledge management training and education 44 (43.14%); mentoring 42 (41.18%); improved documentation of existing knowledge 39 (38.23%); brainstorming 38 (37.25%); staff retention

30 (29.41%); Communities of Practice 24 (23.53%); cross-functional project teams 14 (13.73%); and storytelling 11 (10.78%).

There is a similarity between the library managers' responses and the replies of another category of library employees, as reflected in Table 5.7. Each one of the seven respondents interrogated concurred that internal seminars, informal mentorship, meetings, notice boards, reports on workshops, conferences attended, training, tea breaks and informal storytelling, open days, tea breaks, mentorships, end of year Christmas parties, open workrooms where staff are able to socialise are some of the activities and mechanisms put in place to facilitate knowledge sharing in university libraries of Malawi. One of the respondents had this to say…"*all staff have email addresses for communication and to enable them share knowledge. The technical services workrooms have open office plan where staff can make 'useful noise' and share knowledge. Most staff also are on social media where they can share their knowledge*". Pertaining to the loss of knowledge through staff retirement or staff leaving for greener pastures, the respondents indicated that staff are encouraged to work in teams, prepare handover notes before they leave and report on conferences they attended. Library managers were asked to state the training they provide to staff for enhanced service delivery and how often. The respondents specified that they provided in-service training twice a year during the semester break, on the job training and formal training for staff to acquire higher qualifications. Other trainings include internal workshops and attendance of external conferences, workshops, as well as professional training. The attendance of external conferences are done annually. However, a document review (See Appendix 6) on analysis of workshops, seminars, and trainings attended by staff shows that universities do not keep statistics. An observation of mentorship as a mechanism for knowledge sharing shows non-existence of a policy and that it was not well formally planned and executed in university libraries. One probable reason for this could be that management is not familiar with mentorship programmes. From the results shown in Table 5.7 it is surprising that mentorship and improved documentation of existing knowledge were not highly regarded mechanisms for knowledge sharing. This is despite the fact that Nonaka and Takeuchi (1995), regard mentorship as one of the means of transferring implicit knowledge from knowledgeable to inexperienced workers, from an instructor to a learner in which the organisation benefits if the more knowledgeable employees retire or exit the company through death, retirement, and dismissal or for other options.

5.7.2 Technological Infrastructure

This aspect is presented in Sections D (see question 13) of the survey questionnaire. The question intended to establish technological infrastructure available to promote knowledge sharing in university libraries in Malawi. The researcher provided multiple options from which respondents had the freedom to choose multiple responses. Table 5.8 provides a summary of the cross-tabulation responses from the universities surveyed.

Table 5.8. Cross-tabulation of technological infrastructure available to promote knowledge sharing in university libraries (n=102)

Technological Infrastructure	Institution	Freq	Percent (%)
Email	UNIMA	55	53.92
	MZUNI	17	16.67
	LUANAR	16	15.68
	MUST	**4**	3.92
Subtotal		**92**	**90.19**
Websites	UNIMA	44	43.13
	MZUNI	15	14.71
	LUANAR	14	13.73
	MUST	**3**	2.94
Subtotal		**76**	**74.51**
Phones	UNIMA	41	40.19
	MZUNI	14	13.73
	LUANAR	15	14.71
	MUST	2	1.96
Subtotal		**72**	**70.59**
Intranet	UNIMA	41	40.20
	MZUNI	16	15.68
	LUANAR	9	8.82
	MUST	3	2.94
Subtotal		**69**	**67.64**
Social media	UNIMA	36	35.29
	MZUNI	15	14.71
	LUANAR	16	15.68
	MUST	1	0.98
Subtotal		**68**	**66.66**
Facebook	UNIMA	30	29.41
	MZUNI	17	16.67
	LUANAR	15	14.71
	MUST	2	1.96
Subtotal		**64**	**62.75**
Institutional repository	UNIMA	23	22.55
	MZUNI	17	16.67

Technological Infrastructure	Institution	Freq	Percent (%)
	LUANAR	8	7.84
	MUST	1	0.98
Subtotal		**49**	**48.04**
Discussion blogs	UNIMA	13	12.75
	MZUNI	3	2.94
	LUANAR	5	4.90
	MUST	1	0.98
Subtotal		**22**	**21.57**
Electronic bulletin boards	UNIMA	17	16.67
	MZUNI	0	0
	LUANAR	4	3.92
	MUST	0	0
Subtotal		**21**	**20.59**
Groupware	UNIMA	16	15.68
	MZUNI	0	0
	LUANAR	2	1.96
	MUST	0	0
Subtotal		**18**	**17.65**
Wikis	UNIMA	13	12.75
	MZUNI	2	1.96
	LUANAR	2	1.96
	MUST	0	0
Subtotal		**17**	**16.67**

An analysis of the respondents' findings in the universities surveyed presented in Table 5.8 shows that the most preferred tools for knowledge sharing in university libraries were: emails 92 (90.19%) of which 55 (53.92%) were from UNIMA, 17 (16.67%) from MZUNI, 16 (15.68%) from LUANAR, and 4 (3.92%) from MUST; websites 76 (74.51%) of which 44 (43.13%) were from UNIMA, 15 (14.71%) from MZUNI, 14 (13.73%) from LUANAR and 3 (2.94%) from MUST; phones 72 (70.59%) of which 41 (40.19%) were from UNIMA, 14 (13.73%) from MZUNI, 15 (14.71%) from LUANAR, and 2 (1.96%) from MUST; intranet 69 (67.64%) of which, 41 (40.20%) were from UNIMA, 16 (15.68%) from MZUNI, 9 (8.82%) from LUANAR, and 3 (2.94%) from MUST; social media 68 (66.66%) of which 36 (35.29%) were from UNIMA, 15 (14.71%) from MZUNI, 16 (15.68%) from LUANAR, and 1 (0.98%) from MUST; facebook 64 (62.75%) of which 30 (29.41%) were from UNIMA, 17 (16.67%) from MZUNI, 15 (14.71%) from LUANAR and 2 (1.96%) from MUST.

The other, but less prominent tools for knowledge sharing are, institutional repository 49 (48.04%) of which 23 (22.55%) were from UNIMA, 17 (16.67%) from MZUNI, 8 (7.84%)

from LUANAR and 1 (0.98%) from MUST; discussion blogs 22 (21.57%) from which 13 (12.75%) were from UNIMA, 3 (2.94%) from MZUNI, 5 (4.90%) from LUANAR and 1 (0.98%) from MUST; electronic bulletin boards 21 (20.59%) in which 17 (16.67%) were from UNIMA, 0 (0%) from MZUNI,4 (3.92%) from LUANAR and 0 (0%) from MUST; groupware 18 (17.65%) of these, 16 (15.68%) were from UNIMA, 0 (0%) from MZUNI, 2 (1.96%) from LUANAR, and 0 (0%) from MUST; and wikis 17 (16.67%) of which 13 (12.75%) were from UNIMA, 2 (1.96%) from MZUNI, 2 (1.96%) from LUANAR and 0 (0%) from MUST. Library managers were also asked to present their views on technological infrastructure available to promote knowledge sharing. The findings revealed that emails, social media (facebook and WhatsApp), intranet, personal computers and telephones were some of the infrastructure available to promote knowledge sharing in university libraries of Malawi. One respondent remarked. "…*The library has an open workroom where staff can socialise and make 'useful noise' to share their knowledge. In addition, all library staff have an email address for communicating and for knowledge sharing*".

An observation undertaken on the technological infrastructure available in the universities surveyed showed the availability of some communication tools such as computers connected to the internet, mobile and fixed phones used for internal communication. Almost all libraries had a presence on the social media including facebook, WhatsApp and mailing and website. Only one library had a presence on Myspace. The face book page was for providing information to students and academics on new acquisitions, instruction on information literacy, and questions and answer sessions, rather than for communication among library staff. The results clearly indicate that emails were the most favoured tools for knowledge sharing in the universities surveyed.

5.8 University policies for knowledge sharing

Interviews were held with library managers to establish policies that universities have for knowledge sharing (See question 27 of the interview guide, Appendix 1) as well as document review (Appendix 6) (strategic plans, annual reports and budgets for capacity building). The results showed that none of the universities had policies on knowledge sharing. One of the college librarians explained the situation as follows: "*the college and university as a whole do not have a knowledge management policy per se. In the case of our college we an intellectual property policy, research and consultancy policy and ICT policy*". In some other cases, one of the universities surveyed had an annual research dissemination conference and research

seminar. The researcher also sought to determine the strategies the library employed to prepare current staff for future positions in view of senior staff leaving (see question 28 of the interview guide). In response to the question, all library managers appear to settle on sharing and delegation of responsibilities to senior library staff such as attendance of meetings, as the major strategy. The respondents emphasised that the purpose of sharing and delegating responsibilities to their immediate subordinate staff was to acquaint them with management aspects such as recruitment, staff appraisals, strategic planning, budgeting and mentoring so that when they left the library, there should be no gaps. From these findings, it can be construed that universities in Malawi did not have policy on knowledge sharing.

5.9 Factors Influencing Knowledge Sharing

The fourth research question: *What are the factors influencing knowledge sharing in University libraries in Malawi?* Sought an understanding of issues responsible for influencing knowledge exchange amongst library employees in the institutions examined. The research questions are addressed in Section E, (question 14, Appendices 2 and 3) of the library staff's' survey questionnaire, (questions 29 to 33, Appendix 1) of the library managers' interview schedule and Section B (question 9, Appendix 4) of the university and college registrars' survey questionnaire. Literature is full of factors that are said to influence knowledge sharing. These factors include leadership and management support (Wang and Noe, 2010), organisational structure (Chen and Huang, 2007), and Organisational culture (Kim and Lee, 2006). The questionnaire provided some statements on the 5 point Likert rating scale in which the respondents were supposed to agree or disagree with the statements.

The results are summarised in Table 5.9 for library staff's responses and Table 5.10 for Registrars' responses presented in subsections 5.9.1. to 5.9.3 that cover the following aspects respectively:

- Leadership
- Organisational culture/climate
- Organisational structure

Table 5.9 Factors influencing knowledge sharing

Factors Influencing Knowledge Sharing	Disagree		Neutral		Agree	
Leadership	Fre	%	Fre	%	Fre	%
The library has a vision on the strategic importance of knowledge sharing for realising library purposes.	17	16.67	15	14.71	70	68.63
Library leadership sets goals for knowledge sharing	17	16.67	15	14.71	70	68.63
Library leadership encourages knowledge sharing	16	15.68	11	10.78	75	73.53
Organisation Climate / Culture	Fre	%	Fre	%	Fre	%
There is reciprocal trust among staff and between staff and library management	32	31.37	15	14.71	55	53.92
Library management fosters a culture of good learning environment	14	13.86	13	12.87	74	73.27
Library management fosters a culture of creativity and new ideas	13	13	19	19	70	70
Knowledge exchange is generally applied in the library	15	14.71	15	14.71	71	69.61
Organisation Structure						
Centralisation						
The library has a greater amount of clearly expressed work regulations and guidelines	24	23.53	21	20.59	57	55.88
Employees abide by the obviously distinct task procedures prepared by the organisation in knowledge sharing	25	25	25	25	50	50
The library depends on close administration in regulating everyday processes	29	28.43	19	17.65	54	52.94
Decentralisation						
Employees have the autonomy to share knowledge	13	13	20	20	67	67
Employees participate in the decision-making process	38	37.25	20	19.61	44	43.14
Employees seek answers from many channels	18	17.65	19	17.65	65	63.73

Factors Influencing Knowledge Sharing	Disagree		Neutral		Agree	
The environment speeds decision making	36	36.36	26	26.26	37	37.37

Factors Influencing Knowledge Sharing... Cont'd

Factors Influencing Knowledge Sharing	Disagree		Neutral		Agree	
Social interaction ties	Fre	%	Fre	%	Fre	%
I maintain close social bonds with co-workers in the library	12	11.76	7	6.86	83	81.37
I spend greater part of time interacting with co-workers the library.	21	20.59	20	19.61	61	59.80
I know some members in the library on an individual capacity	14	13.73	15	14.71	73	71.57
I have regular communication with some co-workers in the library	5	4.90	5	4.90	92	90.19
Trust						
Employees in library have Mutually faith-based and trustworthy relationships.	19	17.65	29	28.43	54	52.94
Employees in the library always keep promises that they make to one another.	32	31.37	46	45.09	24	23.53
I can always trust the co-workers in the library to lend me a hand if I need it.	7	6.86	20	19.61	75	73.53
I can always depend on the co-workers in the library to make my research and job easier	10	9.80	17	16.67	75	73.53
Communication						
Employees converse and deliberate with other members frequently	8	7.84	13	12.75	81	79.41
Employees are ready to converse and deliberate with co-worker extensively	7	6.86	18	17.65	77	75.49
Coordination						
The duties of the staff are well organised	15	14.71	14	13.73	73	71.57
The work processes and actions are well programmed	13	12.75	16	15.68	73	71.57

Table 5.10 Registrars' responses to Factors Influencing Knowledge Sharing (n=5)

Factors Influencing Knowledge Sharing	Disagree		Neutral		Agree	
Leadership	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
The library has a vision on the strategic importance of knowledge for achieving library objectives.	-	-	1	20	4	80
Library leadership sets goals for knowledge sharing	1	20	-	-	4	80
Library leadership encourages knowledge sharing	-	-	-	-	5	100
Organisation Climate / Culture						
There is reciprocal trust among staff and between employees and library management	-	-	-	-	5	100
Library management fosters a culture of good learning environment	-	-	1	20	4	80
Library management fosters a culture of creativity and new ideas	1	20	1	20	3	60
Knowledge exchange is generally applied library	1	20	1	20	3	60
Organisation Structure						
Centralisation						
The library has a greater amount of clearly expressed work regulations and guidelines	-	-	2	40	3	60
Employees abide by the obviously distinct task procedures prepared by the organisation in knowledge sharing	1	20	1	20	3	60
The library depends on close administration in regulating everyday processes	1	20	1	20	3	60
Decentralisation						
Employees have the autonomy to share knowledge	-	-	1	20	4	80
Employees contribute to the decision-making process	-	-	-	-	5	100
Employees seek answers from various sources	-	-	2	40	2	40
The environment speeds decision making	2	40	3	60	-	-

	Disagree		Neutral		Agree	
I maintain close social relationships with some members in the library	-	-	-	-	5	100
I spend a lot of time interacting with some members in the library.	3	60	1	20	1	20
Factors Influencing Knowledge Sharing	**Disagree**		**Neutral**		**Agree**	
Social interaction ties	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
I know some members in the library on a personal level	-	-	1	20	4	80
I have frequent communication with some members in the library	-	-	2	40	3	60
Trust						
Mutually faith-based and trustworthy relationships.	1	20	3	60	1	20
Members in the library always keep promises that they make to one another.	-	-	4	80	1	20
I can always trust the members in the library to lend me a hand if I need it.	1	20	1	20	1	20
I can always rely on the members in the library to make my research and job Easier	3	60	-	-	2	40
Communication						
Employees converse and deliberate with other members frequently	-	-	2	40	3	60
Employees are ready to converse and deliberate with co-worker extensively	-	-	2	40	3	60
Coordination						
The duties of the staff are well organised	-	-	1	20	4	80
The work processes and actions are well programmed	-	-	1	20	4	80

5.9.1 Leadership and Management Support

The question on whether leadership influenced knowledge sharing, yielded several responses. The statement that the library has a vision on the strategic importance of knowledge for realising library purposes, and that this is clearly outlined and communicated to all staff, 70 (68.63%) agreed, 17 (16.67%) disagreed and 15 (14.71) were neutral. On the second statement library leadership sets goals for knowledge sharing, 70 (68.63%) agreed, 17(16.67%) disagreed and 15 (14.71%) were neutral. The statement, library leadership encourages knowledge sharing, 75 (73.53%) agreed, 16 (15.68%) disagreed and 11 (10.78%) were neutral. University and college registrars validated the library staff's findings, with 4(80%) respondents agreeing that their respective institutional libraries had a vision on the strategic importance of knowledge for achieving library objectives and that these were clearly outlined and communicated to all staff, while 1 (20%) was neutral. Four (80%) respondents also agreed that library leadership sets goals for knowledge sharing, and 1 (20%) disagreed. All, 5 (100%) registrars agreed that library leadership encouraged knowledge sharing.

Library managers were asked through interviews to state the support they render to encourage knowledge sharing among staff (See question 30) of the interview guide. In their response, all the respondents seem to agree that they search for opportunities for staff to acquire knowledge. These opportunities are in the form of conferences and short term training in which staff is supported through travelling and payment of fees. The results also show that library leadership creates an enabling environment in which staff is encouraged to work in teams, interact and participate in knowledge sharing freely without being seen to be competing. Additionally, respondents stated that they provided equipment such as computers connected to the internet to facilitate their work. From the above responses, the results seem to suggest an overall perception of the positive influence that leadership has on knowledge sharing among library staff.

5.9.2 Organisational culture/climate

The question on whether Organisational culture/climate influenced knowledge sharing among library staff also yielded several responses. As can be seen from Table 5.9 above, only 55 (53.92%) respondents agreed that there is reciprocal trust amongst staff and between employers and library management, 32 (31.37%) disagreed and 15 (14.71%) were neutral. Regarding the statement whether library management fosters a culture of good learning environment, 74 (73.27%) agreed, 14 (13.86%) disagreed and 13 (12.87%) were neutral. Concerning the

statement, library management fosters a culture of creativity and new ideas, 70 (70%) agreed, 19 (19%) were neutral, while 13 (13%) disagreed. The statement, Knowledge sharing is normally applied in the library, 71 (69.61%) agreed, 15 (14.71%) disagreed and 15 (14.71%) were neutral. Responses from university and college registrars show that all 5 (100%) respondents agreed that there was reciprocal trust among staff and between employers and library management. Four (80%) college and university registrars agreed that library management fosters a culture of good learning environment, in which 1 (20%) respondent was neutral. Three (60%) college and university registrars agreed that library management fosters a culture of creativity and new ideas, 1 (20%) was neutral and the other 1 (20%) disagreed. With regards to whether knowledge sharing is generally applied in the library, 3 (60%) agreed, 1 (20%) disagreed and 1 (20%) was neutral.

An interview with library managers on the description of the organisational culture for knowledge sharing of their institutions, (See question 31 of the interview guide) portrays a picture of a culture that is open, friendly, where there is free interaction of employees. The culture of openness and friendliness where staff freely interact and consult each other cultivates trust, which subsequently encourages knowledge sharing. One library manager believed that the culture is supportive of knowledge sharing because staff had a shared vision of the college. Thus, the said manager commented:

…" *There is no competition among staff to share their knowledge. Staff members are aware that when they share their knowledge, they are moving towards the success of the library. When they are successful, the whole library is successful*".

The above results demonstrate that the organisational culture or climate influences knowledge sharing because its leadership has cultivated trust and openness among employees. Literature provides us with evidence that trustworthy behaviour enhances teamwork, networking and collaboration, and communication empowering co-workers to share personal knowledge freely (Kim and Lee, 2006; Howell and Annansingh, 2013).

5.9.3 Organisational structure

The construct of organisation structure had many variables such as: centralisation, decentralisation, social interaction ties, trust, communication and coordination that are recognised to leverage knowledge exchange. The results are presented as follows.

5.9.3.1 Centralisation

Concerning centralisation, the results indicate that 57 (55.88%) respondents agreed to the statement that the library has a greater amount of clearly expressed work regulations and guidelines, 24 (23.53%) disagreed, and 21(20.59%) were neutral. The statement staff abide by the obviously distinct task procedures prepared by the organisation in knowledge sharing, 50 (50%) agreed, 25 (25%) were neutral, and 25 (25%) disagreed. The statement that the library depends on close administration in regulating everyday processes, 54 (52.94%) agreed, 29 (28.43%) disagreed and 19 (17.65%) were neutral. Regarding responses from college and university registrars, 3 (60%) agreed that the library has a large number of explicit work rules and policies, with 2 (40%) being neutral. On whether employees followed the clearly defined task procedures made by the firm in knowledge sharing, 3 (60%) agreed, 1 (20%) disagreed and the other 1 (20%) was neutral. Equally, 3 (60%) agreed that the library the library depends on close administration in regulating everyday processes, 1 (20%) disagreed and the other 1 (20%) was neutral. An analysis of the findings point to library structures that mirror the parent organisations whose structures are too formalised, with an emphasis on rules and regulations, and control systems. This type of structure slows the processes, produces a system where there is lack of participation which discourages communication, devotion, and participation with activities and assignments amongst organisational members. Additionally, it diminishes the prospect for personal development and progression, and inhibits creative panaceas to challenges in that it serves as a barrier to creation of knowledge exchange communities in organisations (Al-Alawi, Al-Marzooqi and Mohammed, 2007; Chen and Huang, 2007).

5.9.3.2 Decentralization

The statement on employees have the autonomy to share knowledge, 67 (67%) respondents agreed, 20 (20%) were neutral and 13 (13%) disagreed. The second statement, 'employees contribute to the decision-making process', 44 (43.14%) agreed, 38 (37.25%) disagreed and 20 (19.61%) were neutral. The third statement, 'seek answers from various sources', 65 (63.73%) agreed, 19 (17.65%) were neutral and 18 (17.65%) disagreed. The last statement, 'the environment speeds decision making', 37 (37.37%) agreed, 36 (36.36%) disagreed 26

(26.26%) were neutral. Four (80%) university and college registrars agreed that employees have the autonomy to share knowledge, while 1 (20%) was neutral. All 5 (100%) respondents agreed that staff contribute to the decision-making process. On whether staff seek answers from various sources, 2 (40%) agreed, 2 (40%) were neutral and 1 did not respond. Three (60%) were neutral on whether the environment speeds decision making, and 2 (40%) disagreed.

An interview with library managers on how the nature of their organisation structure enhances trust, communication and knowledge sharing among staff in their libraries, (See question 32, Appendix 1 of the interview schedule) elicited several responses. One respondent was of the opinion that the institution had a bureaucratic structure with clear chain of command which could not be bypassed. This was also validated by an observation of the library structures (Appendix 5) that revealed the organisational structures were indeed bureaucratic in nature with clear lines of communication. The respondent however, pointed out that there is an allowance of circumventing the established lines of communication for speedy decision making. Another respondent was of the view that the structure was a mix of hierarchical and flexibility in which one section of the department can hold a meeting without the approval of the college librarian. Yet, other respondents stated that the structures of their institutions were democratic, flexible and open which allowed staff to discuss, and consult each other. It is not clear though whether such systems enhanced trust, communication and knowledge sharing among staff in university libraries of Malawi. An observation of layout of office space, and organisation of library sections see (Appendix 5) of the observation tool, showed that almost all offices for senior staff were closed, only junior staff had open workrooms for their daily work activities.

The results embody library structures that are highly centralised. If libraries had decentralised structures, they would have created a work atmosphere that emboldens interface amongst staff by essentially using unrestricted rooms, use of flexible job specifications and job interchange and promoting the exchange of knowledge throughout divisions and unofficial consultations as espoused by Nonaka's SECI Model (Nonaka and Takeuchi, 1995).

5.9.3.3 Social interaction ties

Responses on 'I maintain close social bonds with some members in the library', 83 (81.37%) agreed, 12 (11.76%) disagreed and 7 (6.86%) were neutral. The second statement, 'I spend

greater part of time interacting with co-workers in the library', 61 (59.80%) agreed, 21 (20.59%) disagreed and 20 (19.61%) were neutral. The third statement, 'I know some members in the library on an individual capacity', 73 (71.57%) agreed, 15 (14.71%) were neutral and 14 (13.73) disagreed. The fourth statement 'I have regular communication with some co-workers in the library', 92 (90.19%) agreed, 5 (4.90%) disagreed and 5 (4.90%) were neutral. Registrars' responses had all 5 (100%) agreeing that they maintained close bonds with some members in the library. While, 3 (60%) disagreed with the statement that they expend a great deal of time interacting with some co-workers in the library, 1 (20%) agreed and 1 (20%) was neutral. As to whether they knew library members on a personal level, 4 (80%) agreed, and 1 (20%) was neutral. Pertaining to whether they regularly communicated with some other staff in the library, 3 (60%) agreed and 2 (40%) were neutral. Much as the findings indicate that library staff maintained close social relationship ties and that they spent a lot of time interacting, it is not clear whether this was for sharing knowledge or for enhancing their socialisation. The Social Capital Theory by Nahapiet and Ghoshal (1998) and the SECI Model by Nonaka and Takeuchi, (1995) promulgate that social interactions have been found essential for fruitful implicit knowledge. In the course of knowledge transformation, and production in some firms, implied knowledge is exchanged by socialisation which needs comprehensive social interaction amongst staff.

5.9.3.4 Trust

Results on whether or not members in the library have reciprocal faith-based and trustworthy relationships, 54 (52.94%) agreed, 29 (28.43%) were neutral and 19 (17.65%) disagreed. The statement members in the library always keep promises that they make to one another, 46 (45.09%) were neutral, 32 (31.37%) disagreed, and 24 (23.53%) agreed. Another statement, 'I can always trust the members in the library to lend me a hand if I need it', 75 (73.53%) agreed, 20 (19.61%) were neutral and 7 (6.86%) disagreed. The last statement, 'I can always depend on the co-workers in the library to make my research and job easier', 75 (73.53%) agreed, 17 (16.67%) were neutral and 10 (9.80%) disagreed. The registrars' responses indicate that 3 (60%) remained neutral on the statement that members in the library had reciprocal faith-based and trustworthy relationships, 1 (20%) was neutral and 1 (20%) agreed. Four (80%) remained neutral on whether members in the library always kept promises that they made to one another, with only 1 (20%) agreeing.

The statement that library staff always trust the members in the library to lend them a hand if they needed it, had 1 (20) each agreeing, disagreeing and remaining neutral, 2 others did not respond. There were 3 (60%) respondents that disagreed with the statement that library staff can always depend on the members in the library to make their research and job easier, and 2 (40%) agreed. Although the study shows that library staff trusted their colleagues to lend a helping hand, staff did not trust their colleagues that they would keep their promises. Trust is cultivated as a result of interpersonal relationships. Extreme degree of trust encourages successful contact, understanding and participation since trust enhances the worth of dialogue, conversation and understanding. Trust is developed as time passes because organisational staff participate in frequent interfaces with colleagues and study to count on them for accomplishing collective organisational targets and results (Tsai *et al*., 2014).

5.9.3.5 Communication

Respondents were asked if staff converse and deliberate with their colleagues regularly, 81 (79.41%) agreed, 13 (12.75%) were neutral and 8 (7.84%) disagreed. Pertaining to the statement whether staff are ready to converse and deliberate with their colleagues extensively, 77 (75.49%) agreed, 18 (17.65%) were neutral and 7 (6.86%) disagreed. Three (60%) registrars agreed that employees converse and deliberate with other members frequently, 2 (40%) were neutral, 3 (60%) agreed that employees converse and deliberate with other members extensively, while 2 (40%) were neutral. It was observed that both horizontal and vertical lines of communication were used in which staff communicated among themselves at the same level, as well as with their superiors and juniors. The results demonstrate that library staff regard communication highly in their daily tasks. Communication has been lauded in literature to promote knowledge sharing. For instance, the SECI Model, Nonaka and Takeuchi (1995) posit that interpersonal communication is one of the mechanisms used for the acquisition, and dissemination of the tacit knowledge.

5.9.3.6 Coordination

The Statement that, the task duties of the employees are well organised, 73 (71.57%) respondents agreed, 15 (14.71%) disagreed and 14 (13.73%) were neutral. The last statement, 'the work processes and actions are well programmed', 73 (71.57%) agreed, 16 (15.68%) were neutral and 13 (12.75%) disagreed. The statement that the duties of the employees are well organised of, had 4 (80%) of the registrars agreeing, and 1 (20%) disagreeing with the

statement. The last statement on work processes and actions are well programmed', had 4 (80%) agreeing and 1 (20%) disagreeing with the statement.

5.10 Factor analysis of factors influencing Knowledge sharing

A factor analysis was conducted to identify and simplify underlying constructs that explain the correlational relationships between numbers of continuous variables as discussed in subsections 5.2.5.1 to 5.2.5.6. Factor analysis was run to summarise a several items with a reduced number of derived items called factors. Nine factors were extracted as presented in Table 5.11.

Table 5.11. Factors generated

Factors Influencing Knowledge Sharing amongst Paraprofessional and professional librarians	Mean	Standard Deviation	Factors
Coordination			**F1**
The duties of the staff are well organised	3.66	1.00	852
The work processes and actions are well programmed	3.76	1.04	813
Social interaction ties			**F2**
I know some members in the library on a personal level	3.71	1.12	847
I maintain close social bonds with some co-workers in the library	3.98	1.03	834
Communication			**F3**
Employees converse and deliberate with other members frequently	3.85	0.89	840
Employees are ready to converse and deliberate with other members in depth	3.90	0.90	822
Organisation Structure			**F4**
The library depends on close administration in regulating everyday processes	3.22	1.19	829
Trust			**F5**
Members in the library always keep promises that they make to one another.	2.86	0.96	815
Leadership			**F6**
Library leadership sets goals for knowledge sharing	3.52	1.18	808

A careful examination of the factors presented in Table 5.11 above, shows nine factors or variables that were generated and grouped under Coordination (F1), Social interaction ties (F2), Communication (F3), Organisational structure (F4), Trust (F5) and Leadership (F6). The findings reveal that the average outcomes of all knowledge sharing statements are above the neutral score of 3 with an exception of the statement under Trust (2.86). Taken together, the

statements under communication had the highest mean score on average, with employees communicating and discussing with other members frequently scoring a mean of 3.85 and a standard deviation of 0.89; while employees' readiness to converse and deliberate with other members in depth had a mean score of 3.90 and a standard deviation of 0.90. The findings correlate with those found in subsection 5.9.3.5 under communication, where most respondents, 81 (79.41%) agreed that staff converse and deliberate with their colleagues regularly, and 77(75.49%) respondents agreeing that staff are ready to converse and deliberate with their colleagues extensively. Whereas, the statement under Trust (F5), staff in the library always keep promises that they make to one another had the least mean score of 2.86 with a standard deviation of 0.96. This is consistent with the findings in subsection 5.9.3.4 on Trust where most of the respondents, 46 (45.09%) were neutral on whether members in the library always kept promises that they made to one another.

The findings suggest that library employees placed an overwhelming premium on communication for their daily tasks. This also goes to show that communication performs a significant part in knowledge exchange. On the other hand, the findings show that there is an absence of trust among staff to keep promises made to colleagues. Without trust, it would be difficult for library staff to engage in knowledge sharing.

5.10.1 Regression Analysis

A multiple regression analysis was conducted to establish which of the factors (social interaction ties, communication, organisational structure, trust and leadership) had important influence on respondents' knowledge sharing. The results of the measure produced the Analysis of Variance (ANOVA) values shown in Table 5.12 and Coefficients presented in Table 5.13 respectively.

Table 5.12 ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.248	8	2.531	1.310	.254[a]
	Residual	127.538	66	1.932		
	Total	147.787	74			

a. Predictors: (Constant), Coordination, Organisational Structure_ Centralisation, Social Interaction, Communication, Trust, Organisational_Structure__Decentralisation, Leadership, Organisational Climate

b. Dependent Variable: Rank

Table. 5.13 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	8.867	3.650		2.429	.018
	Leadership	-.701	.381	-.320	-1.839	.070
	Organisation climate	.725	.www446	.313	1.628	.108
	Organisation structure	.030	.286	.014	.104	.917
	Decentralisation	.123	.404	.047	.304	.762
	Social interaction ties	-.133	.386	-.047	-.346	.730
	Trust	-.522	.431	-.180	-1.213	.230
	Communication	-.782	.382	-.283	-2.045	.045
	Coordination	.485	.378	.222	1.285	.203

a. Dependent Variable: Rank

The results in Table 5.12 show the value of F was significantly different from zero (F=1.310, p< .254). It is therefore, concluded that the results did not occur by chance.

The results in Table 5.13 above suggest that communication has a statistically significant influence towards knowledge exchange (β=-0.283, t=-2.045, p<0.05). If the P value had been >0.05, then communication would not have been a statistically significant influencer of knowledge sharing.

140

The other factors, leadership (β=-0.320, t=-1.839, p>0.05), organisational climate (β=0.313, t=1.628, p>0.05), organisation structure (β=0.014, t=0.014, p>0.05), decentralisation (β=0.047, t=0.304, p>0.05), social interaction ties (β=-0.047, t=-0.346, p>0.05), trust (β=-0.180, t=-1.213, p>0.05), and coordination (β=0.222, t=1.285, p>0.05) show that they were not statistically important influencers of knowledge sharing. Had their P values been p<0.05), then they would have been statistically significant influencers of knowledge sharing. It appears that communication, more so, face to face communication has a profound influence on knowledge exchange. It is also a necessary catalyst through which library staff communicate, and share and achieve personal and organisational goals.

5.11 Attitude of Librarians towards Knowledge Sharing

The fifth research question: *What is the attitude of librarians towards knowledge sharing in university libraries in Malawi* was intended to establish the attitude of librarians towards knowledge interchange in the university libraries surveyed. This research question is addressed through question 15 in Section F, (Appendices 2 and 3) of the library staff's survey questionnaire, questions 34 to 38 (Appendix 1) of the library managers' interview schedule, Section C, (question 10) of the University and College Registrars' survey questionnaire. This question was guided by the Theory of Reasoned Action (TRA) Model (Azjen and Fishbein, 1980). The TRA posits that together, extrinsic and intrinsic motivation influence individual intentions to engage in knowledge sharing as well as their actual knowledge sharing behaviour (Lin, 2007). The research question provided some statements on the 5 Likert point rating scale in which the respondents were supposed to agree or disagree with the statements.

The results summarised in Table 5.14 (library staff's responses) and Table 5.15 (registrars' responses) is presented in subsections 5.11.1 to 5.11.3 that cover the following facets:

- Autonomous or Intrinsic Motivation (knowledge self-efficacy, enjoyment in helping others)
- Attitudes toward knowledge sharing
- Extrinsic motivation

Table 5.14 Librarians' Attitude towards knowledge sharing

Motivation	Disagree		Neutral		Agree	
Autonomous (Intrinsic motivation)	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
Knowledge self-efficacy						
I am self-assured in my capability to donate knowledge that others in the library would consider valuable.	2	1.96	7	6.86	93	91.17
I have the know-how needed to contribute knowledge for other members in the library	6	5.88	5	4.90	91	89.21
It does not really make any difference whether I share my knowledge with other members in the library.	79	77.45	14	13.73	9	8.82
I have self-assurance in responding or adding comments to messages or articles posted by other members in the library	7	6.86	14	13.73	81	79.41
Most other employees can provide more valuable knowledge than I can	18	17.65	28	27.45	56	54.90
Enjoyment in helping others						
I enjoy exchanging my knowledge with members in the library	4	3.92	4	3.92	94	92.16
I enjoy assisting members in the library by donating my knowledge	4	3.92	2	1.96	96	94.12
It feels good to assist other members in the library by donating my knowledge	7	6.86	1	0.98	94	92.16
Sharing my knowledge with other members in the library is pleasurable	5	4.90	4	3.92	93	91.17
It feels good to assist other members in the library solve their problems	6	5.88	2	1.96	94	92.16
Attitudes toward knowledge sharing						
My knowledge sharing with other colleagues is …	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
very unpleasant	47	85.45	4	7.27	4	7.27

Unpleasant	42	42	6	6	52	52
very pleasant	3	4.76	4	6.34	56	88.88
Pleasant	6	8.10	26	35.13	42	56.75
very bad	38	88.37	4	9.30	1	2.32
Bad	39	88.63	3	6.82	2	4.54
very good	6	9.37	2	3.12	56	87.5
Good	2	4.16	4	8.33	42	87.4
very worthless	32	72.72	1	2.27	11	25
Worthless	29	74.35	1	2.56	9	23.07
very valuable	2	3.27	6	9.84	53	86.88
Valuable	4	6.77	2	3.38	53	89.83
Knowledge sharing intentions						
I anticipate to exchange work reports and related documents with the members in the library more frequently in the future	2	2	4	4	94	94
I plan to share my manuals, methodologies, and models with the members in the library in the future.	1	0.99	11	10.89	89	88.12
I have the expectations to exchange my experience or know how from work with the members in the library in the future	1	0.98	6	5.88	95	93.14
I plan to share my know-where or know-whom at the request of the members in the library in the future.	3	2.97	7	6.93	91	90.09
I intend to exchange my know-how acquired from education and training with the members in the library in the future.	2	1.98	2	1.98	98	96.07
Extrinsic motivation						
Expected organizational reward						
I will get a an increased pay in exchange for my knowledge exchange	58	56.86	28	27.45	16	15.68
I will get an improved bonus in exchange for my knowledge interchange	66	65.34	24	23.76	11	10.89
I will get increased elevation prospects in exchange for my knowledge sharing	48	47.05	24	23.52	30	29.41

I will get an increased job security in return for my knowledge exchange	40	39.21	23	22.54	39	38.23
Reciprocal benefits						
When I share my knowledge with colleagues, ...						
I reinforce bonds between existing members of the organization and myself	6	5.88	8	7.84	88	86.27
I increase the reach of my association with other organisation members	6	5.88	9	8.82	87	85.29
I anticipate to get knowledge in exchange when necessary	9	8.82	12	11.76	81	79.41
I believe that my forthcoming demands for knowledge will be answered	7	6.86	25	24.5	70	68.63
Shared vision and goals						
The members in the library share the vision of assisting others resolve their work-related problems.	9	8.82	27	26.47	66	64.7
The members in the library share the same goal of learning from each other	10	9.8	30	29.41	62	60.78
The members in the library share the same value that helping others is pleasant	10	9.8	30	29.41	62	60.78

Table 5.15. Registrars' responses on attitude of librarians towards knowledge sharing

Motivation	Disagree		Neutral		Agree	
Autonomous (Intrinsic motivation)	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
Knowledge self-efficacy						
Library staff have the know-how needed to contribute knowledge for other members in the library	-	-	-	-	5	100
Most other employees can provide more valuable knowledge than others	-	-	-	-	5	100
Enjoyment in helping others						
Library staff enjoy exchanging their knowledge with others members in the library	2	40	1	20	2	40
Library staff enjoy assisting members in the library by donating their knowledge	-	-	1	20	4	80
Library staff feel good to assist other members in the library by donating their knowledge	-	-	-	-	5	100
Library staff consider it pleasurable exchanging their knowledge with other members in the library	-	-	-	-	5	100
Library staff feel good to assist other members in the library solve their problems	-	-	-	-	5	100
Attitudes toward knowledge sharing						
I perceive library staff's knowledge sharing with other colleagues to be ...						
very unpleasant	-	-	-	-	1	20
Unpleasant						
very pleasant						
Pleasant	-	-	-	-	1	20
very bad						
Bad						
very good	-	-	-	-	1	20
Good	-	-	-	-	1	20
very worthless						
Worthless						

very valuable						
Valuable	-	-	-	-	1	20
Knowledge Sharing Intentions	**Disagree**		**Neutral**		**Agree**	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**
Library staff anticipate to exchange work reports and related documents with the members in the library more frequently in the future	-	-	2	40	3	60
Library staff plan to share manuals, methodologies, and models with the members in the library in the future.			1	20	4	80
Library staff intend to exchange their experience or know-how from work with the members in the library in the future.	-	-	2	40	3	60
Library staff plan to share their know-where or know-whom at the request of the members in the library in the future.	-	-	1	20	4	80
Library staff intend to exchange their know-how acquired from education and training with the members in the library in the future.	-	-	1	20	4	80
Extrinsic motivation						
Expected organizational reward						
Library staff expect to get a an increased pay in exchange for my knowledge exchange	-	-	-	-	5	100
Library staff expect get an improved bonus in exchange for their knowledge interchange	-	-	1	20	4	80
Library staff expect to get increased elevation prospects in exchange for their knowledge sharing	-	-	1	20	4	80
Library staff expect to get increased job security in return for their knowledge exchange	1	20	-	-	4	80
Reciprocal benefits						

When library staff share their knowledge with colleagues, ...						
They strengthen bonds between existing members of the organization	-	-	-	-	5	100
They increase the reach of my association with other organization members	-	-	-	-	5	100
They anticipate to get knowledge in exchange when necessary	-	-	-	-	5	100
They believe that their forthcoming demands for knowledge will be answered	-	-	-	-	5	100
Shared vision and goals						
The members in the library share the vision of assisting others resolve their work-related problems	-	-	-	-	5	100
The members in the library share the same goal of learning from each other	-	-	1	20	3	60
The members in the library share the same value that helping others is pleasant	-	-	1	20	4	80

5.11.1 Intrinsic Motivation

The construct of intrinsic motivation had two variables namely; self-efficacy and enjoyment in helping others. The results are presented as follows.

5.11.1.1 Knowledge self-efficacy

Confidence or self-efficacy is defined as the judgement of people concerning their abilities to organise or perform various activities to realise particular degrees of accomplishment (Bandura, 1986, cited in Olatokun and Nwafor, 2012:220).

The question on whether library staff had self-assurance in their capability to donate knowledge that others in the library would deem beneficial, produced 93 (91.17%) respondents that agreed, 7(6.86%) that were neutral and 2 (1.96%) who disagreed. The statement on whether library staff had the know-how needed to contribute knowledge for other members in the library, yielded 91 (89.21%) respondents that agreed, 6 (5.88%) that disagreed and 5 (4.90%) who were

neutral. There were 79 (77.45%) respondents that disagreed with the statement that it did not really make any difference whether library staff shared their knowledge with other members in the library, 14 (13.73%) neutral and 9 (8.82%) that agreed. The statement that library staff had self-assurance in responding or adding comments to messages or articles posted by other members in the library, had 81 (79.41%) respondents that agreed, 14 (13.73%) that were neutral and 7 (6.86%) who disagreed. While the statement that most library employees could provide more valuable knowledge than others could, returned 56 (54.90%) respondents that agreed, 28 (27.45%) that were neutral and 18 (17.65%) that disagreed. Registrars' responses show that all, 5 (100%) agreed that library staff have the know-how needed to contribute knowledge for other members in the library, just as they all, 5 (100%) agreed that most of the library employees can provide more valuable knowledge than others.

The results suggest that library staff had confidence in their capabilities which motivated them to exchange knowledge with their co-workers. Capability or personal efficacy can help to inspire workers to exchange knowledge with co-workers (Wasko and Faraj, 2005).

5.11.1.2 Enjoyment in helping others
There were 94 (92.16%) respondents that agreed with the statement that library staff enjoy exchanging their knowledge with other members in the library, 4 (3.92%) disagreed, 4 (3.92%) were neutral. Pertaining to the statement whether library staff enjoy assisting their colleagues in the library by donating their knowledge or not, 96 (94.12%) agreed, 4 (3.92%) disagreed and 2 (1.96%) were neutral. With regards to the statement on whether library staff feel good to assist other members in the library by donating their knowledge, 94 (92.16%) agreed, 7 (6.86%) disagreed and 1 (0.98%) were neutral. The statement on library staff's sharing of their knowledge with other members in the library being pleasurable generated 93 (91.17%) respondents that agreed, 5 (4.90%) that disagreed and 4 (3.92%) that were neutral. The last statement on library staff feeling good to help other members in the library in solving their problems, had 94 (92.16%) agreeing, 6 (5.88%) disagreeing and 2 (1.96%) being neutral. While the registrars' responses on: 'library staff enjoy exchanging knowledge with other members in the library' show that 2 (40%) agreed, 2 (40%) disagreed and 1 was neutral; on the statement 'library staff enjoy assisting members in the library by donating their knowledge', 4 (80%) agreed and 1 (20%) was neutral; Library staff feel good to assist other members in the library by donating their knowledge all 5 (100%) agreed; Library staff consider it pleasurable sharing

their knowledge with other members in the library all 5 (100%) agreed and Library staff feel good to help other members in the library solve their problems all 5 (100%) agreed. Library managers' interview findings validate the other library staff's findings by recounting that staff are enjoy in sharing their knowledge with others outside the organisation through paper presentations at conferences, and documents. One respondent noted:" The *library by its nature is a service oriented organisation and knowledge sharing is its main reason for its existence*". The findings show that staff are innately inspired to contribute knowledge because they take pleasure in assisting others.

5.11.2 Attitudes toward knowledge sharing

The responses indicate that library staff's knowledge sharing with other colleagues is: very pleasant 56 (88.9%) agreed, 4 (6.34%) neutral, 3 (4.76%) disagreed; very good 56 (87.5%) agreed, 6 (9.37) disagreed and 2 (3.12%) were neutral; valuable 53 (89.83%) agreed, 4 (6.77%) disagreed and 2 (3.38%) were neutral; very valuable 53 (86.88%) agreed, 6 (9.84%) were neutral and 2 (3.27%) disagreed; very worthless 32 (72.7%) disagreed, 11 (25%) agreed, and 1(2.27%) neutral; very unpleasant 47 (85.45%) disagreed, 4 (7.27%) agreed just as the other 4 (7.27%) were neutral; very bad 38 (88.37%) disagreed, 4 (9.30%) were neutral and 1 (2.32%) agreed. Responses by registrars on how they perceive library staff's knowledge sharing with other colleagues, show 1 (20%) to be very unpleasant, 1 (20%) to be pleasant, 1 (20%) to be very good, 1 (20%) to be good and 1 (20%) to be valuable. An interview with the library managers showed that library staff had a positive attitude towards knowledge sharing because they felt they could contribute something good. In one case, the respondent stated:

> *"The attitude of staff has improved from what was previously happening where staff used to be sensitive to what they wanted to share knowledge with their colleagues. This positive attitude is exemplified by staff sending each other their newly acquired knowledge. The results generally show that library staff's knowledge sharing with their colleagues is either very pleasant, very good or very valuable".*

5.11.2.1 Knowledge sharing intentions

The results indicate that library staff's intentions to exchange work reports and related documents with co-workers in the library more frequently in the future show: 94 (94%) agreed, 4 (4%) neutral and 2 (2%) disagreed. Library staff's plans to share their manuals, methodologies, and models with their colleagues in the library in the future, 89 (88.12%)

agreed, 11(10.89%) were neutral and 1 (0.98%) disagreed. Respondents' expectations to exchange their experience or know-how from work with colleagues in the library in the future, 95 (93.14%) agreed, 6 (5.88%) were neutral and 1 (0.98%) disagreed. Library staff's plan to share their know-where or know-whom at the request of the colleagues in the library in the future, 91 (90.09%) agreed, 7 (6.93%) were neutral and 3 (2.97%) disagreed. Respondents' intention to exchange their know-how acquired from education and training with their colleagues in the library in the future, 98 (96.07%) agreed, 2 (1.98%) disagreed and 2 (1.98%) were neutral. Registrars' results indicate that Library staff intend to share work reports and related documents with the members in the library more frequently in the future, 3 (60%) agreed and 2 (40%) were neutral. Library staff's anticipation to exchange their manuals, methodologies, and models with their colleagues in the library in the future, 4 (80%) agreed and 1 (20%) was neutral. Library staff have the expectation to exchange their experience or know-how from work with the members in the library in the future, 3 (60%) agreed and 2 (40%) were neutral. Library staff plan to exchange their know-where or know-whom at the request of the colleagues in the library in the future, 4 (80%) agreed and 1 (40%) was neutral. Finally, library staff intend to exchange their know-how acquired from education and training with the members in the library in the future, 4 (80%) agreed, while 1 (20%) was neutral.

5.11.3 Extrinsic Motivation

The construct of extrinsic motivation had three variables namely; expected organisational reward reciprocal benefits and shared vision and goals. The results are presented as follows.

5.11.3.1 Expected organisational rewards

Results on respondents getting an increased pay in exchange for knowledge interchange indicate that: 58 (56.86%) disagreed, 28 (27.45%) were neutral and 16 (15.68%) agreed; that they will get an improved bonus in exchange for knowledge interchange, 66 (65.34%) disagreed, 24 (23.76%) were neutral and 11 (10.89%) agreed; that they will get increased elevation prospects in exchange for knowledge interchange, 48 (47.05%) disagreed, 30 (29.41%) agreed and 24 (23.52%) were neutral; that they will get increased job security in return for knowledge exchange, 40 (39.21%) disagreed, 39 (38.23%) agreed and 23 (22.54%) were neutral. Registrar's responses pertaining to 'library staff expect to get an increased pay in exchange for their knowledge sharing', all 5 (100%) agreed; library staff expect to receive a higher bonus in return for their knowledge sharing, 4 (80%) agreed and 1 (20%) was neutral;

library staff anticipate to get increased elevation prospects in exchange for their knowledge sharing, 4 (80%) agreed and 1 (20%) was neutral; and library staff anticipate to get increased job security in return for their knowledge sharing, 4 (80%) agreed and 1 (20%) disagreed.

The library managers when interviewed on the availability of incentives to encourage sharing of knowledge narrated that, although they would have loved to reward staff through performance management appraisals, the appraisal tools do not have items on knowledge sharing. This poses a challenge to some strides staff have made towards knowledge sharing. However, staff through performance management appraisal system are rewarded through promotions based on their performance. Other incentives as stated by the respondents are through staff training, attendance of staff at conferences, workshops, and through verbal recognition. Almost all the library mangers tended noted that:…"*monetary rewards are discouraged because of budgetary constraints, but rather some gifts are awarded to the deserving staff"*. The findings show that expected organisational rewards did not have a direct effect on the attitude to sharing knowledge. Similarly, Bock and Kim (2005), discovered an inverse connection between monetary rewards and knowledge exchange among some firms in South Korea.

5.11.3.2 Reciprocal benefits

The results show that respondents' knowledge sharing with colleagues will reinforce bonds between existing members of the organisation and themselves 88 (86.27%) agreed, 8 (7.84%) were neutral, and 6 (5.88%) disagreed; knowledge sharing with co-workers increase the reach of their association with other organisation members, 87 (85.29%) agreed, 9 (8.82%) were neutral, and 6 (5.88%) disagreed; when they share knowledge with fellow employees respondents anticipate to get knowledge in response when necessary, 81 (79.41%) agreed, 12 (11.76%) were neutral and 9 (8.82%) disagreed; when respondents share knowledge with their colleagues, they believe their forthcoming demands for knowledge will be answered 70 (68.63%) agreed, 25 (24.5%) were neutral and 7 (6.86%) disagreed. All 5 (100%) registrars agreed that library staff's sharing of their knowledge with colleagues reinforce bonds between existing members of the organisation; library staff's sharing of their knowledge with colleagues increase the reach of their association with other organisations, all 5 (100%) agreed; library staff's sharing of their knowledge with colleagues anticipate to get knowledge in response when necessary, 5 (100%) agreed; and library staff's sharing of their knowledge with co-

workers had confidence that their forthcoming demands for knowledge will be answered, 5 (100%) agreed. The findings indicate that employees regarded reciprocity as one of the positive values of knowledge sharing implying that they also valued knowledge sharing more positively. Mutuality makes up the conviction of persons that knowledge exchange will hand them the advantage of forthcoming assistance from co-workers. Such an impression of mutual benefit will lead to the involvement of exchange behaviours within and between groups, which further results in mutually interactive relationships formed by such dependence (Lin, Wu and Lu, 2012).

5.11.3.3 Shared vision and goals

The results indicate that the staff in the library share the vision of assisting co-workers resolve their work-related problems, 66 (64.7%) agreed, 27 (26.47%) were neutral, 9 (8.82%) disagreed; the staff in the library share the similar goal of learning from each other, 62 (60.78%) agreed, 30 (29.41%) were neutral and 10 (9.8%) disagreed; and the staff in the library share the similar importance that assisting colleagues is pleasing, 62 (60.78%) agreed, 30 (29.41%) were neutral and 10 (9.8%) disagreed. Registrars' responses on the staff in the library share the vision of assisting colleagues resolve their work-related problems, indicate all 5 (100%) agreed; the staff in the library share the similar goal of learning from co-workers, 3 (60%) agreed and 1 (20%) was non-committal; the staff in the library share the similar importance that assisting co-workers is pleasing, 4 (80%) agreed and 1 (20%) was neutral. Library managers were interviewed to give an account of how the libraries shared the library vision/goals with library staff. Their responses indicate that meetings, emails, library webpages, brochures, strategic plans, notice boards were some of the methods through which library vision/goals were shared with library staff. However, an observation of the websites shows that one of the university colleges, did not have a functional website. Other colleges and universities had functional websites, but their library webpages only had a mission statement without vision/goals. Without a functional website, it may prove difficult for the library to share the vision/goals of the library with library staff.

5.12 Issues, concerns or challenges for knowledge sharing

An interview with library managers revealed several issues, concerns or challenges that affect knowledge sharing in the universities that incorporate but are not restricted to lack of policies and insufficient budgets for organising knowledge sharing forums; there are no incentives to

encourage staff to share their knowledge; lack of institutional repositories, and database of staff's research expertise; nonexistence of the knowledge management audit; and knowledge silos in the organisations. To emphasise the latter point, one respondent remarked that:

> *Management does not bother to establish the knowledge that staff has acquired from*
> *their studies.*

Besides the issues raised above, other concerns that the respondents had were that most knowledge meant to be shared was technical in nature. Without technical requisite knowledge, staff members were unable to grasp it, hence affecting knowledge sharing activities. Time constraint was another challenge that hampered knowledge sharing activities. It was mentioned that when staff members come back from a conference, they could not share their knowledge because they were preoccupied with their normal duties and that their work schedules were congested.

Within the university libraries a catalogue of issues, concerns and challenges were also divulged. In some instances, some respondents lamented that the library rooms meant for staff's socialisation were taken up for classes. This in some way affected staff's knowledge sharing activities. Yet in some other cases, it was heard that lack of formal mechanisms for knowledge sharing meant that when an experienced library staff left the organisation, the library was bound to lose that knowledge and suffer. At one university, the respondent lamented about staff's inability to access the institutional website off campus. This undoubtedly could lead to staff not being able to access and retrieve knowledge resources from the library and their emails. By not accessing their emails off campus, it could mean staff facing some challenges in communicating their thought and ideas with their colleagues.

5.13 Analysis of data from survey questionnaire

In this segment, cross-tabulations were conducted to determine the connections and divergences between paraprofessional and professional librarians in terms of factors influencing knowledge sharing, leadership, organisational climate/culture, organisational structure, social interaction ties, communication and coordination.

5.13.1 Leadership

The study intended to compare the influence of leadership on knowledge sharing among paraprofessional and professional librarians. The variables tested include the library's vision on the strategic importance of knowledge for achieving library objectives, library leadership

sets goals for knowledge sharing and library leadership encourages knowledge sharing. The findings are shown in Tables 5.16, 5.17 and 5.18 respectively.

Table 5.16 Cross-tabulation on the library's vision on strategic importance for achieving library objectives

Rank	The library has a vision on strategic importance for achieving library objectives			Total
	Disagree	Neutral	Agree	Total
Chief Library Assistant	5	0	13	18
Senior Library Assistant	3	1	16	20
Library Assistant	6	7	33	46
Library Attendant	0	0	3	3
Senior assistant librarian	0	4	2	6
Assistant librarian	3	3	3	9
Total	17	15	70	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.189[a]	10	.020
Likelihood Ratio	19.249	10	.037
N of Valid Cases	102		

The Chi-square tests show that (N=102, df=10, X^2=21.189, p=0.020). Based on the decision rule, there is a significant difference between the paraprofessional and professional librarians (ranks) with regard to the library having a vision on the strategic importance of knowledge for achieving library objectives in university libraries of Malawi.

Table 5.17 Cross-tabulation on library leadership sets goals for knowledge sharing

Rank	Library leadership sets goals for knowledge sharing			Total
	Disagree	Neutral	Agree	
Chief Library Assistant	3	3	12	18
Senior Library Assistant	0	3	17	20
Library Assistant	10	6	30	46
Library Attendant	0	0	3	3
Senior assistant librarian	0	2	4	6
Assistant librarian	4	1	4	9
Total	17	15	70	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.125ᵃ	10	.520
Likelihood Ratio	10.655	10	.385
N of Valid Cases	102		

The Chi-square tests show that (N=102, df=10, X^2=9.125, p=0.520). This result indicates that there is no significant difference between the paraprofessional and professional librarians (rank) as regards the library leadership setting goals for knowledge sharing in university libraries of Malawi.

Table 5.18. Cross-tabulation on library leadership encourages knowledge sharing

Rank	Library leadership encourages knowledge sharing			Total
	Disagree	Neutral	Agree	
Chief Library Assistant	2	4	12	18
Senior Library Assistant	0	1	19	20
Library Assistant	11	6	29	46
Library Attendant	1	0	2	3
Senior assistant librarian	0	0	6	6
Assistant librarian	2	0	7	9
Total	16	11	75	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.781[a]	10	.553
Likelihood Ratio	11.362	10	.330
N of Valid Cases	102		

The Chi-square tests show that (N=102, df=10, X^2=8.781, p=0.553). Therefore there is no significant difference between the paraprofessional and professional librarians (rank) with regard to library leadership encouraging knowledge sharing in university libraries of Malawi.

5.13.2 Organisation Climate / Culture

The study intended to compare the influence of organisational climate /culture on knowledge sharing among paraprofessional and professional librarians. The variables tested include mutual trust among employees, between employees and library management; library management fostering of a culture of good learning environment; library management fostering a culture of creativity and new ideas; and that knowledge sharing is generally practiced in the library. The results are shown in Tables 5.19- 5.22 respectively.

Table 5.19. Cross-tabulation on mutual trust among employees and between employees and library management

Rank	Mutual trust among employees and between employees and library management			
	Disagree	Neutral	Agree	Total
Chief Library Assistant	4	3	11	18
Senior Library Assistant	6	1	13	20
Library Assistant	16	9	21	46
Library Attendant	2	0	1	3
Senior Assistant librarian	1	1	4	6
Assistant librarian	3	1	5	9
Total	32	15	55	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.297[a]	10	.790
Likelihood Ratio	6.635	10	.759
N of Valid Cases	102		

The Chi-square tests show that (N=102, df=10, X^2=6.297, p=0.790) there is no critical distinction between the para-professional and professional librarians (rank) with regard to the existence of common trust amongst workers and between staff and library leadership in university libraries of Malawi.

Table 5.20. Cross-tabulation on library management fosters a culture of good learning environment

Rank	Library management fosters a culture of good learning environment			Total
	Disagree	Neutral	Agree	Total
Chief Library Assistant	5	2	11	18
Senior Library Assistant	2	3	15	20
Library Assistant	5	7	34	46
Library Attendant	0	0	3	3
Senior assistant librarian	0	1	5	6
Assistant librarian	2	0	6	8
Total	14	13	74	101

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.681[a]	10	.660
Likelihood Ratio	9.657	10	.471
N of Valid Cases	101		

The Chi-square tests show that (N=101, df=10, X^2=7.681, p=0.660) there is no critical distinction between the paraprofessional and professional librarians (rank) and library management with regard to library management fostering a culture of good learning environment in university libraries of Malawi.

Table 5.21. Cross-tabulation on library management fosters a culture of creativity and new ideas

Rank	Library management fosters a culture of creativity and new ideas			
	Disagree	Neutral	Agree	Total
Chief Library Assistant	4	1	13	18
Senior Library Assistant	2	6	12	20
Library Assistant	5	9	32	46
Library Attendant	0	3	0	3
Senior assistant librarian	0	0	6	6
Assistant librarian	2	0	7	9
Total	13	19	70	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.908[a]	10	.076
Likelihood Ratio	18.174	10	.052
N of Valid Cases	102		

The Chi-square tests show that (N=102, df=10, X2=16.908, p=0.076) there is no critical distinction between the para-professional and professional librarians (rank) with regard to library management fostering a culture of creativity and new ideas in university libraries of Malawi.

Table 5.22 Cross-tabulation on Knowledge sharing is generally practiced in the library

Rank	Knowledge sharing is generally practiced in the library				Total
	Disagree	Neutral	Agree	Missing	
Chief Library Assistant	3	3	12	0	18
Senior Library Assistant	3	0	17	0	20
Library Assistant	7	10	28	1	46
Library Attendant	0	0	3	0	3
Senior assistant librarian	0	1	5	0	6
Assistant librarian	2	1	6	0	9
Total	15	15	71	1	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.084[a]	15	.814
Likelihood Ratio	15.188	15	.438
N of Valid Cases	102		

The Chi-square tests shows that (N=102, df=15, X^2=10.084, p=0.814) there is no critical distinction between the paraprofessional and professional librarians (rank) with regard to knowledge sharing generally being practiced in university libraries of Malawi.

5.13.3 Organisational Structure

The study intended to compare the impact of institutional configuration on knowledge sharing among paraprofessional and professional librarians. Two dimensions of structure being investigated are centralisation and decentralisation. The variable being tested under centralisation are substantial number of express work tenets and plans, staff adhere to the evidently outlined task processes made by library management in knowledge sharing, the library's dependence on strict supervision in controlling everyday processes. Under decentralisation, the variables include employees' autonomy to share knowledge, employees' participation in the decision-making process, employees' search for problem solutions from

many channels, and the environment's speeding up of decision making. The results are presented in tables 5.23 to 5.29 respectively.

Table 5.23. Cross-tabulation on the library has a large number of explicit work rules and policies

Rank	The library has a large number of explicit work rules and policies			Total
	Disagree	Neutral	Agree	Total
Chief Library Assistant	1	6	11	18
Senior Library Assistant	4	4	12	20
Library Assistant	16	8	22	46
Library Attendant	0	0	3	3
Senior assistant librarian	2	2	2	6
Assistant librarian	1	1	7	9
Total	24	21	57	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.324[a]	10	.159
Likelihood Ratio	16.279	10	.092
N of Valid Cases	102		

The Chi-square tests show that (N=102, df=10, X^2=14.324, p=0.159) there is no critical distinction between the paraprofessional and professional librarians (rank) with regard to the library having a substantial number of express work tenets and plans.

Table 5.24. Cross- tabulation on employees follow the clearly defined task procedures made by the library management in knowledge sharing

Rank		Employees follow the clearly defined task procedures made by library management in knowledge sharing			Total
		Disagree	**Neutral**	**Agree**	**Total**
	Chief Library Assistant	1	5	13	19
	Senior Library Assistant	7	3	10	20
	Library Assistant	11	13	20	44
	Library Attendant	1	0	2	3
	Senior Assistant Librarian	1	3	1	5
	Assistant Librarian	4	1	4	9
Total		25	25	100	100

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.920[a]	10	.228
Likelihood Ratio	14.467	10	.153
N of Valid Cases	100		

The Chi-square tests show that (N=100, df=10, X^2=12.920, p=0.228) there is no critical distinction between the paraprofessional and professional librarians (rank) with regard to staff adhering to the evidently outlined task processes made by library management in knowledge sharing in university libraries of Malawi.

Table 5.25. Cross-tabulation on the library relies on strict supervision in controlling day-to-day operations

Rank	The library relies on strict supervision in controlling day-to-day operations			Total
	Disagree	Neutral	Agree	
Chief Library Assistant	2	4	12	18
Senior Library Assistant	7	2	11	20
Library Assistant	17	5	24	46
Library Attendant	1	1	1	3
Senior assistant librarian	1	4	1	6
Assistant librarian	1	3	5	9
Total	29	19	54	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.864[a]	10	.042
Likelihood Ratio	17.334	10	.067
N of Valid Cases	102		

The Chi-square tests show that (N=102, df=10, X^2=18.864, p=0.042) there is no critical distinction between the paraprofessional and professional librarians (rank) with regard to the library depending on strict supervision in controlling everyday processes.

Table 5.26. Cross-tabulation on employees' autonomy to share knowledge

Rank	Employees have the autonomy to share knowledge			Total
	Disagree	Neutral	Agree	
Chief Library Assistant	1	3	14	18
Senior Library Assistant	2	6	12	20
Library Assistant	8	5	32	45
Library Attendant	1	0	1	2
Senior assistant librarian	0	1	5	6
Assistant librarian	1	5	3	9
Total	13	20	67	100

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.736[a]	10	.107
Likelihood Ratio	14.832	10	.138
N of Valid Cases	100		

The Chi-square tests show that (N=100, df=10, X^2=15.736, p=0.107) there is no critical distinction between the paraprofessional and professional librarians (rank) with respect to staffs' autonomy to share knowledge in university libraries of Malawi.

Table 5.27. Cross-tabulation on employees' participation in the decision-making process

Rank	Employees participate in the decision-making process			Total
	Disagree	Neutral	Agree	
Chief Library Assistant	7	5	6	18
Senior Library Assistant	9	5	6	20
Library Assistant	16	8	22	46
Library Attendant	2	0	1	3
Senior assistant librarian	1	1	4	6
Assistant librarian	3	1	5	9
Total	38	20	44	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.860[a]	10	.827
Likelihood Ratio	6.437	10	.777
N of Valid Cases	103		

The Chi-square test show that (N=102, df=10, X^2=5.860, p=0.827) there is critical distinction between the paraprofessional and professional librarians (rank) with regard to workers' involvement in the decision-making process in university libraries of Malawi.

Table 5.28 Cross-tabulation on employees search for solutions from many channels

Rank	Employees search for problem solutions from many channels			Total
	Disagree	Neutral	Agree	
Chief Library Assistant	3	3	12	18
Senior Library Assistant	5	0	15	20
Library Assistant	8	10	28	46
Library Attendant	0	1	2	3
Senior assistant librarian	1	1	4	6
Assistant librarian	1	4	4	9
Total	18	19	65	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.521[a]	10	.484
Likelihood Ratio	10.647	10	.386
N of Valid Cases	99		

The Chi-square tests show that (N=102, df=10, X^2=13.356, p=0.204) there is no critical distinction between the paraprofessional and professional librarians (rank) with regard to employees searching for problem solutions from many channels in university libraries of Malawi.

Table 5.29. Cross-tabulation on the environment speeds decision making

Rank	Environment speeds decision making			Total
	Disagree	Neutral	Agree	
Chief Library Assistant	5	6	7	18
Senior Library Assistant	9	3	8	20
Library Assistant	16	14	13	43
Library Attendant	0	0	3	3
Senior assistant librarian	3	2	1	6
Assistant librarian	3	1	5	9
Total	36	26	37	99

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.521[a]	10	.484
Likelihood Ratio	10.647	10	.386
N of Valid Cases	99		

The Chi-square test show that (N=99, df=10, X^2=9.521, p=0.484) there is no critical distinction between the paraprofessional and professional librarians (rank)with regard to the environment speeding up decision making in university libraries of Malawi.

5.13.4 Social interaction ties

The study intended to compare the influence of social collaboration ties, trust, consultation and harmonisation on knowledge sharing among paraprofessional and professional librarians in university libraries of Malawi. The variables being tested in social interaction ties are maintenance of close social relationships among library staff, library staff spending a great deal of time communicating with each other in the library, library staff knowing each other in the library on a personal level and library staff having frequent communication with each other in the library. Variables on trust include reciprocal faith-based and trustworthy relationships, library staff keeping promises that they make to one another, library staff always trusting their colleagues in the library to lend them a hand if needed, and library staff always relying on their colleagues in the library to make their research and job easier. Variables being tested in communication are staff converse and deliberate with co-workers often, and staff have enthusiasm to converse and deliberate with co-workers in extensively. Lastly, the variables in

coordination being tested are task activities of staff being well arranged and the work systems and exercises are all round planned. The findings are presented in Tables 5.30 to 5.41 respectively.

Table 5.30. Cross-tabulation on library staff maintaining close social relationships with some colleagues in the library

Rank	Library staff maintain close social relationships with some colleagues in the library			Total
	Disagree	Neutral	Agree	
Chief Library Assistant	1	1	16	18
Senior Library Assistant	2	0	18	20
Library Assistant	7	4	35	46
Library Attendant	1	1	1	3
Senior assistant librarian	0	0	6	6
Assistant librarian	1	1	7	9
Total	12	7	83	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.520[a]	10	.396
Likelihood Ratio	11.271	10	.337
N of Valid Cases	102		

The Chi-square test show that (N=106, df=10, X^2=10.520, p=0.396) there is no critical distinction between the paraprofessional and professional librarians (rank) with regard to library staff maintaining close social relationships with each other in the university libraries of Malawi.

Table 5.31. Cross-tabulation on library staff spending a lot of time interacting with some members in the library

Rank	Library staff spending a lot of time interacting with some members in the library.			
	Disagree	Neutral	Agree	Total
Chief Library Assistant	2	3	13	18
Senior Library Assistant	3	3	14	20
Library Assistant	10	10	26	46
Library Attendant	2	1	0	3
Senior assistant librarian	0	2	4	6
Assistant librarian	4	1	4	9
Total	21	20	61	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.255[a]	10	.268
Likelihood Ratio	13.901	10	.178
N of Valid Cases	102		

a. 12 cells (66.7%) have expected count less than 5. The minimum expected count is .54.

The Chi-square test show that (N=102, df=10, X^2=12.255, p=0.268) there is no critical distinction between the paraprofessional and professional librarians (rank) with regard to library staff spending a great deal of time communicating with one other in the university libraries of Malawi.

Table 5.32. Cross-tabulation on library staff knowing each other in the library on a personal level

Rank	Library staff know each other in the library on a personal level			Total
	Disagree	Neutral	Agree	
Chief Library Assistant	1	3	14	18
Senior Library Assistant	1	0	19	20
Library Assistant	10	9	27	46
Library Attendant	0	3	0	3
Senior assistant librarian	0	0	6	6
Assistant librarian	2	0	7	9
Total	14	16	73	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27.419[a]	10	.002
Likelihood Ratio	25.966	10	.004
N of Valid Cases	102		

a. 12 cells (66.7%) have expected count less than 5. The minimum expected count is .46.

The Chi-square test show that (N=102, df=10, X^2=27.419, p=0.002). Based on the decision rule, there is a critical distinction between the paraprofessional and professional librarians (ranks) with respect to the library staff knowing each other on a personal level in the university libraries of Malawi.

Table 5.33. Cross-tabulation on library staff's frequent communication with colleagues in university libraries.

Rank	Library staff's frequent communication with colleagues in the library.			Total
	Disagree	Neutral	Agree	
Chief Library Assistant	0	2	16	16
Senior Library Assistant	1	0	19	20
Library Assistant	4	2	40	46
Library Attendant	0	1	2	3
Senior assistant librarian	0	0	6	6
Assistant librarian	0	0	9	9
Total	5	5	92	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.083[a]	10	.280
Likelihood Ratio	12.381	10	.260
N of Valid Cases	102		

a. 13 cells (72.2%) have expected count less than 5. The minimum expected count is .15.

The Chi-square tests show that (N=102, df=10, X^2=12.083, p=0.280) based on the decision rule, there is no significant difference between the paraprofessional and professional librarians (ranks) with regard to the library staff's frequent communication with their colleagues in the university libraries of Malawi.

Table 5.34. Cross-tabulation on the library staff's reciprocal faith-based and trustworthy relationships

Rank	Library staff have reciprocal faith-based and trustworthy relationships.			Total
	Disagree	Neutral	Agree	
Chief Library Assistant	1	5	13	18
Senior Library Assistant	5	5	10	20
Library Assistant	11	11	24	46
Library Attendant	0	0	3	3
Senior assistant librarian	0	4	2	6
Assistant librarian	2	4	3	9
Total	19	29	54	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.345[a]	10	.331
Likelihood Ratio	13.361	10	.204
N of Valid Cases	102		

a. 11 cells (61.1%) have expected count less than 5. The minimum expected count is .54.

The Chi-square tests show that (N=102, df=10, X^2=11.345, p=0.331) based on the decision rule, there is no significant difference between the paraprofessional and professional librarians (ranks) with regard to the library staff having mutual faith-based and trusty relationships with their colleagues in the university libraries of Malawi.

Table 5.35. Cross-tabulation on library always keep promises that they make to one another

Rank	Members in the library always keep promises that they make to one another.			Total
	Disagree	Neutral	Agree	
Chief Library Assistant	3	9	6	18
Senior Library Assistant	5	11	4	20
Library Assistant	18	18	10	46
Library Attendant	1	0	2	3
Senior assistant librarian	2	2	2	6
Assistant librarian	3	6	0	9
Total	32	46	24	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.437[a]	10	.325
Likelihood Ratio	14.559	10	.149
N of Valid Cases	102		

a. 10 cells (55.6%) have expected count less than 5. The minimum expected count is 80.

The Chi-square test show that (N=102, df=10, X^2=11.47, p=0.325) based on the decision rule, there is no significant difference between the paraprofessional and professional librarians (ranks) with regard to the library staff library always keeping promises that they make to one another in university libraries of Malawi.

Table 5.36. Cross-tabulation on library staff trust the members in the library to lend me a hand if they need it.

Rank	Library staff trust the members in the library to lend me a hand if they need it.			Total
	Disagree	Neutral	Agree	
Chief Library Assistant	2	5	11	18
Senior Library Assistant	1	3	16	20
Library Assistant	1	9	36	46
Library Attendant	0	0	2	3
Senior assistant librarian	0	2	4	6
Assistant librarian	3	0	6	9
Total	7	20	75	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.413[a]	10	.066
Likelihood Ratio	16.180	10	.095
N of Valid Cases	102		

a. 3 cells (72.2%) have expected count less than 5. The minimum expected count is .31.

The Chi-square test show that (N=102, df=10, X^2=25.573[a], p=0.004). Based on the decision rule, there is significant difference between the paraprofessional and professional librarians (ranks) with regard to the library staff relying on the members in the library to make their research and job easier trusting in university libraries of Malawi

174

Table 5.37. Cross-tabulation I can always rely on the members in the library to make my research and job easier

Rank	Employees communicate and discuss with other members frequently			Total
	Disagree	Neutral	Agree	
Chief Library Assistant	0	7	11	18
Senior Library Assistant	2	4	14	20
Library Assistant	4	4	38	46
Library Attendant	0	0	3	3
Senior assistant librarian	0	2	4	6
Assistant librarian	4	0	5	9
Total	10	17	75	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	25.573[a]	10	.004
Likelihood Ratio	25.144	10	.005
N of Valid Cases	102		

a. 13 cells (72.2%) have expected count less than 5. The minimum expected count is .31.

The Chi-square test show that (N=102, df=10, X^2=25.573, p=0.004). Based on the decision rule, there is significant difference between the paraprofessional and professional librarians (ranks) with regard to the library staff relying on the members in the library to make their research and job easier trusting in university libraries of Malawi.

Table 5.38. Cross-tabulation on employees communicate and discuss with other members frequently

Rank	Employees communicate and discuss with other members frequently			Total
	Disagree	Neutral	Agree	
Chief Library Assistant	1	4	13	18
Senior Library Assistant	1	0	19	20
Library Assistant	4	5	37	46
Library Attendant	0	0	3	3
Senior assistant librarian	0	2	4	6
Assistant librarian	2	2	5	9
Total	8	13	81	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.694[a]	10	.659
Likelihood Ratio	7.779	10	.650
N of Valid Cases	102		

a. 13 cells (72.2%) have expected count less than 5. The minimum expected count is .22.

The Chi-square test show that (N=102, df=10, X^2=7.694, p=0.659). Based on the decision rule, there is no significant difference between the paraprofessional and professional librarians (ranks) with regard to the library employees communicating and discussing with other members frequently in university libraries of Malawi.

Table 5.39. Cross-tabulation on employees have willingness to communicate and discuss with other members in depth

Rank	Employees have willingness to communicate and discuss with other members in depth			Total
	Disagree	Neutral	Agree	
Chief Library Assistant	1	4	13	18
Senior Library Assistant	1	0	19	23
Library Assistant	3	10	33	46
Library Attendant	0	0	3	3
Senior assistant librarian	1	1	4	6
Assistant librarian	1	3	5	9
Total	7	18	77	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.695[a]	10	0.911
Likelihood Ratio	5.149	10	0.88
N of Valid Cases	102		

a. 13 cells (72.2%) have expected count less than 5. The minimum expected count is .20.

The Chi-square test show that (N=102, df=10, X^2=4.695, p=0.911). Based on the decision rule, there is no significant difference between the paraprofessional and professional librarians (ranks) with regard to the library employees' willingness to communicate and discuss with other members in depth in university libraries of Malawi.

Table 5.40. Cross-tabulation on the task assignments of the employees are well planned

Rank	Task assignments of the employees are well planned			Total
	Disagree	Neutral	Agree	
Chief Library Assistant	1	4	13	18
Senior Library Assistant	5	1	14	20
Library Assistant	4	6	32	46
Library Attendant	1	0	2	3
Senior assistant librarian	0	0	6	6
Assistant librarian	3	0	6	9
Total	15	14	73	102
Total	15	14	73	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.837[a]	10	.296
Likelihood Ratio	14.640	10	.146
N of Valid Cases	102		

a. 12 cells (66.7%) have expected count less than 5. The minimum expected count is .45.

The Chi-square test show that (N=102, df=10, X^2=11.837, p=0.296). Based on the decision rule, there is no significant difference between the paraprofessional and professional librarians (ranks) with regard to the task assignments of the employees being well planned in university libraries of Malawi

Table 5.41. Cross-tabulation on work procedures and activities are well scheduled

Rank	Work procedures and activities are well scheduled			Total
	Disagree	Neutral	Agree	
Chief Library Assistant	2	3	13	18
Senior Library Assistant	5	3	12	20
Library Assistant	4	8	34	46
Library Attendant	1	0	2	3
Senior assistant librarian	0	0	6	6
Assistant librarian	1	2	6	9
Total	13	16	73	102

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.602[a]	10	.668
Likelihood Ratio	9.314	10	.503
N of Valid Cases	102		

a. 12 cells (66.7%) have expected count less than 5. The minimum expected count is .36.

The Chi-square test show that (N=102, df=10, X^2=7.602, p=0.668). Based on the decision rule, there is no significant difference between the paraprofessional and professional librarians (ranks) with regard to the employees' work procedures and activities being well in university libraries of Malawi.

5.14 Summary of Findings

This Chapter presented data analysis of the findings of data collected through a mix of survey questionnaires, interviews, observations and document reviews. The data analysis and presentation of results were displayed founded on the themes and research questions as outlined in part 5.1.

The major variables analysed included types of knowledge generated, rationale for knowledge sharing, mechanisms and infrastructure available for knowledge sharing, factors influencing

knowledge sharing and attitude towards knowledge sharing in university libraries of Malawi. The quantitative data analyses were presented using among others frequencies, cross tabulations and chi-square test to understand differences and relationships among variables. Qualitative data collected through interviews, observations and document reviews were interpreted by way of thematic analysis. The analysis involved the presentation of sampled university library staff, professional and paraprofessional librarians and university and college registrars by department, rank, age, gender and educational qualifications.

The fundamental findings revealed that several types of knowledge are produced namely research reports, conference papers, minutes of meetings, conferences and their reports. The sources of this knowledge were conferences, emails, experienced members of staff, internet, experiential and collaboration. The findings also revealed that capacity building strategies for staff included long term training to acquire higher qualifications, workshops and conferences and recruitment of already qualified staff with specialised knowledge. The study found that the rationale for knowledge sharing were for enhancing team building, enhancing collaboration and communication skills among staff, improvement and development of new services.

The study has also revealed lack of policies on knowledge sharing, and an absence of mentorship programmes as major mechanisms for knowledge sharing in university libraries of Malawi. Knowledge silos or hoarding in the organisations also hampered knowledge sharing activities since management did not take an interest to establish the knowledge that staff had attained from their trainings. The findings revealed the availability of emails, fixed and mobiles phones, computers and a presence of social media for knowledge sharing. A factor analysis and regression analysis conducted showed that communication had a significant influence towards knowledge sharing. It was also found that staff could not trust each other on keeping promises made to their colleagues. The findings also discovered that staff had positive attitude towards knowledge sharing intentions, though there was an absence of incentives to reward staff involved in knowledge sharing.

In general, the exact results of the research were that the leadership and management of university libraries surveyed did not support knowledge sharing. The chapter that follows discusses the discoveries of the research.

CHAPTER SIX

180

DISCUSSION OF FINDINGS

6.1 Introduction

This chapter discusses and interprets the research discoveries obtained from quantitative and qualitative data presented in chapter five. The two data sets were merged and integrated into the discussion of findings. The essence is to enrich and enhance the research findings.

The essence of the discussion and interpretation of results is to make something meaningful out of the results achieved through explaining what has been established by the researcher. Discussion and interpretation of data involves connecting the discoveries to the original research problem, particular research intentions and questions, the written works and hypotheses as espoused by Leedy and Ormrod (2005). The overarching research question that guided the study is: What Knowledge sharing strategies are used in University libraries of Malawi? Universities surveyed consisted of the University of Malawi (UNIMA), Mzuzu University (MZUNI), Lilongwe University of Agriculture and Natural Resources (LUANAR) and Malawi University of Science and Technology (MUST).

Specifically, the research addressed the following research questions:

1) What types of knowledge is generated or acquired by university libraries in Malawi?
2) What is the rationale for knowledge creation and sharing by university libraries in Malawi?
3) What mechanisms and infrastructure are used for knowledge sharing in university libraries in Malawi?
4) What are the factors influencing knowledge sharing in University libraries in Malawi?
5) What is the attitude of librarians towards knowledge sharing in university libraries in Malawi?
6) What framework is needed for effective knowledge sharing in University libraries in Malawi?

The roadmap for organising the chapter centres on the research questions and themes emanating thereof namely: types of knowledge created or generated, rationale for knowledge creation and sharing, mechanisms and infrastructure for knowledge sharing, factors influencing knowledge sharing, and attitude of librarians towards knowledge sharing. The study was underpinned by the Social Capital Theory (SCT) (Nahapiet and Ghoshal, 1998), Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 2000), and Socialisation, Externalisation,

Combination and Internalisation (SECI) Model also known as Knowledge Conversion Theory (Nonaka and Takeuchi, 1995).

6.2 Demographic profile of the respondents

An examination of the characteristics of the respondents was carried out to establish the department/section, rank, working experience, gender, age, educational status of the respondents in the university libraries.

The research disclosed that more than half of respondents were males, with females making up a minority of the respondents. The distribution of the ranks of the respondents shows that: paraprofessional staff dominated the echelons of the libraries with most of them being library assistants from the technical services, and the reader's services sections. These were followed by senior library assistants, in which half of them were from reader's services and the remainder from the technical services section. The other category of paraprofessionals were chief library assistants, with half of these from the technical services section and the other half from different sections and the remainder were library attendants from the technical services and the reader's services section.

A further analysis of the demographics of the respondents indicate that most respondents were above the age of 31 years with educational qualifications varying from certificate, diploma, Bachelor's degree, Masters' and Doctorate degree. Their ranks ranged from library assistants to University /College Librarian, and from Assistant Registrar to College Registrar.

6.3 Strategies used for capacity building and retention of staff

The question only targeted university and college librarians to find out strategies used for capacity building and retention of staff. The findings of the study established that capacity building was achieved through academic training (Certificate, Diploma, Bachelors, Masters and Doctorate programmes) and short term training through attendance of workshops, seminars and conferences. The current results corroborate the findings of a study by Chipeta and Chawinga (2017) which investigated the Knowledge management capability of lecturers at Mzuzu University (MZUNI) in Malawi. Through the use of questionnaires, the study found that 41 (66.1%) of the respondents indicated that MZUNI top management encourages staff to continue their education or training by providing them with scholarships. While 37 (59.7%)

of the respondents indicated that MZUNI encourages staff to attend local and international conferences, workshops and seminars. Furthering of one's education or training brings about the acquisition of new skills, knowledge and change in attitude. This observation is echoed by Wamundila and Ngulube (2011) who say that training and expertise enhancement equip workers with pertinent working knowledge valuable to organisational processes. Kokt (2010) argues that encouraging and sponsoring staff to attend international conferences is regarded as part of capacity building and a huge motivation for staff in its own right. This is so because staff feel valued by the university they represent and could be seen as one way of retaining the best employees. In the end, individual competences are continuously developed, thereby making a huge contribution to organisational success.

A variety of perspectives were expressed pertaining to how staff were retained. These include motivation of staff through promotion based on performance, delegation of staff to committee meetings, sharing of responsibilities, job rotation, and placement of staff in their rightful positions. In another instance, at one university, the respondents indicated that staff retention was the prerogative of the central office, of which they had no control. Surprisingly, none of the respondents mentioned mentorship as a strategy for capacity building. Placement of staff in their rightful positions is in agreement with the findings of a study by Joe, Yoong and Patel (2013), which established recruitment of staff with subject matter expertise, was cardinal to capacity building of staff. Subject matter know-how is entwined to the abilities, and practical knowledge of people, and may be enhanced by way of prescribed qualifications, on-the-job or practical learning, and can be a feature of employees of any age. Some firms have specialists who have joined them with skill which is then refined and modified to their responsibilities (Joe, Yoong, and Patel, 2013). The know-how could be in particular, described subjects such as cataloguing and classification of library materials, reference services and journals management.

6.4 Types of knowledge generated or acquired by university libraries

The study intended to determine the types of knowledge generated or acquired by Malawian university libraries, by establishing the particular types of knowledge (implied and expressed) produced, and the sources of knowledge acquisition in university libraries.

6.4.1 Knowledge generated by university libraries.

The findings of this research discovered that university libraries produced and acquired the following knowledge: minutes of meetings, proceedings of library staff's papers at conferences, emails and memos, operational procedure manual handbooks, circulation statistics, policy documents, curriculum documents, rules and regulations, bibliographies and indexes, audio visual production of inaugural lectures and graduations ceremonies, workshop reports circulated to library staff, marketing and or promotion of library information resources and services and customer care, books and journals acquired from publishers, open access documents shared to staff, for instance Koha library software, database management, and institutional repositories. The findings denote that knowledge generation and acquisition in the university libraries were within their core mandate of knowledge acquisition, processing (cataloguing, classifying, indexing, building of bibliographies) and dissemination of such knowledge to library users.

Jain (2014b) in a similar study in which she investigated knowledge management practice at the university of Botswana, found out that staff at the University of Botswana generated, published and disseminated knowledge in the form of books, articles, keynote addresses, conference papers and theses and dissertations. Likewise, Nyaude and Dewah (2014), in a study that investigated strategies for knowledge generation, acquisition or capturing strategies at the National Archives of Zimbabwe established that the National Archives of Zimbabwe acquired its knowledge from educational training of members and from conferences and workshops attended by members of staff. In addition, a similar study by Wamundila and Ngulube (2011), on 'Enhancing knowledge retention in higher education at the University of Zambia', revealed that knowledge acquisition practices took the form of meetings in which operational decisions were made. In spite of the differences in the locations of the organisations studies (current study and those of Jain, 2014b; Nyaude and Dewah, 2014; and Wamundila and Ngulube, 2011), the resemblance of the findings may be ascribed to the fact that the main core of the institutions studied are to generate, process, store and disseminate knowledge to students and users.

Despite the studying establishing ceaseless knowledge generation and acquisition in the university libraries, this knowledge was not codified, thereby posing a risk of losing such valuable organisational knowledge. This is contrary to what Wamundila and Ngulube (2011) and Dewah and Mutula (2016) recommended that; to improve knowledge generation and

acquisition in knowledge organisations, knowledge capturing or acquisition should be done through documentation by codifying the relevant operational information and storing it in repositories where it can be retrieved and used by anybody in a firm. The authors posit that, after acquiring knowledge from an individual, knowledge objects should be built by mining main objects of knowledge, such as interview guides, work schedules, benchmark data and market segmentation analyses out of documents and store them in an automated depository for some people to use. This they argued, would allow many individuals to locate, identify and access documented knowledge without having to bother the individual who initially created it. This method makes it simple for the knowledge to be used again, particularly in creating project proposals, thereby sparing a great amount of time, and save the steady loss of knowledge and help in the learning timeframe for newly hired staff, (Wamundila and Ngulube, 2011; and Dewah and Mutula, 2016).

In the present study, two kinds of knowledge implied and expressed knowledge can be unravelled. Emails and memos, operational procedure manual handbooks, circulation statistics, policy documents, curriculum documents, rules and regulations, books and journals, open access documents shared to staff, for instance Koha library software, database management, and institutional repositories that are generated in university libraries of Malawi can be regarded as explicit knowledge. The generation of explicit knowledge could be ascribed to generation of research reports, procedure manual handbooks, circulation statistics, policy documents, curriculum documents, rules and regulations, bibliographies and indexes, meetings, workshops and conference proceedings and their reports, emails and memos, and the codification of the same.

The knowledge creation theory of Nonaka and Takeuchi (1995) theorise that such expressed knowledge is formal, organised and systematic and is documented in books, journal articles, online databases, publications, websites, library manuals, cataloguing and indexing schedules and is also evident during meetings, workshops, and conferences. Expressed knowledge is gathered within or remotely from the institution and preserved in organisational documents and databases such as institutional repositories in the case of libraries. These can be easily shared with others through information technology infrastructure (emails and social media) to allow library employees to make improvements on library process (Nonaka and Takeuchi, 1995).

Findings from the current research likewise show the generation of tacit knowledge in university libraries of Malawi. In uniformity with Nonaka (1994), Nonaka and Takeuchi (1995) and Nonaka, Toyama and Konno (2000) studies, implied knowledge is private, practical-oriented based knowledge possessed by individuals and is said to be difficult to access because it resides in the minds of individuals. As such, knowledge creation can be achieved through collaborative procedure that will include several persons who are gathered as one in collaborative arrangements such as networking with other libraries, meetings, participating in library workshops, seminars, and conferences (Nonaka, Toyama and Konno, 2000; Argawal and Islam, 2014). Correspondingly, the knowledge of library operations such as cataloguing and classification, of library resources, digitisation of library resource, circulation of library resources, library clients and their wants, library resources, library equipment and technological knowledge requires gathered for creating innovative knowledge which leads to the enhancement and advancement of resource provision to the customers and performance of the library (Argawal and Islam, 2014).

6.4.2 Sources of knowledge acquisition

The study sought to establish the sources through which library staff acquired knowledge in the university libraries.

6.4.2.1 Sources of knowledge acquisition

According to Maponya (2004) and Agarwal and Islam (2015), acquiring and capturing knowledge to retain organisational knowledge is an important characteristic to the efficacy of knowledge-based organisations. Results of the present research divulged that employees in university libraries acquired their knowledge through experienced members of staff, internet and the library's databases, collaboration and teamwork colleagues, learn by doing, networking and through procedure manuals. The findings appear to indicate that knowledge acquisition was mainly realised by means of experienced members of staff, internet and the library's databases, collaboration and teamwork, colleagues, learn by doing. The acquired knowledge seems to suggest both tacit and explicit knowledge are acquired. Joe, Yoong and Patel (2013) in a study that investigated knowledge loss of older employees in knowledge intensive organisations in New Zealand, found that this valuable knowledge was gained because of subject expertise. The study also established that specialists were authoritative foundation of wealth formation within firms and were individuals who had immersed expert knowledge of a

specialty, tried and qualified, particularly by practical know-how. Discipline subject know-how is attached to the talents, education and know-how of persons; could be advanced by means of official qualifications, on-the-job or practical coaching as well as be a feature of employees of every age. Both Joe, Yoong and Patel's (2013) study and the current findings appreciate the skills, knowledge and experience of individuals', official qualifications, and on-the-job or practical coaching as the major carriers of individual tacit knowledge.

By acquiring knowledge from collaboration and teamwork, colleagues, learn by doing. The present study's findings are in line with the Nonaka and Takeuchi's (1995) knowledge creation theory, which theorises that for tacit knowledge to be shared, there has to be socialisation in which staff members spend time together and collaborate in the same environment. According to Nonaka and Takeuchi (1995), this also typically occurs when juniors learn the tacit knowledge by way of practical know-how, instead of from written instructions of schoolbooks. This according to Nyaude and Dewah (2014), enhances work skills for junior members of staff and assures an organisation that knowledge is retained at the exit from service of the experienced members of staff.

Furthermore, the tacit knowledge that staff acquire is converted into explicit knowledge. According to Nonaka and Takeuchi (1995), the act of converting or codifying implied knowledge into expressed knowledge such as documents, manuals, is characterised by more formal interactions such as expert interviews or the sharing of lessons learned by (collaboration and teamwork, and colleagues as in the current study). This newly converted knowledge can be diffused effortlessly through the organisation and come to be the basis of new knowledge. Since tacit knowledge can be virtually impossible to codify, the use of metaphor is cited as an important externalisation mechanism (Nonaka, Toyama, and Konno, 2000). When implied knowledge is made explicit, knowledge is preserved in libraries' documents and databases, it can be simply shared with others and allow library employees to make improvements on library processes.

Once knowledge is made explicit Nonaka and Takeuchi (1995), Nonaka, Toyama and Konno (2000), expound that it should be transformed into further complicated and organised collections of expressed knowledge. This is done by cataloguing, classifying and indexing some library documents to generate renewed knowledge. The novel expressed knowledge is

later distributed amongst the members of the organisation. Information technology, creative communication networks and databases can be used for the acquisition, integration, synthesis and processing, and dissemination of the newly created knowledge. The finding of the present study established that learning by doing was one of the sources of knowledge acquisition by staff in university libraries. According to Nonaka and Takeuchi (1995), this is internalisation and is directly connected to learning by doing. Nonaka, Toyama and Konno, (2000) are of the view that by skimming documents or working instructions about their jobs and the company, and by thinking upon them, junior staff can acquire the expressed knowledge produced in such documents to improve their implied knowledge base. Once knowledge is assimilated to into a persons' knowledge bases, in the shape of technical expertise, it becomes a precious resource. This implied knowledge amassed at the personal stage can then trigger a new rise of knowledge production when it is interchanged with others through socialisation (Nonaka, Toyama, and Konno, 2000). After internalisation, the process continues at a new level, hence the metaphor of a spiral of knowledge creation often referred to as the SECI model.

However, despite some semblance of knowledge management activities taking place in university libraries, these practices seem to suggest that they are a part of managing the normal work processes in the work places surveyed. It is also unclear if the knowledge of the senior, experienced, skilled and knowledgeable staff is correctly documented to transfer knowledge to junior staff to avoid the loss of organisational knowledge. This observation is echoed by Mpofu (2011), who conducted a survey study on 'Knowledge management practices in Malawi'. Mpofu's (2011) study ascertained that very few of the organisations studied had introduced formal knowledge management systems as management tools. The study showed that managers of these organisations did not drive the knowledge management strategy. While, Dewah and Mutula (2016) found a plethora of challenges associated with knowledge acquisition in some state -owned organisations in sub-Saharan Africa. These challenges for managing knowledge assets in public sector organisations included limited understanding of knowledge management merits, deficiency of skills, absence of rewards of inducements to exchange knowledge, absence of befitting technology, minimal assurance from top leadership and management, unavailability suitable paradigms to study from and brain drain.

6.5 Rationale for knowledge creation and sharing

The study findings based on the survey questionnaires of library staff showed that team building, improvement of training, education and networking of newly recruited employees, enabling each person to make informed decisions, development of new products/services, enhancement of collaboration among staff, enhancement of communication skills, improvement of library services and productivity such as time and cost-effective, well-timed and worthwhile, customer-focused and 24 hours library services in a stable way were the rationale for knowledge sharing in university libraries of Malawi. Consistent with the results of the present research were the findings of Huang and Li (2009), whose survey study on 'The mediating effect of knowledge management on social interaction and innovation performance' in Taiwan, found that social collaboration with reciprocal trust, communication, and cooperation helped firms' employees to amass social assets and upsurge interpersonal connections for knowledge exchange and use. This in turn paved the way for enhancement of innovations in libraries.

An interview with the library managers revealed that the rationale for knowledge sharing was mostly for improving the delivery of library services, provision of databases, bibliographies and indexes to their clientele, mobilisation of resources through grant opportunities, innovations, and to assist the universities to fulfil their mandate. Some of the innovative services introduced according to the library managers were the use of Koha, an open source library software, institutional repository, electronic book detection system, CCTV, the introduction of the provision of electronic journals, e-granary and other databases at the expense of print journals.

The present study's findings of improving the delivery of library resources and the promotion of novel products/ resources such as the provision of technological services match those of Islam, Agarwal and Ikeda (2015). Islam, Agarwal and Ikeda (2015) used an exploratory study to investigate knowledge management for service innovation in academic libraries in Asia, Europe, Canada and USA. Their study found that most libraries had implemented technological innovations. In their study, Islam, Agarwal and Ikeda (2015) found that among the 27 respondents, 14 (16%) indicated the provision of e-books, 14 (16%) online research assistance, 13 (15%) mobile apps/web site, 13 (15%) being present in social websites and applications, and 12 (13%) electronic warehouses as technological innovations that libraries had introduced. The findings of the present study are also consistent with Jain's (2014b) study, who in her

empirical study, investigated knowledge management practices in Southern African Development Community (SADC) university libraries. Her findings revealed that knowledge management was found to raise the provision of library resources besides a library's general output in numerous ways, by providing well-timed and worthwhile, customer-focused and 24 hours library services in a stable way.

The findings of the current study point to university libraries as being learning organisations. Jain and Mutula (2008) in their literature review in Botswana on 'Libraries as learning organisations: Implications for knowledge management', noted that by promoting a culture of collective learning and collaboration, and by libraries introducing content such as e-journals, e-books, institutional repositories, databases and digital libraries, libraries become learning organisations. The adoption of digital scholarship in universities entails that university libraries should transform themselves into learning organisations by among other things creating a climate of change and innovation. This can be achieved by working collaboratively with other stakeholders, notably academics, learners and the public (Jain and Mutula, 2008).

Although responses from university libraries in Malawi showed that the rationale for knowledge sharing was for the provision of a well-timed and worthwhile, customer-focused and 24 hours library services in a stable way, the current trend in university libraries points to an opposite direction due to several challenges, chief among them being inadequate budget and lack of knowledge and skills. These findings are in agreement with those of Mapulanga (2014), who used a mixed method study to investigate 'Prospects and constraints of staff development in the University of Malawi Libraries'. The study identified constraints in staff training and development as a result of inadequate funding of University of Malawi Libraries (UML).

Mapulanga's (2014) findings resonate well with those of Chaputula (2016), a doctoral study on 'eReadiness of public university libraries in Malawi with special reference to the use of mobile phones in the provision of library and information services' in Malawi. Chaputula's (2016) findings acknowledged lack of knowledge, skills and experience by library staff in the delivery of well-timed and worthwhile, customer-focused and 24 hours library services in a stable way. Additionally, poor network infrastructure and insufficient number of computers, high fees of internet get entry, chronic energy outages, and an absence of appropriate ICT talents in university libraries of Malawi were said to have impacted negatively on public university libraries in Malawi failing to adequately serve their clients.

6.6 Mechanisms and IT Infrastructure used for Knowledge Sharing

There are various mechanisms and infrastructure used for sharing knowledge. These mechanisms for sharing knowledge include: storytelling, brainstorming, communities of practice, training, workshops, seminars, telephone calls, face to face meetings, mentoring, documentation of existing knowledge, across departmental information sessions, and library newsletters. The infrastructure part includes ICT infrastructure namely; emails, web 2.0 applications such as, wikis, twitter, blogs, newsgroups and mailing lists (Mutula and Mooko, 2008; Jasimuddin and Zhang 2009; Jain, 2014a; Abbas, 2015; Tan, 2016). Findings obtained in relation to these aspects are discussed subsequently.

6.6.1 Mechanisms for knowledge sharing

Mechanisms perform a significant part in knowledge sharing. The study therefore, sought to ascertain the mechanisms through which university library staff shared their knowledge. Findings from library staff indicated that mechanisms for sharing knowledge in university libraries included: attending workshops, conferences and training for both new and existing staff, communication networks such as internet, intranet and extranet and e-mails, collaboration and teamwork, utilising knowledge sharing tools for instance, document management systems and groupware, official and unofficial discussions. Other methods for knowledge sharing included knowledge management training and education, mentoring, improved documentation of existing knowledge, brainstorming, and staff retention, communities of practice (CoPs), cross-functional project teams and storytelling.

Interviews conducted with library managers revealed internal seminars, informal mentorship, meetings, notice boards, reports on workshops and conferences attended, training, tea breaks and informal storytelling, open days, tea breaks, end of year Christmas parties, open workrooms where staff are able to socialise as some of the activities, and mechanisms put in place to facilitate knowledge sharing in university libraries of Malawi.

Findings of the current study showed that attending workshops was the most common mechanism for knowledge sharing. This was closely followed by training both new and existing staff. Attending workshops and training staff are regarded in this study as an aspect of capacity building. The success of university libraries rests on the competencies of its employees

to provide the requirements of the academia more competently and inexpensively. To be fruitful in working in such a turbulent environment, library staff need to acquire new skills and knowledge by means of training and attending conferences and workshops. This is supported by Cabrera and Cabrera (2007), who in a study on fostering knowledge sharing which reviewed research on knowledge sharing and related behaviours, found that education can be applied to improve levels of performance among workers. The authors argue that the use of broad training and development programmes could support to upturn overall levels of performance among organisational workers. In turn, workers will believe more confident of their capabilities and will be more likely to share their knowledge with co-workers. Gagné (2009) in her presentation of a model of knowledge-sharing motivation based on a combination of the theory of planned behaviour (TPB) and self-determination theory (SDT) in Canada, regarded training as a means for knowledge sharing. She wrote that training affords countless prospects for an organisation to communicate and initiate standards about sharing knowledge.

The findings also revealed that mentoring, improved documentation of existing knowledge brainstorming staff retention, communities of practice, cross-functional project and storytelling were not highly regarded as mechanisms for knowledge sharing. While library managers that were interviewed indicated the use of informal mentoring, an observation of mentorship as mechanism for knowledge sharing, showed that it was not well formally planned and executed in university libraries. One probable reason for this could be that management was not familiar with mentorship programmes. Yet some authors (Nonaka and Takeuchi, 1995; Level and Mach, 2005; Darwin and Palmer, 2009; Sears, 2014) have applauded mentoring as one of the methods applied to share and maintain knowledge in an institution.

Level and Mach's (2005) qualitative study which examined 'Peer mentoring: A one institution's approach to mentoring academic librarians', ascertained that by pairing a mentor with a developing novice, in which a guide was to offer direction and share know-hows and expertise to the mentee, some unanticipated improvements such as quality communication among all staff and the formation of cross-departmental partnerships were achieved. Nonaka and Takeuchi's (1995) SECI Model, regarded mentorship as one of the means of transferring implied knowledge from expert to unskilled employees or from coach to trainee. Subsequently, the organisation benefits if the more skilful employees exit the firm through death, retirement, dismissal or for other options. The preceding literature discussed, does not support the present

192

findings which portrays a lack of formal mentorship programmes. The results of the current research are akin to those of Wamundila and Ngulube's (2011) investigation of mentoring activities at the University of Zambia. The Wamundila and Ngulube (2011) study found that mentorship programmes were not in place at the University of Zambia except that every employee was prompted to communicate with co-workers on many concerns involving tasks. This according to the authors, suggested that there might have been some informal mentorship at the University of Zambia, although the situation showed an absence of assurance in making sure that working knowledge at the University of Zambia was transferred amongst staff.

The present study's findings also showed that university libraries did not regard improved documentation of existing knowledge highly as shown by the responses in the preceding paragraph. The importance of documenting existing knowledge has already been discussed in this chapter (See section 6.3.1). Nonetheless, the current study has observed that by documenting existing knowledge it enables several individuals to explore and access the organised knowledge without having to communicate with the individual that initially produced it. This method renders it effortless to utilising knowledge, particularly in formulating project propositions, thereby preventing time, and mitigating attrition challenges and help in the learning period for new staff as argued by Wamundila and Ngulube (2011) and Dewah and Mutula (2016).

The present study found that brainstorming, communities of practice and storytelling were not preferred mechanisms for knowledge sharing in university libraries as evidenced by the responses, in the previous chapter (see table 5.7). The Literature (Mutula and Mooko, 2008; Jasimuddin and Zhang, 2009; Jain, 2014b; Abbas, 2015; Tan, 2016) however, argued that in face-to-face collaborative communication, the exchange of implied and expressed knowledge is done by way of socialisation and externalisation as demonstrated in the SECI model that can be modified by research universities. This is accomplished via meetings, training and brainstorming plenaries among faculty members.

Present findings revealed that Communities of practice (CoPs) were equally not favoured mechanisms for knowledge sharing in university libraries surveyed. Literature by Faraj and Wasko (2001), Laquinto, Ison and Faggian (2011), Yamklin and Igel (2012), and Buckley (2012) suggest otherwise. CoPs are up-and-coming social collectives where people working on

related projects self-organise to assist one another and exchange viewpoints about their work procedure, developing in learning and origination within the communities. They are natural groups throughout departments, sections, physical dispersation and functional boundaries to link persons sharing corporate knowledge (Faraj and Wasko, 2001). Put differently, CoPs let individuals of similar pursuits to gather together with minimal costs and assist them to interchange thoughts and organise their projects.

The current findings are in sharp contrast with those of Laquinto, Ison and Faggian (2011) which sought to scope the nature and form of practices, understandings and institutional arrangements that might contribute to the successful design and continuity of CoPs in a state government department in Australia. The study discovered that the success of those CoPs that kept afloat was ascribed to high rate of attendance of meetings, a desire among members to collaborate and share experience. In a similar study by Yamklin and Igel (2012), on 'Communities of practice purposefully designed for improving business performance' in Thailand, it was revealed that in one of the companies studied, CoPs were created as a community to exchange knowledge. The success of the CoPs was because of management involvement and support. CoPs members felt motivated by receiving attention from top management as their ideas and suggestions were reviewed by senior management and applied within the company, hence encouraging more contributions from the individual CoPs members. However, in South Africa, a survey study by Buckley (2012) which assessed 'Higher education and knowledge sharing: From ivory tower to twenty-first century', learnt that the use of CoPs as a medium of exchange of ideas and knowledge had some challenges.

The empirical evidence showed unwillingness by academics to share knowledge due to inhibitors such as time constraints, and a lack of support or participation from management. The Buckley's (2012) findings can be equated to the findings of the current study in the sense that, among the challenges found that inhibited knowledge sharing via foras such as the CoPs in university libraries in Malawi, were lack of policies, and inadequate budget, lack of incentives to encourage staff to share their knowledge (See section 5.12). Other probable factors that could have accounted for non-use and non-preference of CoPs as a mechanism for knowledge sharing in university libraries included, unfamiliarity with the concept and lack of staff time.

The Social Capital Theory (SCT) (Nahapiet and Ghoshal, 1998) and the SECI Model of (Nonaka and Takeuchi, 1995), advocate for social interaction among employees in knowledge sharing. The SCT and SECI Model theorise that by fostering a friendly relationship or friendlier bonds, individual are more relaxed and much more confident in exchanging their opinions and resources. The individuals' prospect to exchange their knowledge with others is encouraged when people make use of more time collectively. This is because, improved relation leads to further regular communication, and because communication is more useful since these relations as well produce a collective mutual understanding (Nahapiet and Ghoshal, 1998; Nonaka and Takeuchi, 1995).

Responses from library staff revealed that storytelling (11 (10.78%)) was not a familiar mechanism for knowledge sharing. This is despite the library managers indicating through interviews that informal storytelling was one of the activities and mechanisms put in place to facilitate knowledge sharing in university libraries of Malawi. However, such a response rate from library staff contradicts library managers' responses. And indeed it shows that just as mentoring and CoPs, storytelling as a concept may not be well understood by university management as a mechanism for knowledge sharing in university libraries of Malawi. In recent years, studies on the creation and transfer of tacit knowledge in organisations have tended to focus on organisational stories. Swap *et al.* (2001), in a literature review study 'Using mentoring and storytelling to transfer knowledge in the workplace', concluded that organisational stories are the detailed narratives of past management actions, employee interactions, and other events in an organisation that are informally communicated within it. Typically, these narratives will begin from within the organisation and will hence exhibit organisational norms, values and culture. In storytelling, participants frame their experiences in stories to explain how things are done. Storytelling is a powerful tacit knowledge transformation tool since it uncovers tacit skills by adding meaning and context to the ideas, facts, and so forth which the university libraries in Malawi have not fully utilised for their benefit.

In the USA, Colon-Aguirre (2015), conducted an empirical study on 'Knowledge transferred through stories: A typology', which investigated organisational stories shared among academic librarians who worked at the reference desk. The study revealed different kinds of knowledge that were shared through stories. The most prevalent story themes among librarians working at

the reference desk were their experience dealing with unusual patrons, former supervisors, poor administrators, former employees and past crises. The study further ascertained that since the stories presented were tacit and cultural in nature; these were considered essential ingredients for innovation. By communicating meaning and best practices, the study demonstrated that organisational stories can be applied in training and development of new employees; by reiterating past events in the organisation, stories can be employed as change management tools. In addition, stories were found to serve as motivation; especially, since they communicated triumphs and survival of individuals through past trials and tribulations. Lastly, the study established that organisational stories also become the history of the organisation as they are passed on from one member to another and they perpetuate belief systems and attitudes and become the collective memory of the organisation.

In Africa, studies on storytelling have been conducted by Wamundila and Ngulube (2011), Chigada (2014), a doctoral study on 'The role of knowledge management in enhancing organisational performance in selected banks of South Africa', and Muchaonyerwa (2015, a doctoral study on 'Knowledge sharing strategies in university libraries in KwaZulu-Natal province of South Africa'. Wamundila and Ngulube's (2011) study found that storytelling as a knowledge sharing tool was lacking, thereby exposing UNZA's capability to uncover implied knowledge for functional benefit was insufficient. Chigada (2014) found that storytelling was not a popular mechanism for maintaining knowledge in the banks studied, and Muchaonyerwa's (2015) study exposed a need of grasp and awareness with the notion of storytelling as a knowledge exchange means amongst library employees in the institutions studied. It was clear from the findings that storytelling as an unofficial technique for knowledge interchange was deficient in the institutions studied. The findings of the present study correlate to those of Wamundila and Ngulube (2011), Chigada (2014) and Muchaonyerwa (2015). The probable explanation for the identical findings of the four studies might be that despite all these studies being conducted in knowledge-intensive organisations using similar approaches, that are mixed method studies, it could also be that all the institutions were unfamiliar with and lacked knowledge about the power of storytelling to leverage knowledge sharing in institution surveyed. The use of stories to share knowledge in firms is supported by SECI Model (Nonaka and Takeuchi, 1995), who posit that narratives are influential unofficial medium of interchange, because they permit workers to exchange their know-hows and learn from one another.

6.6.2. Technological infrastructure

Technology in literature has been hyped to be a key enabler in implementing knowledge sharing. Technology, interchangeably known as Information and Communication Technology (ICT), guarantees that collecting, organising, transmitting and distributing knowledge within university libraries is undertaken competently and proficiently (A-Alawi, Al-Marzooqi and Mohammed, 2007; Jasimuddin and Zhang, 2009; Dewah and Mutula, 2014; and Tan, 2016). In the current study, most of the respondents consented to email, websites, phones, intranet, social media, facebook, institutional repository, discussion blogs, electronic bulletin boards, groupware and wikis as technological infrastructure available to promote knowledge sharing in university libraries.

Library managers that were interviewed added WhatsApp, intranet, personal computers and phones. ICTs are effectively utilised to enable and improve the organisational process of knowledge generation, storage/retrieval, transfer and utilisation. Jarvenpaa and Staples's (2001) findings of a study which explored 'Perceptions of organisational ownership of information among academic and administrative staff in Australian and Canadian state universities', revealed that ICTs enhanced both technical and social networks in universities by enabling knowledge sharing. To lend credence to Jarvenpaa and Staples's (2001) findings, Connelly and Kelloway (2003) found that many organisations that were attempting to intensify knowledge interchange amongst their staff created a knowledge depository where staff contributed their know-how by electronic means to the organisation. This allowed easy access amongst library staff to interchange their knowledge, mainly staff that were too preoccupied to operate face-to-face on project-linked issues. Alavi and Leidner, (2001) noted that some of the ICTs that allow knowledge management related activities include web-based storage, virtual communities, internet, intranet, groupware, video conferencing, group support systems, distance education tools, online group discussion, portal technology, instant messaging, and e-mails. Nonaka and Takeuchi (1995) posit that information technology, creative communication networks and databases are the mechanisms and infrastructure used for the acquisition, integration, synthesis and processing, and dissemination of the newly created knowledge.

An observation of the technological infrastructure available in the universities surveyed validated the library staff and library managers' findings. All libraries observed showed the availability of some communication tools such as computers connected to the internet, mobile

and fixed phones used for internal communication. An observation of their websites showed that almost all libraries had a presence on the social media including facebook, WhatsApp and mailing lists. Only one library had a presence on Myspace. However, the face book pages were for providing information to students and academics on new acquisitions, instruction on information literacy, and questions and answer sessions, rather than for knowledge sharing among library staff. The findings undoubtedly revealed that emails were the most favoured tools for knowledge interchange amongst library employees in institutional libraries studied. The study revealed that although Web 2.0 tools such as Blogs, wikis and Twitter, and social media platforms like facebook, WhatsApp provide cooperative partnership medium to increase knowledge interchange and output, these tools were not effectively used for knowledge sharing in university libraries. Knowledge management experts use them to gather individuals as a group so as to exchange and design proposals.

6.7 Factors influencing knowledge sharing

The present study sought to get an understanding of aspects that influenced knowledge interchange amongst library employees in the institutional libraries studied. The purpose was achieved by investigating KS factors to drive knowledge sharing in universities. These include: leadership, organisational culture or climate and organisational structure. Several factors have been proved to be key influencers of knowledge sharing in organisations that include leadership and management support (Wang and Noe, 2010), organisational culture or climate (Kim and Lee, 2006) and organisational structure (Chen and Huang, 2007).

6.7.1 Leadership and management support

The results of the current research show that the management of institutional libraries supported knowledge sharing among its staff. This is evidenced by the majority of library staff and university registrars who indicated that the library had a vision on the strategic importance of knowledge for achieving library objectives, and that this is clearly outlined and communicated to all staff. Equally, library staff and university registrars were of the view that library leadership set goals for knowledge sharing, as well as library staff and university registrars agreeing that library leadership encouraged knowledge sharing.

The cross tabulation and chi-square test revealed a significant difference between the paraprofessional and professional librarians (ranks) with regard to the library having a vision

on the strategic importance of knowledge for achieving library objectives in university libraries of Malawi. The tests show that (N=102, df=10, X^2=21.189, p=0.020) based on the decision rule, there is a critical distinction between the paraprofessional and professional librarians (ranks) with regard to the library having a vision on the strategic importance of knowledge for achieving library objectives in university libraries of Malawi. Despite the relative high percentage among professional and paraprofessional librarians (see Table 5.6), the investigator gathered that the dissimilarities with respect to the library having a vision on the strategic importance of knowledge for achieving library objectives in university libraries of Malawi, could be due to professional librarians having an opportunity to represent library management in university meetings, taking part in library budgeting and planning, enabling them to have first-hand information as opposed to the paraprofessional librarians.

A cross tabulation and chi-square test on library leadership set goals for knowledge sharing shows that there is no significant difference between the paraprofessional and professional librarians (rank) in university libraries of Malawi. The test show that (N=102, df=10, X^2=9.125, p=0.520) based on the decision rule, there is no critical distinction between the paraprofessional and professional librarians (rank) with respect to the library leadership setting goals for knowledge sharing in university libraries of Malawi.

A cross tabulation and chi-square test on *library leadership encourages knowledge sharing* shows that there is no significant difference between the paraprofessional and professional librarians (rank) with regard to library leadership encouraging knowledge sharing in university libraries of Malawi. The test results reveal that (N=102, df=10, X^2=8.781, p=0.553) based on the decision rule, there is no significant difference between the paraprofessional and professional librarians (rank) with regards to library leadership encouraging knowledge sharing in university libraries of Malawi. While, a regression analysis test show that leadership (β=-0.320, t=-1.839, p>0.05) did not have a statistically critical influence towards knowledge sharing. This is contrary to literature which suggests that leadership has a significance impact on knowledge exchange.

An interview with the library managers to find out the support they rendered to encourage knowledge sharing among staff, validated the library staff and university registrars' responses. The library managers indicated that they searched for opportunities for staff to acquire their

knowledge. These opportunities were in the form of conferences and short term training in which staff is supported through travelling and payment of fees. The results also show that library leadership created an enabling environment in which staff was encouraged to work in teams, interact and participate in knowledge sharing freely without being seen to be competing. Additionally, respondents stated that they provided equipment such as computers connected to the internet to facilitate their work.

Dedicated and competent management leadership, mixed with tactic, should be available within university libraries with the aim of top management taking full command for making policies, programmes and strategies. Jain (2014b), in a survey of knowledge management practice among academic staff at the University of Botswana, found that top leadership and management support improved the success of knowledge management initiatives in an organisation. This was achieved by translating the organisation's vision and mission into a knowledge management vision and mission and helping people realise that knowledge management is a behaviour not a project and maintaining employees' morale.

The Social Capital theory (Nahapiet and Ghoshal, 1998) notes that collective vision affords a joint reference structure for varied organisational staff to evaluate the legitimate and efficacy of prevailing organisational knowledge and integrate them inside their own organisational operational procedures in a standardised way. Without a collective vision, any learning or exchange by individual organisational members is less likely to be importantly understood, internalised, or applied by others within the same organisation. For this reason, creating a collective vision amongst organisational employees is of paramount significance in knowledge-based firms. Norms of collectivity that influence a person to leave personal pursuits for the group are a uniting force for that group (Tsai *et al.*, 2014).

The results of the current research are akin to those of Tan's (2016) survey, which investigated, 'Enhancing knowledge sharing and research collaboration among academics: The role of knowledge management' in five Malaysian universities. The study found that top management encouraged and provided finances that enabled academic staff to share their research outcomes at symposiums. The similarity of the results between the current study and those of Tan (2016), could be because both studies were conducted in universities of the developing countries. The difference though is that Tan's (2016) study was made up of professors, associate professors

and senior lecturers as opposed to this study whose target were university library staff. Top management backing in universities also included the transmitting of messages that knowledge sharing was essential to a firm's functioning, by way of contribution concerning monetary sustenance and other resources for infrastructure and for meaningfully increasing its knowledge base.

Despite some semblance of an overall perception of university libraries leadership's positive support towards knowledge sharing among library staff in the present study, their commitment is not known. In a similar study conducted by Jain (2014b) in Botswana, it was found that there was not a strong knowledge management leadership at the university, with no clear directions defined for knowledge management. In addition, there was no visible leadership and commitment of top management; and which provided inadequate budget for knowledge management initiatives. These are indicators that the top management did not seem to appreciate and give adequate support towards knowledge management proposals, as demonstrated in the insignificant priority placed on the growth and extension of knowledge management strategies in universities. The probable reasons for the similarities of the findings by Jain (2014b) and the current study could be attributed to the fact that both investigations were carried out in developing nations beset with insufficient budgets, inadequate staff training, insufficient technology facilities, deficiency of KM know-how, high cost of internet access, lack of lack of pointers on KM implementation, persistent power outages, lack of incentives, lack of relevant ICT skills, limited management help and an absence of KS culture (Jain, 2014b).

6.7.2 Organisational culture or climate

The study intended to analyse the influence of organisational climate /culture on knowledge interchange amongst paraprofessional and professional librarians. The variables tested include common trust amongst staff and between employees and library management; library management fostering of a culture of good learning environment; library management fostering a culture of creativity and new ideas; and that knowledge sharing is normally applied in the library. Culture is exhibited in the values, norms, and habits of the organisation, where values are showed in norms that subsequently form particular behaviour. Organisational culture has long been argued to influence knowledge sharing in an organisation and that it can influence knowledge sharing by establishing an atmosphere in which there are strong social norms

concerning the significance of sharing one's knowledge with others (Cabrera and Cabrera, 2007). Consequently, there is a requirement to appreciate individuals' way of living and how they impact their insights, so that knowledge exchange can be entrenched amongst library employees in the institutional libraries examined. One of the ways in which culture is said to influence knowledge management systems is by forming norms concerning sharing knowledge.

In the current study, library staff as well as all university and college registrars agreed that there was common trust amongst staff and between employers and library management. The findings revealed that most respondents disagreed and half of them were neutral that there was common trust amongst employees and between employers and library management in university libraries of Malawi. A cross tabulation and a measure of chi-square test on common trust amongst employees and between employees and library management show that (N=102, df=10, X^2=6.297, p=0.790) there was no critical distinction between the paraprofessional and professional librarians (rank) with respect to the existence of common trust amongst staff and between employees and library management in university libraries of Malawi.

In addition, a measure of regression analysis shows that trust (β=-0.180, t=-1.213, p>0.05) did not have a statistically critical influence towards knowledge sharing. However, this is contrary to literature for instance, Kim and Lee (2006) argue that trust and openness in organisations stimulate lively knowledge interchange amongst staff and that dependable behaviour increases communication speed by enabling co-workers to openly interchange individual knowledge and concerns. The authors observe that faithful and trusting relations reduce dishonesty, cheating, and the likelihood amongst workers to hold others responsible for organisational failures. Extreme degree of staff trust can develop to better knowledge exchange, mutual goals, and lower transaction costs. Without trust, official knowledge-interchange practices are inadequate to influence people to exchange knowledge with co-workers in the within the organisation.

The present study found that (74 (73.27%)) of the library staff and (4 (80%)) college and university agreed that library management fostered a culture of good learning environment in university libraries of Malawi. A measure of cross tabulation and chi-square test on library management fostering a culture of good learning environment in university libraries of Malawi show that (N=101, df=10, X^2=7.681, p=0.660) there was no critical distinction between the

paraprofessional and professional librarians (rank) and library management with regard to library management fostering a culture of good learning environment in university libraries of Malawi. The present study also found that (70 (70%)) library staff and (3 (60%)) college and university registrars agreed that library management fostered a culture of creativity and new ideas.

A cross tabulation and chi-square test on *library management fosters a culture of creativity and new ideas in university libraries* show that (N=102, df=10, X^2=16.908, p=0.076). The findings disclosed that there was no critical difference between the para-professional and professional librarians (rank) with regard to library management fostering a culture of creativity and new ideas in university libraries of Malawi. Equally, (71(70.2%)) library staff and (3(60%)) university and college registrars agreed that knowledge sharing is generally practiced in the library. A Cross tabulation and chi-square test conducted on *Knowledge sharing is normally applied in the library* show that (N=102, df=15, X^2=10.084, p=0.814) there was no critical distinction between the paraprofessional and professional librarians (rank) with regard to knowledge sharing generally being practiced in university libraries of Malawi.

To corroborate the library staff, and university and college registrars' responses, interviews were conducted with library managers on the description of the organisational culture for knowledge sharing of their institutions, (See question 31, Appendix 1 of the interview schedule). The library managers' responses portrayed a picture of a culture that is open, friendly, where there was free interaction of employees. The culture of openness and friendliness where staff freely interacted and consulted each other cultivates trust, which subsequently encourages knowledge sharing. One library manager believed that the culture is supportive of knowledge sharing because staff had a shared vision of the college.

Organisational culture is primarily exhibited by the leadership of the organisation or the department. Howell and Annansingh (2013) argue that one of the means in which organisational way of doing things impacts knowledge sharing is by leadership and top management establishing an atmosphere that sympathetic, open and trustworthy which cultivates and promotes teamwork, networking and collaboration. Other important organisational culture that influence employee knowledge sharing according to Kim and Lee (2006) are social networks, motivation to share, trust and teamwork spirit. Syed-Ikhsan and

Rowland (2004) advise that management should create a culture that inspires individuals to exchange their knowledge, rather than hoarding it.

6.7.3 Organisational structure

Organisational configuration reveals the manner jobs are scheduled inside the organisation; as well as the way individuals are to execute their tasks centred on the guidelines, processes, and conventions of the organisation (Syed-Ikhsan and Rowland, 2004). In the current research, the organisational configuration was examined with regard to the way it aroused knowledge exchange amongst library employees.

An analysis of the results amassed using the survey questionnaires, interviews and observations showed library structures that mirrored parent organisations whose structures were too formalised, with an emphasis on rules and regulations, and control systems. Such a structure is not amenable to enhance knowledge sharing among library staff. Library staff were of the view that the library structures had a greater amount of clearly expressed work regulations and guidelines, as exhibited by the majority of library staff and university and college registrars as shown in Tables 5.9 and 5.10 respectively. The findings also showed that employees abide by the obviously distinct task procedures prepared by the organisation in knowledge sharing, as reflected by the responses by library staff and college registrars.

The structure as indicated by the library staff and university and college registrars relied on close administration in regulating everyday processes as revealed by. While less than half of the respondents either did not agree or were neutral that the library staff relied on close administration in regulating everyday processes. This type of structure slows the processes, produces a system where there is lack of participation that diminishes communication, devotion, and participation with errands and assignments amongst organisational members. This was reflected in library staff responses in which only a few indicated that staff participated in the decision-making process. Some of the respondents felt that employees did not have the freedom to participate in the decision making processes in the university libraries. While, fewer respondents were neutral indicating that they either agreed or disagreed that employees participated in decision making process in their libraries. The study also established that the structures of universities surveyed did not speed up the decision making processes as some

respondents felt that the environment speeded up the decision making processes, while other library staff were of the contrary view and yet others were neutral.

An interview with library managers on how the nature of their organisational structure enhanced trust, communication and knowledge sharing among staff in their libraries, (See question 32, Appendix 1 of the interview schedule) shows that the institution had a bureaucratic structure with clear chain of command which could not be bypassed. This was also validated by an observation of the library structures (Appendix 5). The respondents however, pointed out that there was an allowance of circumventing the established lines of communication for speedy decision-making. In some instances some structures portrayed a mix of hierarchy and flexibility. Yet, in some other cases, the structures of their institutions were said to be democratic, flexible and open which allowed staff to discuss, and consult each other. It was not clear though whether such systems enhanced trust, communication and knowledge sharing among staff in university libraries surveyed. An observation of layout of office space, and organisation of library sections (see Appendix 5) of the observation tool, showed that almost all offices for senior staff were closed; only junior staff had open workrooms for their daily work activities. Overall, the results exemplify library structures that are highly centralised. If libraries had decentralised structures, they would have created a work atmosphere that emboldens interface amongst staff by essentially using unrestricted rooms, use of flexible job specifications and job interchange and promoting the exchange of knowledge throughout divisions and unofficial consultations as espoused by Nonaka's SECI Model (Nonaka and Takeuchi, 1995).

The results of the present study support the findings of Muchaonyerwa (2015), who in her doctoral study in which she investigated the flexibility of libraries' structures to facilitate knowledge sharing, ascertained that libraries mirrored the universities' configurations, which are extremely rigid and hierarchical, and hence not appropriate for knowledge exchange. Al-Alawi, Al-Marzooqi and Mohammed (2007), in their mixed method study of public and private sector organisations in Bahrain, found that centralised organisational structures were usually characterised by complex levels and chain of command with particular description of information reporting processes. Such structures slowed the processes, usually utilised great amount of time for knowledge to flow to every level, and raise constraints on information flow.

The results from multiple regression analysis revealed that there was no critical connection between organisational configuration and knowledge sharing as evidenced by the p-value ($\beta=0.014$, $t=0.014$, $p>0.05$) in Table 5.9. The present findings are comparable to a study by Syed-Ikhsan and Rowland (2004) in Malaysia which established that there was no critical connection between knowledge dissemination and organisational configuration within the state -owned organisations they studied. The similarities could be because both studies were done in publicly funded institutions. Syed-Ikhsan and Rowland (2004), Al-Alawi, Al-Marzooqi and Mohammed (2007) and Chen and Huang (2007) found in their studies that structures that are too formalised, with an emphasis on rules and regulations, and control systems, lessen the prospect for personal development and progression, and inhibits creative answers to concerns in that they serve as a barrier to creation of knowledge sharing communities in organisations. Rather, a decentralised or horizontal organisational structure encourages collaboration, coordination of teams, mutual adjustments, networking and integration roles in an organisation which allows flexible coordination during task execution and leads to increased knowledge sharing (Syed-Ikhsan and Rowland, 2004; Al-Alawi, Al-Marzooqi and Mohammed, 2007; Chen and Huang, 2007).

Findings of the current study also indicated that library staff maintained close social relationship ties and that they spent a lot of time interacting, and that they knew each other on a personal level. These findings were validated by all the registrars who agreed that library staff maintained close social relationships. Much as the findings indicated that library staff maintained close social relationship ties and that they spent a lot of time interacting, it is not clear whether this was for sharing knowledge or for enhancing their socialisation. A regression analysis to determine the strength of social interaction ties to knowledge sharing yielded the results ($\beta=-0.047$, $t=-0.346$, $p>0.05$), indicating that social interaction ties did not have a statistically significant influence towards knowledge sharing. This is contrary to some studies conducted elsewhere which show social interactions to be necessary for successful tacit knowledge sharing. Findings of Fathi, Eze and Goh (2011) in Malaysia, and Chang and Chuang (2011) in Taiwan bear witness. Fathi, Eze and Goh (2011) in using a survey study to investigate key determinants of knowledge sharing in an electronics manufacturing firm in Malaysia, found that social relationship ties had significant influence on the attitude towards sharing knowledge. The authors established that by building attached bonds or closer ties, individuals were more contented and much more optimistic in sharing their opinions and resources. In a

similar study by Chang and Chuang (2011) who conducted a social survey study on 'Social capital and individual motivation on knowledge sharing: Participant involvement as a moderator' in Taiwan, found that the further these social bonds develop, the more pronounced the strength, occurrence, and extent of the knowledge exchange. Accordingly, it has been theorised that social bonds can improve knowledge interchange behaviour. The Social Capital Theory by Nahapiet and Ghoshal (1998) and the SECI Model by Nonaka and Takeuchi (1995) state that in the course of knowledge adaptation, and formation in companies, implicit knowledge is exchanged by means of socialisation which involves considerable social interaction amongst workers.

Findings of the current study, further show that despite library staff indicating that they trusted their colleagues to lend a helping hand, most of the staff did not trust their colleagues that they would keep their promises. This is supported by most of the library staff who were neutral, indicating that they neither agreed nor disagreed that they trusted their colleagues would keep promises. A regression analysis of trust shows (β=-0.180, t=-1.213, p>0.05) that trust did not have a critical distinction influence towards knowledge sharing. The findings of the current study are in contrast to literature which points to the other direction. Tsai *et al.* (2014) in their survey study on 'Group social capital in virtual teaming contexts: A moderating role of positive affective tone in knowledge sharing' in Taiwan, established that there was a relationship between trust and knowledge exchange. Trust is cultivated as a result of interpersonal relationships. High degree of trust encourages successful consultation, understanding and exchanges since trust develops the worth of interchange, discourse and appreciation. Trust is fostered after some time as organisational staff absorbed into repetitive exchanges with co-workers and study to count on them for realising collective organisational targets and results (Tsai *et al.*, 2014).

In a study that investigated the impact of organisational context and information technology on employee knowledge sharing capabilities in South Korean public and private organisations, Kim and Lee (2006) established that trust was related to knowledge sharing. They further found that trust and openness in organisations promoted lively knowledge exchanges amongst workers and that honesty behaviour enhanced communication rapidly by inspiring co-workers to openly communicate personal knowledge and issues. The dissimilarities of the current study's findings and those of Kim and Lee (2006) and Tsai *et al.* (2014) could conceivably

result from the fact that the organisations targeted by Kim and Lee (2006) and Tsai *et al.* (2014) had well established knowledge management systems and updated IT infrastructures compared to the organisations surveyed in this study. Possible explanations for trust not being found to have a statistically critical impact on knowledge interchange in the current study, could be that people were more willing to contribute their private knowledge because of their close and regular contact amongst themselves. Another probable clarification is that trust is not critical in risky knowledge sharing interactions.

Pertaining to communication, the findings of the current study revealed that library staff viewed face to face communication highly in their daily tasks. An observation of the communication channels, showed that horizontal and vertical lines of communication were used by staff to communicate among themselves at the same level, as well as with their superiors and juniors to share their thoughts. A factor analysis measure showed that the statements under communication had the highest mean score on average, with employees communicating and discussing with other members frequently scoring a mean of 3.85 and a standard deviation of 0.89; while employees' readiness to interconnect and converse with other members in detail had an average score of 3.90 and a standard deviation of 0.90. Similarly a regression analysis measure had a score of $\beta=-0.283$, $t=-2.045$, $p<0.05$, implying that communication had a statistically significant influence towards knowledge sharing.

The results of the present investigation are supported by Al-Alawi, Al-Marzooqi and Mohammed's (2007) mixed method study of public and private sector organisations in Bahrain. The study found that about half of the employees indicated that the structures were decentralised, flexible and allowed them to participate in decision making processes, only either disagreeing or beinge neutral. The study further established that the system allowed for face-to-face communication with their colleagues and free flow of information throughout organisational levels. Communication has been lauded in literature to promote knowledge sharing. For instance, the SECI Model (Nonaka and Takeuchi, 1995) posits that interpersonal communication is one of the mechanisms used for the acquisition, and dissemination of the tacit knowledge.

6.8 Attitude of Librarians towards Knowledge Sharing

Theory of Reasoned Action (TRA) Model (Ajzen and Fishbein, 1980) posits that together, extrinsic and intrinsic motivation influence individual intents to engage in knowledge exchange as well as their actual knowledge interchange behaviour.

The current findings of the study found that workers' attitudes and intents to exchange knowledge were related to their inherent drive to exchange knowledge. This study also found that worker attitudes toward and intents regarding knowledge exchange were deeply linked with their inherent drive rather than external motivation to exchange knowledge. The results imply that a feeling of the know-how and self-assurance of employees could be a requisite for workers to partake in knowledge exchanges. To be precise, workers who believed in their capacity to donate knowledge had a tendency of greater drive to contribute their knowledge to co-workers because they derived pleasure in helping others. Library managers' interview findings validated the other library staff's findings by recounting that staff were contented to exchange their knowledge with others outside the organisation through paper presentations at conferences and documents. The findings imply that library staff were intrinsically motivated to share their knowledge.

The results of the current research draw parallel with those of Bock and Kim (2002), Wasko and Faraj (2005) and Bello and Oyekunle (2014). Bock and Kim (2002) used a quantitative method and theory of reasoned action (TRA) to explore the attitudes of knowledge sharing in four large public organisations in South Korea. Their study revealed that staff with high self-assurance in their capability to donate knowledge were more likely to complete particular assignments. Their findings also showed that knowledge efficacy expressed in people trusting that their knowledge could assist to resolve job associated problems and increase work efficacy.

Wasko and Faraj (2005) also in their mixed method study on 'Why should I Share? Examining social capital and knowledge contribution in electronic networks of practice', found that a major predictor of individual knowledge donation was the perception that participation enhanced an individual's reputation. Thus, employees were innately driven to donate knowledge as partaking in scholarly activities and resolving problems was thought -provoking or enjoyable and because they enjoyed assisting others. Knowledge donors who derive gratification from helping co-workers may be more favourably focused toward knowledge exchange and more inclined to exchange knowledge (Wasko and Faraj, 2005). The study also

found that staff were innately driven to share their knowledge because they believed that it could lead to achievement and success, they enjoyed helping others, and solving colleagues' work related problems. Bello and Oyekunle (2014) used a quantitative survey and theory of planned behaviour to investigate the attitude, perceptions and motivation towards knowledge sharing in universities in Kwara State in Nigeria. The study found that staff were innately driven to exchange their knowledge because they believed that it could lead to achievement and success, they enjoyed helping others, and solving colleagues' work related problems.

The results of the current research similarly show that the attitude of library staff towards knowledge sharing were either very pleasant, very good, valuable, or very valuable. This together with the library managers' interviews show that library staff had a positive attitude towards knowledge because they felt they could contribute something good. One of the interviews stated that the attitude of staff had improved from what was previously happening where staff used to be sensitive to what they wanted to share with their colleagues. This is exemplified by staff sending each other their newly acquired knowledge. The results generally show that library staff's knowledge sharing with their colleagues is either very pleasant, very good or very valuable.

The results of the current research are similar to those of Lin (2007), Fullwood, Rowley and Delbridge (2013) and Muchaonyerwa (2015). Fullwood, Rowley and Delbridge (2013) used a survey to examine the attitudes of and intentions towards knowledge sharing of academics in the United Kingdom (UK). The findings revealed that academics had an undoubted optimism attitude regarding knowledge exchange, thus, signifying that the positive attitudes transformed into robust affirmative intents regarding knowledge exchange. This was attributed to the belief that by engaging in knowledge interchange, academics would promote and spread their interactions with co-workers and that they were willing to be considered for inward elevation and exterior engagements.

Muchaonyerwa (2015) in her doctoral study in which she investigated attitude and perceptions of library staff towards knowledge sharing in South Africa, established that respondents had an optimistic attitude concerning knowledge sharing. This positivity was ascribed to the fact that sharing knowledge with co-workers was viewed as being good and wise. In addition, Witherspoon *et al*. (2013) used a quantitative, across-discipline, meta-analytic summary of 46

210

studies spanning North America, Asia, and Europe, to investigate antecedents of individuals' knowledge sharing intentions and behaviours in organisations. The findings of the study were that attitude concerning knowledge exchange had the largest impact on knowledge exchange intentions.

Pertaining to knowledge sharing intentions, the results indicate that library staff's intention to share work reports and related documents with colleagues in the library more frequently in the future were good. This is shown by the majority of the respondents who had indicated that they had an intention to share work reports and related documents with colleagues in the library more frequently in the future. The findings also revealed that library staff's plans to share their manuals, methodologies, and models with their colleagues in the library in the future was positive as shown by most of the respondents who agreed to the statement. The findings further revealed that respondents' intentions to share their experience or know-how from work with colleagues in the library in the future was positive. Equally, the findings revealed that library staff were willing to share their know-where or know-whom at the request of the colleagues in the library in the future as well as they had an intention to share their expertise obtained from education and training with their colleagues in the library in the future.

Witherspoon *et al*. (2013) found that knowledge sharing intention had the largest influence on knowledge sharing behaviour. This positive relationship was influenced by anticipated pay increases, and promotions, and reputation building.

Results of the current study on the effect of expected institutional rewards on knowledge exchange, revealed a negative relationship. This is evidenced by about half respondents who did not agree that they would get an increased pay in exchange for knowledge interchange. Few respondents were neutral, implying that they neither agreed nor did not agree that they would get an increased pay in exchange for knowledge interchange and a minority of them agreed.

The study also found that most of the respondents did not agree that they will get a higher bonus in exchange for knowledge interchange, while others were neutral and a few agreed. Equally, some respondents either disagreed, agreed or were neutral that they will get improved elevation prospects in exchange for knowledge interchange. Furthermore, the findings revealed

that most respondents disagreed, agreed and or were neutral that they will get improved job security in exchange for knowledge interchange. Interviews with library managers on the availability of incentives to encourage sharing revealed that, although they would have loved to reward staff through performance management appraisals, the appraisal tools do not have items on knowledge sharing. This posed challenges to some strides staff had made towards knowledge sharing. The study also revealed that staff through performance management appraisal system were rewarded through promotions based on their satisfactory performance. Some other incentives as cited by the respondents were achieved through sending staff for training, conferences, workshops, and through verbal recognition. Some of the respondents noted that monetary rewards were discouraged because of budgetary constraints, but rather some gifts were awarded to the deserving staff. The findings show that expected organisational rewards had no significant effect on the attitude to sharing knowledge.

The results of the current research correlate with the findings of Bock and Kim (2005), Lin (2007), Buckley (2012) and Jain (2014b) who established an absence of connection between monetary rewards and knowledge exchange in some firms they studied. Bock and Kim (2005) explored the attitudes of knowledge exchange in four large public organisations in South Korea and found that the larger the incentives employees were offered, the more negatively they viewed the activity for which the bonuses were received (Bock and Kim, 2005). Some possible reasons provided by the researchers for this negative relationship were that rewards had a punitive effect because they are manipulative like outright punishment. Also, not receiving a reward that one had expected to receive is akin to being punished.

Secondly, rewards break off relationships. For each person who wins, there are many others who feel they have lost. When employees compete for a limited number of incentives, they will very likely begin to see each other as competitors to their own success. Finally, rewards, like punishment, may weaken inherent drive. The more they encounter being monitored, the more they are inclined to lose whatever they are undertaking. Lin (2007) in a survey that examined the effects of extrinsic and intrinsic motivation of employee knowledge sharing intentions in 50 firms in Taiwan, established that organisational financial incentives were not critically correlated to workers attitude or intents regarding knowledge exchange. Possible reason provided by Lin (2007) is that more than 67% of the participants were managers who may not have valued organisational incentives. Rather, these respondents may have been inspired by

other purposes such as the conviction that reassuring staff to share knowledge with co-workers was a requirement. The author also argues that external incentives flourish merely in getting short-term conformity. Finally, the author acknowledges that with inherently driven workers, the creation and transmission of implied knowledge is more significant than with externally driven workers (like those driven by financial reward. The findings of the current study that monetary rewards did not influence knowledge sharing correlate with those of Lin (2007). The reason for this scenario could be attributed to staff being inherently driven rather than externally driven to interchange their knowledge.

Buckley (2012) in her study of 'Higher education and knowledge sharing: From ivory tower to twenty-first century' in South Africa, established that rewarding academics for knowledge creation can be controversial, since academics in universities are supposed to be creators of knowledge. She found that there was no conclusive evidence that rewarding academics was critically correlated to knowledge exchange and as such there was no point in rewarding academics in any form. The author, however encouraged the use of incentives such as recognition; duty or need; a good frame of reference; a sense of give and take (quid pro quo); feedback mechanisms for letting knowledge sharers know their knowledge is being used; and the pleasure of helping someone attain their goals. On the other hand, Jain (2014a) in an empirical study in which she investigated knowledge management practices in Southern African Development Community (SADC) university libraries, ascertained that constant budget decline impacted on everything including an absence of reward system, and lack of incentives for knowledge exchange. The findings of the current study corroborate those of Jain (2014b), in the sense that budgetary constraints hindered some efforts to provide monetary rewards to staff that engage in knowledge exchange.

The findings of the present research indicate that employees regarded reciprocity to be one of the positive values of knowledge exchange implying that they also valued knowledge sharing more positively. Reciprocity represents the conviction of people that knowledge exchange will provide them the assurance of forthcoming assistance from others. The results show that most respondents acknowledged that knowledge sharing with colleagues strengthened ties between existing members of the organisation and themselves. Similarly, the majority of respondents indicated that knowledge sharing with colleagues expanded their scope of their association with other organisation members. The study revealed further that most respondents indicated that

when they shared knowledge amongst themselves, they expected to obtain knowledge in exchange when necessary. In the same manner, many respondents indicated that when they shared knowledge with their colleagues, they believed their forthcoming demands for knowledge would be responded to.

Lin, Wu and Lu (2012) in a survey study that used the relations model theory, explored the affect factors of knowledge sharing behaviour in Taiwanese companies. The study established that reciprocal relationships are grounded on the premise that when the extent of task interdependence is more intensive, the more evident it reinforces the relationships in which individuals consider that to be part of a team in which each person is at the same level and where it is naturally envisaged to exchange their thoughts and ideas. Such an impression of mutual benefit leads to the involvement of exchange behaviours within and between groups and further results in mutually interactive relationship formed by such dependence (Lin, Wu and Lu, 2012). The present study also found that (87(85.3%)) respondents indicated that knowledge sharing with colleagues expanded their scope of their association with other organisation members.

Kankanhalli, Tan and Wei's (2005) empirical study that investigated the contribution of knowledge to electronic knowledge repositories in the United States of America (USA), found that reciprocal benefits provided an effective motivation to facilitate knowledge sharing and as a result achieved long term cooperation. In this way, employees believed they could obtain reciprocal benefits from their colleagues and other organisational members by sharing their knowledge. In such relationships, knowledge possessors require knowledge demanders to give out equal assistance in return in the future wherever necessary. Under such a consensus, the knowledge possessor would be more willing to spend time and efforts in sharing their knowledge. That is why reciprocity has been regarded as one of the positive values of knowledge sharing, implying that if employees valued knowledge sharing more positively, the behaviour of sharing will also be observed more frequently (Lin, Wu and Lu, 2012). The current study has established that mutual benefits considerably influenced workers' attitudes and intents concerning knowledge exchange. This could be because of the collaboration ability which depended greatly on belief as amicable exchange, without which information and knowledge interchange cannot happen easily lacking such mutuality.

As regards shared vision and goals, the findings of the present study revealed that the vision and goals had an influence on employees' knowledge sharing. This is shown by most respondents who agreed that staff in the library shared the vision of assisting fellow staff to resolve their professional problems. While only a few could neither agree nor disagree with the statement. In the same manner, some respondents agreed that the staff in the library shared the same goal of learning from each other. Others were neutral with the statement and a minority disagreed. The study found further that most respondents were positive that staff in the library shared the common value that assisting others was pleasant, while some were neutral and others disagreed. Library managers interviewed to give an account of how the libraries shared the library vision/goals with library staff indicated that meetings, emails, library webpages, brochures, strategic plans, notice boards were some of the methods through which library vision/goals were shared with library staff. However, an observation of the websites showed that one of the university colleges, did not have a functional website. Other colleges and universities had functional websites, but their library webpages only had a mission statement without a vision/goals. Without a functional website, it may prove difficult for the library to share the vision/goals of the library with library staff.

Shared vision or goals have been observed as a connecting process that supports diverse units of an organisation to join or to pool resources together. Tsai *et al.* (2014) in a survey study that examined group social capital in virtual teaming contexts in Taiwan found that knowledge sharing was positively affected by shared vision. The preceding authors maintained that organisational employees who shared a vision were anticipated to be allies sharing or exchanging their resources. Likewise, Chow and Chang (2008) in a survey study that used the social capital and theory of reasoned action frameworks, examined social network among some managers of some Hong Kong companies. The study revealed that social system tie and goals considerably supported the subject norm on knowledge, social trust and shared goals in organisational knowledge sharing, although the two did not have straightforward consequences on the intent to exchange knowledge within the organisations.

6.9 Issues, concerns or challenges for knowledge sharing

The study sought to establish some challenges for knowledge sharing in universities surveyed. Responses from interviews with library managers revealed several issues, concerns or challenges that existed in universities as a whole and libraries in particular for knowledge

sharing. Relating to universities as a whole, some of the major challenges were lack of policies, inadequate budgets for organising knowledge sharing foras which hampered knowledge sharing, as well as lack of incentives to encourage staff to share their knowledge. The findings of the present study are consistent with the findings of Jain (2014b) and Dewah and Mutula (2014) who found a plethora of challenges in the studies they conducted. Jain (2014a), in a study she investigated on knowledge management practices in Southern African Development Community (SADC) university libraries, found that budget cuts in academic libraries had negatively impacted on rewards systems on knowledge management activities. In the same way, Dewah and Mutula (2014) in a study, examined knowledge retention strategies in public sector organisation in sub-Saharan Africa, also ascertained budget cuts, an abscence of inducements or compensations to exchange knowledge.

The findings of the present study also show a lack of institutional repositories and database of staff's research expertise. An absence of a database of staff's research expertise is fraught with nonexistence of the knowledge management audit to decipher the knowledge silos of the organisations. Some plausible explanations that can be advanced for lack of institutional repositories and database of staff's research expertise are lack of appropriate technology and skilled personnel due to inadequate budgets. Jain (2011) in a literature review of new trends and future applications/directions of institutional repositories in academic institutions revealed that institutional repositories which had increasingly become an avenue for alternative publishing models, had their growth concentrated largely in institutions in the developed world. The results of this current study are comparable with those of Jain (2011; 2014b) and Dewah and Mutula (2014). The Jain (2011; 2014a; 2014b) and Dewah and Mutula (2014) studies found numerous challenges that hindered the successful development of institutional repositories in the less developed countries. The challenges included limited commitment and support from leadership and senior management which meant that they could not allocate adequate budget to support staff training, maintenance costs of IRs, provide incentives to motivate staff deposit their academic work, and provide sufficient and appropriate technology facilities. Other challenges included lack of knowledge management expertise, difficulties in generating content due to low deposits attributed to a lack of institutional policies and mandatory requirements, time constraints, lack of respectability that publishing in institutional repositories is sometimes difficult to achieve the type of recognition that the material merits and technical challenges among them. Dedicated and competent management leadership, tied with tactics,

should be evident in the university libraries to enable top management assume complete control for making policies, projects and plans (Connelly and Kelloway, 2003).

The current study also found that time constraint was another challenge that hampered knowledge sharing activities. It was mentioned that when staff members came back from a conference, they could not share their knowledge because they were preoccupied with their normal duties and that their work schedules were congested. The explanation for this phenomena could be because lack of policy framework which mandates staff to share their knowledge in the University Libraries surveyed. The results of the current research are consistent with comparable studies in university libraries in Southern Africa which showed that, knowledge initiatives were not being observed and KM programmes were absent (Maponya, 2004; Wamundila and Ngulube, 2011; Muchaonyerwa, 2015). In addition, Tan's (2016) survey of five Malaysian universities in which she investigated 'Enhancing knowledge sharing and research collaboration among academics: The role of knowledge management', found that top leadership backing in universities also included the communicating of messages that knowledge sharing is essential to an institution's running, by way of contribution concerning monetary funding and other resources for infrastructure for considerably growing its knowledge base.

Time constraints to share knowledge was also exacerbated by lack of library rooms meant for staff socialisation which were taken up for classes. Socialisation as provided in literature is a critical element for knowledge sharing. In the United States of America (USA), a case study by Jantz (2012) on 'Innovation in academic libraries: An analysis of university librarians' perspectives', and Huang and Li (2009) in a survey study on 'The mediating effect of knowledge management on social interaction and innovation performance' in Taiwan, found that social collaboration promoted the collection, exchange, and use of valuable knowledge and led to the improvement of innovations in libraries. In addition, the Social Capital Theory (SCT) (Nahapiet and Ghoshal, 1998) and the SECI Model of Nonaka and Takeuchi (1995), advocate for social interaction among employees in knowledge sharing. The SCT and SECI Model theorise that by forming friendly understandings or closer bonds, individuals are more contented and much more optimistic in donating their concepts and resources.

The present study also established that lack of formal mechanisms for knowledge sharing meant that when an experienced library staff left the organisation, the library was bound to lose that knowledge and suffer. As already mentioned, possible reasons for this situation in university libraries surveyed could be that management lacked an understanding of knowledge management practices. In some cases, the study also found that staff could not access their institutional websites off campus. This undoubtedly meant that staff could not access and retrieve knowledge resources from their libraries, let alone access their emails.

6.10 Summary of the discussion of findings

The interpretation and discussion of findings of the present research were centred on the themes in accordance with the study's purpose, related written works reviewed, and the central study's questions (see section 1.4) and principal and complementary theories underpinning the study, which included: Social Capital Theory (SCT) (Nahapiet and Ghoshal, 1998); Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 2000); and Socialisation, Externalisation, Combination and Internalisation (SECI) Model likewise referred to as Knowledge Conversion Theory (Nonaka and Takeuchi, 1995).

The results discussed disclosed that university libraries in Malawi were earnestly involved in the generation of both explicit and tacit knowledge, through research; minutes of meetings; proceedings of library staff's papers at conferences; emails and memos; operational procedure manual handbooks; circulation statistics; policy documents; curriculum documents; rules and regulations; bibliographies and indexes; audio visual production of inaugural lectures and graduation ceremonies; workshop reports circulated to library staff; marketing and or promotion of library information resources, services and customer care; books and journals acquired from publishers; open access documents shared to staff for instance Koha library software; database management; and institutional repositories. Despite the exponential, knowledge generation and acquisition in university libraries surveyed, this knowledge was not codified, thereby posing a risk of loss of valuable organisational knowledge.

The findings revealed that staff in university libraries acquired their knowledge through: experienced members of staff, internet and the library's databases, collaboration and teamwork colleagues, learn by doing, networking and through procedure manuals. The knowledge that

was produced and collected by library staff was exchanged among them. The rationale for sharing the knowledge created and acquired was for improving the provision of library resources and the promotion of novel products and services such as the provision of technological services. It was evident that the main mechanisms for sharing knowledge were attending workshops and training of both new and existing staff. The study unveiled that brainstorming, mentoring, communities of practice and storytelling were not preferred mechanisms for knowledge sharing in university libraries. Although the current study established that all universities surveyed showed an availability of Web 2.0 applications such as Blogs, wikis and Twitter, and social media platforms like facebook, WhatsApp which provide shared partnership medium to enhance knowledge exchange and output, the findings revealed that the tools were not effectively utilised to create and exchange knowledge among library staff in university libraries.

The study also found out that factors such as organisational climate, organisational structure, social interaction ties, trust, and coordination, did not have a statistically critical impact towards knowledge exchange. Only communication, specifically, face to face communication was established to have a profound impact on knowledge exchange and that it was a catalyst through which library staff communicated, shared and achieved personal and organisational goals.

The current study uncovered that staff attitudes towards knowledge sharing and intents concerning knowledge exchange were moulded by prospects concerning mutual benefits from knowledge exchange. The staff attitudes toward and intents concerning knowledge exchange were deeply connected with their inherent drive rather than extrinsic motivation to share knowledge. The study also established that staff were contented to exchange their knowledge with others outside the organisation through paper presentations at conferences and documents. The results imply that a perception of the capability and self-assurance of staff may have been a requisite for staff to partake in knowledge exchange. The discussion evidently showed that knowledge sharing and knowledge management practices were not part of the organisational culture in the universities surveyed.

A more detailed summary of the findings, conclusions and recommendations is provided in Chapter Seven

CHAPTER SEVEN
SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

The main objective of the present research intended to examine the knowledge sharing strategies in university libraries in Malawi. The study sought to address the following research questions:

1) What types of knowledge is generated or acquired by university libraries in Malawi?
2) What is the rationale for knowledge creation and sharing by university libraries in Malawi?
3) What mechanisms and infrastructure are used for knowledge sharing in university libraries in Malawi?
4) What are the factors influencing knowledge sharing in University libraries in Malawi?
5) What is the attitude of librarians towards knowledge sharing in university libraries in Malawi?
6) What framework is needed for effective knowledge sharing in University libraries in Malawi?

The study was guided by pragmatism paradigm in which quantitative and qualitative approaches were used with a survey within a case study design. The Social Capital Theory (SCT) (Nahapiet and Ghoshal, 1998), complemented by the Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 2000), and Socialisation, Externalisation, Combination and Internalisation (SECI) Model of the Knowledge Conversion Theory (Nonaka and Takeuchi, 1995) were employed as the guiding theories.

The group of the investigation was made up of all library employees who possessed a Library and information Science (LIS) qualification namely; Certificate, Diploma, Bachelor's, postgraduate Diploma, Honours, Master's and Doctorate degrees occupied in institutional libraries in Malawi. Data were gathered by means of a survey questionnaire, interview schedule, document analysis, and observations. Quantitative data were analysed utilising IBM SPSS software version 20 to produce descriptive and inferential measurements, while qualitative data were analysed using thematic analysis. The validity and reliability of the research tools were attained by utilising triangulation, adjusting elements in data gathering instruments from earlier researches whose Cronbach's alpha values surpassed the minimum threshold of 0.70. The ethical parts of the study were attained by fulfilling the UKZN research ethics procedure, informed consent and securing gate keepers permissions.

This chapter is organised into three main headings namely summary of findings, conclusion, and recommendations. In addition, the originality of the study, contributions of the study and suggested areas for future research are presented.

7.2 Summary of findings

This section provides a summary of the findings of the study based on the following research questions. What types of knowledge is generated or acquired by university libraries in Malawi? What is the rationale for knowledge creation and sharing by university libraries in Malawi? What mechanisms and infrastructure are used for knowledge sharing in university libraries in Malawi? What are the factors influencing knowledge sharing in university libraries in Malawi? What is the attitude of librarians towards knowledge sharing in university libraries in Malawi? What framework is needed for effective knowledge sharing in university libraries in Malawi? The presentation on these questions is preceded by summary of demographic data of respondents.

7.2.1 Summary of the demographic profiles of the respondents

A demographic investigation was carried out to uncover the departments they worked for, their ranks and work experience, gender, age and educational qualifications of the respondents in the university libraries. The study ascertained that most of the respondents were males 83 (72.8%), while 24 (21.05%) were female. The distribution of the ranks of the respondents

shows that: paraprofessional staff dominated the echelons of the libraries. This category of staff made up 88 (86.27%) of the library staff, in which 46 (45.08%) were library assistants, of these, 20 (19.6%) were from the technical services, and 17 (16.6%) from the reader's services sections. These were followed by 21 (20.5%) senior library assistants, of which 10 (9.8%) were from reader's services and 8 (7.8%) from the technical services section. The other category of paraprofessionals made up of 18 (17.6%) chief library assistants, with half 9 (8.8%) of these from the technical services section and the other half from different sections; and 3 (2.9%) were library attendants of which 2 (1.9%) were from the technical services and 1 (1%) from the reader's services section.

A further analysis of the demographics of the respondents indicate that most respondents were above the age of 31 years with educational qualifications varying from certificate, diploma, Bachelor's degree, Masters' and Doctorate degree. Their ranks ranged from library assistants to University /College Librarian and from Assistant Registrar to College Registrar.

7.2.2 Strategies used for capacity building and retention of staff

The interview question only targeted university and college librarians to find out strategies used for capacity building and retention of staff in universities surveyed. The findings of the study were that strategies used for capacity building were achieved through academic training (Certificate, Diploma, Bachelors, Masters, and Doctorate programmes) and short term training through attendance of workshops, seminars, and conferences. Furthering of staff's education or training was for staff's acquisition of new skills, knowledge and change in attitude. Staff training and professional development in turn equipped staff with pertinent working knowledge valuable to organisational processes. Also by encouraging and sponsoring staff to attend international conferences, it meant a huge motivation for staff. This made staff feel valued by the university they represented and this could be one way of retaining the best employees. In the end, individual competences are continuously developed, thereby making a huge contribution to organisational success.

The other strategies used for staff retention apart from training and education were motivation of staff through promotion based on performance, delegation of staff to committee meetings, sharing of responsibilities, job rotation, and placement of staff in their rightful positions. In another instance, at one university, the respondents indicated that staff retention was the

prerogative of the central office, of which the library had no control. However, the study considers the placement of staff in their rightful positions through recruitment of staff with subject matter expertise as an important aspect of capacity building and retention of staff. Subject matter know-how is entwined to the abilities, and practical knowledge of people, and may be enhanced by way of prescribed qualifications, on-the-job or practical learning, and can be a feature of employees of any age. Some firms have specialists who have joined them with skill which is then refined and modified to their responsibilities. The know-how could be in particular, described subjects such as cataloguing and classification of library materials, reference services, and journals management.

7.2.3 Types of knowledge generated or acquired by university libraries.

The first research question of the study intended to determine the types of knowledge generated or acquired by Malawian university libraries, by finding out the particular types of knowledge (tacit and explicit) generated, and the sources of knowledge acquisition in university libraries. The findings of the study showed that university libraries generated and acquired the following knowledge: minutes of meetings, proceedings of library staff's papers at conferences, emails and memos, operational procedure manual handbooks, circulation statistics, policy documents, curriculum documents, rules and regulations, bibliographies and indexes, audio visual production of inaugural lectures and graduation ceremonies, workshop reports circulated to library staff, marketing and or promotion of library information resources and services, customer care, books and journals acquired from publishers, open access documents shared to staff, for instance Koha library software, database management, and institutional repositories. The knowledge generated and acquired in the university libraries were within their core mandate of knowledge acquisition, processing (cataloguing, classifying, indexing, building of bibliographies) and dissemination of such knowledge to library users.

The study revealed that knowledge generation and acquisition of tacit and explicit type was common in the university libraries. Explicit knowledge generation was ascribed to the regular research reports, procedure manual handbooks, circulation statistics, policy documents, curriculum documents, rules and regulations, bibliographies and indexes, workshops and conference proceedings and their reports, emails and memos, and the codification of the same that were generated. The generation of tacit knowledge was through staff's socialisation, formal and informal interactions such as during tea breaks, and regular staff meetings.

The study further revealed that the main source of staff knowledge acquisition was mainly by means of experienced members of staff, internet and the library's databases, collaboration and teamwork, colleagues and learning by doing. The findings seemed to be in consonant with Nonaka and Takeuchi (1995)' theory of knowledge, which underscored the importance of socialisation for staff members to collaborate in the same environment. Nonaka and Takeuchi's (1995) knowledge creation theory also theorises that tacit knowledge is shared when juniors learn through practical experience, instead of from laid down manuals of work guidelines. The acquisition of knowledge from experienced staff, according to Nyaude and Dewah (2014) enhances work skills for junior members of staff. In addition, it also assures an organisation that knowledge is retained at the exit from service of the experienced members of staff.

7.2.4 Rationale for knowledge creation and sharing

The second research question investigated the rationale for knowledge generation. The findings showed that staff produced knowledge for team building, enhancement of collaboration among staff, enhancement of communication skills, improvement of training, education and networking of newly recruited employees. This was to build staff's capacity to improve the delivery of library services and innovations. Some of the innovations introduced were the use of koha, an open source library software, institutional respository, electronic book detection system, CCTV, the introduction of the provision of electronic journals, e-grannary and other databases at the expense of print journals. The improvement of delivery of library services and introduction of technological services were for the purposes of assisting the universities to fufill their mandate of teaching, research, consultancy and outreach. These findings are supported by Jain (2014b), who stated that knowledge management was found to enhance the provision of library resources in addition to a library's general output in numerous ways, by providing well-timed and worthwhile, customer-focused and 24 hours library services in a stable way.

7.2.5 Mechanisms and IT Infrastructure used for Knowledge Sharing

The third research question investigated the mechanssms and IT infrastructure available for knowledge sharing. The findings revealed staff meetings, attending workshops, conferences and training for both new and existing staff, communication networks such as internet, intranet and extranet and e-mails were the available mechanisms for knowledge sharing. The findings also revealed that mentoring, improved documentation of existing knowledge, Communities of

Practice, and storytelling were not highly regarded mechanisms for knowledge sharing. Nonaka and Takeuchi's (1995) knowledge creation theory, Nahapiet and Ghoshal's (1998) Social Capital Theory (SCT) assert that mentorship, Communities of Practice, and storytelling are some of the mechanisms firms use to share knowledge.

The findings of the study also revealed a presence of ICT infracture tools like computers connecte to the internet, fixed phones that were maily used for internal communication. Web 2.0 applications such as Blogs, wikis and Twitter, and social media platforms like facebook, WhatsApp provided cooperative partnership medium to increase knowledge interchange and output. However, the study found that staff did not use Web 2.0 applications for sharing knowledge, but for communicating social activities and improving social relations among themselves. The knowledge creation theory of Nonaka and Takeuchi (1995) posits that information technology, creative communication networks, and databases are the mechanisms and infrastructure used for the acquisition, integration, synthesis and processing, and dissemination of the newly created knowledge.

7.2.6 Factors influencing knowledge sharing

The study showed that knowledge exchange among employees was shaped by many aspects including leadership and management support, lack of trust, inflexible structures, and budget constraints and an overall lack of policy framework for knowledge management. Although the findings revealed some semblance of an overall perception of university libraries leadership's positive support towards knowledge sharing among library staff, their commitment to providing adequate budget for knowledge sharing was absent. The findings revealed lack of trust among staff.

The organisational structures of the university libraries surveyed were described as nonflexible which affected the speedy decision making process among the diverse departments and sections of the institutions. The findings pointed to the library configurations epitomising the configurations of their parent universities, hence impeding successful knowledge exchange.

7.2.7 Attitude of Librarians towards Knowledge Sharing

The results on the attitude of employees concerning knowledge exchange showed that staff's intents concerning knowledge exchange were shaped by anticipations concerning mutual

benefits from knowledge exchange. The findings showed that staff attitudes toward and intents concerning knowledge exchange were deeply related with their inherent drive instead of external drive to exchange knowledge. The study revealed that a sense of capability and self-assurance of staff was a requisite for staff to partake in knowledge exchange. Staff who believed in their capability to donate knowledge were motivated to contribute their knowledge to colleagues because they derived pleasure in helping others. Overall, the findings established that staff was contented to exchange their knowledge with others outside the organisation through paper presentations at conferences and documents. The findings indicated that library employees were intrinsically motivated to exchange their knowledge.

7.3 Conclusions

This section provides conclusions emanating from the results of each research question and themes arising from the study. These include: strategies used for capacity building and retention of staff; types of knowledge generated or acquired by university libraries in Malawi; the rationale for knowledge creation and sharing by university libraries in Malawi; mechanisms and infrastructure used for knowledge sharing in university libraries in Malawi; factors influencing knowledge sharing in university libraries in Malawi; attitude of librarians towards knowledge sharing in university libraries in Malawi; and framework needed for effective knowledge sharing in university libraries in Malawi.

7.3.1 Strategies used for capacity building and retention of staff

The findings of the study pertaining to strategies used for capacity building and retention of staff in universities studies point to the following strategies used: academic training (Certificate, Diploma, Bachelors, Masters and Doctorate programmes) and short term training through attendance of workshops, seminars and conferences. Staff training and professional development was intended to motivate and equip staff with pertinent working knowledge useful to organisational processes. Motivation of staff through promotion based on performance, delegation of staff to committee meetings, sharing of responsibilities, job rotation and placement of staff in their rightful positions were other strategies used to retain staff. The recruitment of staff with subject matter expertise and their placement in rightful positions was intended to facilitate the capacity building and retention of staff.

7.3.2 Types of knowledge generated or acquired

The university libraries studied generated and acquired the following knowledge: minutes of meetings, proceedings of library staff's papers at conferences, emails and memos, operational procedure manual handbooks, circulation statistics, policy documents, curriculum documents, rules and regulations, bibliographies and indexes, audio visual production of inaugural lectures and graduation ceremonies, workshop reports circulated to library staff, marketing and/or promotion of library information resources, services and customer care, books and journals acquired from publishers, open access documents shared to staff, for instance Koha library software, database management, and institutional repositories. It can be deduced from the findings that the knowledge generated and acquired in the university libraries were within their core mandate of knowledge acquisition, processing (cataloguing, classifying, indexing, building of bibliographies) and dissemination of such knowledge to library users.

The study revealed that knowledge generation and acquisition of tacit and explicit type was common in the university libraries. Knowledge generation was due to endless research reports, procedure manual handbooks, circulation statistics, policy documents, curriculum documents, rules and regulations, bibliographies and indexes, workshops and conference proceedings and their reports, emails and memos, and the codification of the same in the case of explicit knowledge. Tacit knowledge generation on the other hand, was through staff socialisation, through formal and informal interactions such as during tea breaks, and regular staff meetings. The study further revealed that the main source of staff knowledge acquisition was mainly by means of experienced members of staff, internet and the library's databases, collaboration and teamwork, colleagues and learning by doing.

7.3.3 The rationale for knowledge creation and sharing

The findings point to generation and acquisition of knowledge by staff for team building, enhancement of collaboration among staff, enhancement of communication skills, improvement of training, education and networking of newly recruited employees. The knowledge generated and acquired by staff was also for their capacity to improve the delivery of library services and innovations. Some innovations introduced included: use of koha, an open source library software, institutional respository, electronic book detection system,

CCTV, the introduction of the provision of electronic journals, e-grannary and other databases at the expense of print journals.

The improvement of delivery of library services and introduction of technological services were for the purposes of assisting the universities to fufill their mandate of teaching, research, consultancy and outreach.

7.3.4 Mechanisms and technology infrastructure used for knowledge sharing

The research found the following mechanisms in place including: staff meetings, attending workshops and Conferences, training for both new and existing staff, communication networks such as internet, intranet and extranet and e-mails. The study also found that staff did not use mentoring, improved documentation of existing knowledge, Communities of Practice, and for knowledge exchange. The results of ther esesarch also revealed a presence of ICT infrastructure tools like computers connected to the internet, fixed phones that were mainly used for internal communication. Despite, Web 2.0 applications such as Blogs, wikis and Twitter, and social media platforms like facebook, WhatsApp which provided cooperative partnership medium to increase knowledge interchange and output. The findings of the current study found that library staff did not use Web 2.0 applications for sharing knowledge, but for communicating social activities and improving social relations among themselves.

The findings seemed to suggest that the institutions depended on face-to-face communication to enhance social ties and collaboration between and among the workers.

7.3.5 Factors influencing knowledge sharing

The study found out that there was lack of trust among staff that affected knowledge sharing amongst them, inflexible structures, budget constraints and lack of policy framework for knowledge management. The findings revealed that lack of knowledge management policies resulted in provision of inadequate budgets for organising knowledge sharing forums. This affected rewarding of staff to motivate them to share knowledge between and among themselves. The study also found that the culture of openness and friendliness where staff freely interacted and consulted each other to cultivate trust that encouraged knowledge sharing was lacking. The organisational structures of the university libraries surveyed were described as nonflexible which affected the speedy decision making process among the diverse

departments and sections of the institutions. The results pointed to the library configurations epitomising the configurations of their parent universities, hence impeding successful knowledge exchange.

7.3.6 Attitude of librarians towards knowledge sharing

The findings showed that staff attitudes toward and intents concerning knowledge exchange were deeply related with their inherent drive instead of external drive to exchange knowledge. The study revealed that a sense of capability and self-assurance of staff was a requisite for staff to partake in knowledge exchange. The findings established that staff was contented to exchange their knowledge with others outside the organisation through paper presentations at conferences and documents. The results indicated that library staff was intrinsically motivated to share their knowledge. The findings seemed to suggest that staff was not motivated by organisational rewards for knowledge sharing.

7.3.7 Challenges of knowledge sharing

The study unearthed a plethora of KS challenges in the university libraries. These include lack of policy framework for knowledge management; lack of institutional repositories, and database of staff's research expertise; lack of appropriate technology and skilled personnel; time constraints; and lack of incentives to encourage staff to share their knowledge.

7.4 Recommendations

Based on the findings and interpretation of the study, and conclusion arrived at, the recommendations are presented in sections 7.4.1 to 7.4.4.

7.4.1 Recommendation: Documentation of Tacit and Explicit Knowledge

The results of the research found large amounts of knowledge produced and collected in university libraries surveyed. However, staff did not document nor codify the knowledge they generated and acquired in university libraries, thereby posing a risk of losing such valuable organisational knowledge.

Recommendation 1: Documentation and Codification of Tacit and Explicit Knowledge-
Therefore, the study strongly recommends that university libraries management should put in place a policy aimed at documenting, codifying and storing in databases tacit and explicit

knowledge generated and acquired by staff in university libraries. University staff could access, reuse and share the knowledge. Wamundila and Ngulube (2011) and Dewah and Mutula (2016) argued that the documented and codified knowledge makes it simple for the knowledge to be used again, particularly in creating project proposals, thereby sparing a great amount of time, and alleviate steady loss of knowledge and help in the learning timeframe for newly hired staff.

7.4.2 Recommendation: Mechanisms and ICT Infrastructure for Knowledge Sharing

The study revealed that University libraries in Malawi did not have well formally planned and executed mechanisms for knowledge sharing in place. This was attributed to an absence of Knowledge management policy. In addition, the current study established that all universities surveyed showed an availability of Web 2.0 applications such as Blogs, wikis and Twitter, and social media platforms like facebook, WhatsApp, which provided cooperative partnership medium to increase knowledge interchange and output. Despite the availability of these technological tools, the findings revealed that library staff did not use these tools effectively to create and share knowledge in university libraries.

Recommendation 2: Mechanisms for Knowledge Sharing-

The study recommends that top library managers should put in place a policy on formal mentorship programmes, storytelling, and Communities of Practice (CoPs) as mechanisms for knowledge sharing. The Social Capital Theory (SCT) (Nahapiet and Ghoshal, 1998) and the SECI Model (Nonaka and Takeuchi, 1995) advocate for social interaction among employees in knowledge sharing, through CoPs. The SECI Model (Nonaka and Takeuchi, 1995) supports the use of narratives to share knowledge in firms as an influential unofficial medium of interchange, because they permit workers to exchange their know-hows and learn from one another. Similarly, Nonaka and Takeuchi's (1995) SECI Model, regard mentorship as a means of transferring implicit knowledge from expert to unskilled employees or from coach to trainee. Subsequently, the organisation benefits if the more skillful employees retire or exit the organisation through death, retirement, dismissal or for other options. The above mechanisms encourage interaction and collaboration among staff, subsequently leading to knowledge sharing.

Recommendation 3: ICT Infrastructure for Knowledge Sharing-

Similarly, it is important that university libraries management, together with the universities management of the institutions studied should put in place a policy that would promote and encourage the use of Web 2.0 tools. Library employees in university libraries to create and exchange knowledge could use the Web 2.0 tools such as Blogs, wikis and Twitter, and social media platforms like facebook and WhatsApp.

7.4.3 Recommendation: Organisational Structure and culture

The study revealed that University libraries in Malawi institution had a bureaucratic structure with clear chain of command. This exemplifies library structures that are highly formalised and hierarchical and therefore not suited for knowledge exchange. The research similarly ascertained that the culture of openness and friendliness where staff freely interacted and consulted each other to cultivate trust that encouraged knowledge sharing was lacking.

Recommendation 4: Flexible Structures-

The study recommends that university libraries management should establish decentralised or horizontal organisational structures that encourage collaboration, coordination of teams, mutual adjustments, networking, and integration of roles in an organisation that allows flexible coordination during task execution that would lead to enhanced communication. The study also recommends that university libraries management should empower co-workers to openly share individual knowledge and concerns, which in turn would enhance trust and openness in organisations thereby promoting active knowledge sharing among employees.

7.4.4 Top management support

The present study findings revealed that although knowledge management improved the delivery of information services to clients in university libraries, it was not fully supported by university management. There were no time and budgetary allocations for knowledge management.

Recommendation 5: Budgetary allocation for KM-

The study recommends that the universities management should allocate a budget and time for KM activities. The budget would cater for acquiring sufficient and appropriate technology

facilities for establishment of Institutional Repositories (IRs), database of staff's research expertise, staff training, and maintenance costs of IRs; and provide incentives to motivate staff to deposit their academic work. The budget would also be used towards finding time, space for staff's socialisation and for organising fora for knowledge sharing.

7.5 Contribution and originality of the study

The research questions tackled in this research were of significance to university management, library management, library staff and stakeholders in Malawi as a whole and university libraries in particular. From a policy viewpoint, the findings revealed that the four universities covered in this study did not have a knowledge management policy. The study concluded that the absence of such a policy could negatively impact the application of effective knowledge exchange in university libraries of Malawi. Therefore, the findings are useful in providing policy direction to university and libraries management on Knowledge Management, and knowledge sharing in Malawi. There is a need to put in place a policy aimed at documentation, codification and storing in databases of the tacit and explicit knowledge generated and acquired by staff in university libraries. Staff could then access and reuse the knowledge and share it amongst themselves. Likewise, the study has established the need for a policy on formal mentorship programmes, storytelling, and Communities of Practice (CoPs) as strategies for knowledge sharing in university libraries. The study has equally found the need for a policy that would promote and encourage the use of Web 2.0 tools such as Blogs, wikis and Twitter, and social media platforms like facebook, WhatsApp amongst library employees in university libraries to create and share knowledge.

The said policies would compel universities management to allocate budget and time for KM activities such as the creation of IRs, database of staff's research expertise, staff training, and maintenance costs of IRs, provision of incentives to motivate staff deposit their academic work, and provide sufficient and appropriate technology facilities. The findings create appreciation among policy formulators and practitioners about KM and knowledge exchange to increase productivity and improved service delivery.

From practical perspective, the study has some implications for university library management and library staff. Firstly, the study has identified some strategies for promoting knowledge sharing in university libraries in Malawi such as: documentation of tacit and explicit knowledge

generated and acquired in university libraries, formulation of policy on formal mentorship programmes storytelling and Communities of Practice (CoPs), technological infrastructure as mechanisms for knowledge sharing. The study also recommends the establishment of decentralised or horizontal organisational structures that encourage collaboration, coordination of teams, mutual adjustments, networking and integration of roles in an organisation, which allows flexible coordination during task execution ion that leads to increased knowledge sharing. Above all, the study has identified top management support as the chief factors in leveraging KM and KS activities in university libraries by allocating a budget and time for KM activities.

The theoretical implications of the study are that the literature reviewed showed inadequate studies on knowledge exchange in university libraries in an emerging nation setting such as Malawi. Most of the empirical studies on knowledge sharing have tended to concentrate on the private sectors and public sector organisations rather than the education sector. Furthermore, literature reviewed suggests that most of the studies on knowledge sharing have tended to concentrate in the developed world and Asian transitional economies such as the USA, UK, Australia, New Zealand, Spain, Canada, China, Malaysia, Japan, Taiwan, Iran and South Korea.

At the same time, most of the researches on knowledge exchange have extensively used the SECI Model, SCT and TRA in conjunction with other models/theories or as stand-alone models (See chapter two). The literature reviewed did not reveal studies that indicate the three theoretical frameworks being used to underpin studies on knowledge sharing in university libraries. As such, this study contributes to the existing body of knowledge by being the first broad one to explore knowledge sharing practices in university libraries in Malawi. The contribution of this study is also original in the sense that there is a scarcity of empirical studies on knowledge sharing strategies in university libraries in Malawi. A search of the general database such as Scopus using search strings *knowledge sharing*, revealed a paucity of research work on KS from the Malawian university libraries. The present study has also generated knowledge by proposing a conceptual framework for KS in university libraries of Malawi. The section that follows provides the justification for the proposed framework.

7.5.1 Justification for the framework

The purpose of the proposed framework is to provide a road map for university libraries management in Malawi in developing and applying clear knowledge management policies. The framework will also help to explain and predict the research phenomena on knowledge sharing from a developing country context such as Malawi. The current study noted the weaknesses of SECI Model, SCT and TRA discussed in the thesis (See Chapter Two, Theoretical Framework). The weaknesses of extant KM theoretical frameworks and models See sections (2.2, 2.3 and 2.4) include lack of focus on university library systems and their general orientation and emphasis on private and business entities. The proposed framework therefore, addresses the said weaknesses by focussing on variables such as (codification of tacit knowledge, the mechanisms for knowledge sharing, organisational culture and structure necessary for knowledge sharing) gleaned from the study that are regarded as critical in knowledge sharing. The model also recognises KM policy, budgetary allocation; incentives to reward staff and intrinsic and extrinsic motivation of library staff as critical to knowledge sharing. Current and future scholars are invited to test this model either within or outside Malawi. The model is illustrated in Figure 7.1 and its various components (knowledge sharing; codification of tacit and explicit knowledge; mechanisms and ICT infrastructure for KS; and organisational structure and culture) are briefly explained.
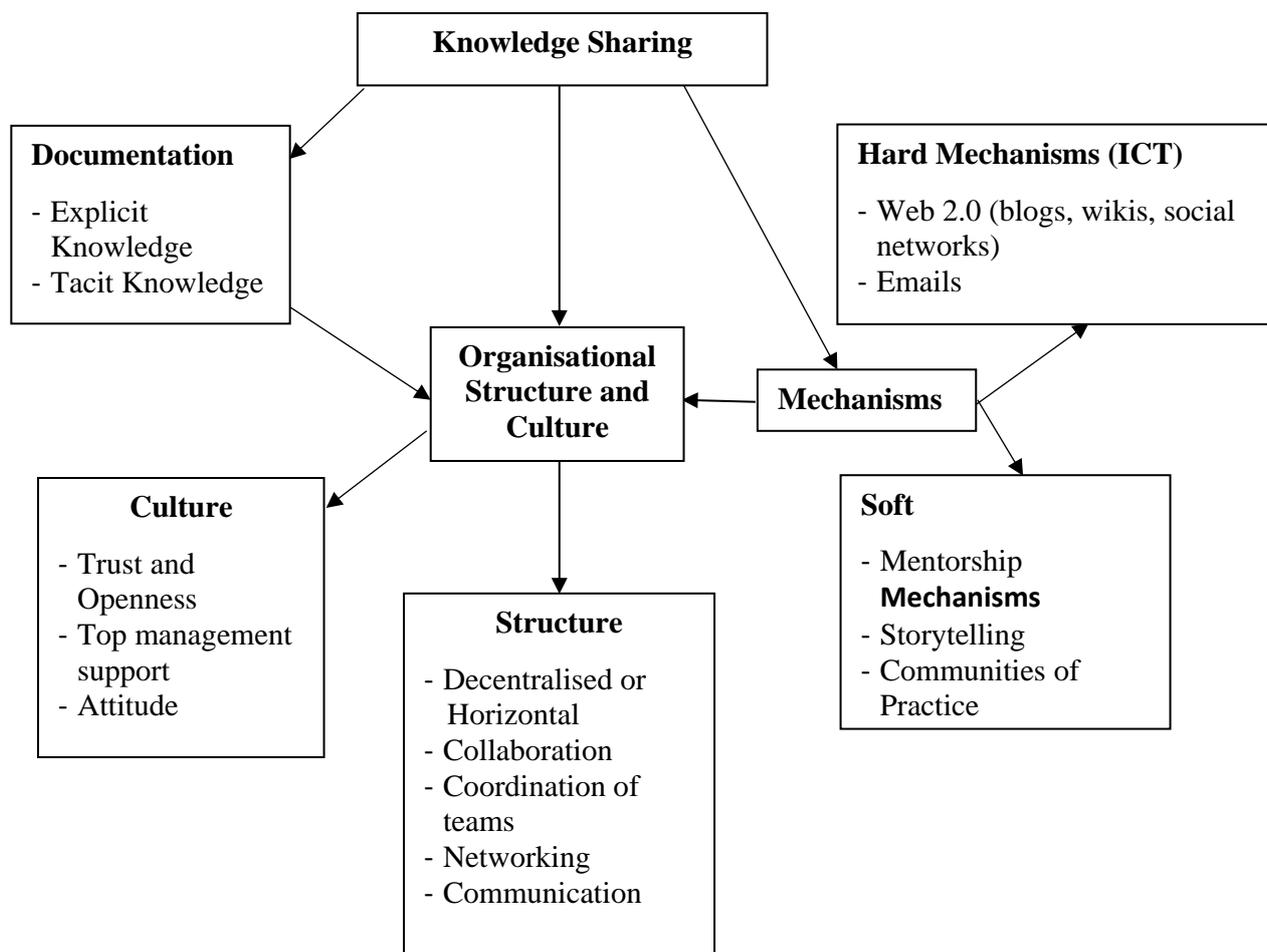
Figure 7.1: Proposed Model for Knowledge Sharing in University Libraries in Malawi

Knowledge sharing: Knowledge sharing (KS) is part of the wider field of knowledge management (KM). It refers to the exchange or dissemination of explicit or tacit data, ideas, suggestions and expertise or technology between individuals or group of employees (Nooshinfard and Nemati-Anaraki, 2014). In libraries, knowledge is shared to improve communication between staff and students, staff and management and among staff themselves to improve service delivery.

Codification of Knowledge generated: University libraries generate both explicit and tacit knowledge which is lost because it is not codified. Codifying and storing in databases tacit and explicit knowledge generated and acquired by staff in university libraries could enable university staff access, reuse and share the knowledge. Wamundila and Ngulube (2011) and

Dewah and Mutula (2016) argued that the documented and codified knowledge makes it simple for the knowledge to be used again, particularly in creating project proposals, thereby sparing a great amount of time, and alleviate steady loss of knowledge and help in the learning timeframe for newly hired staff. Codification of such knowledge could therefore, lead to successful sharing of knowledge in university libraries.

Mechanisms and ICT Infrastructure for Knowledge Sharing: In order for knowledge to be shared, there has to be some mechanisms. Mechanisms are classified into two dominant groups focussing on the type of knowledge they intend to share. These are, soft mechanism which represents the knowledge sharing through person-person interface such as storytelling, brainstorming, communities of practice, training, workshops, seminars, telephone calls, face to face meetings, mentoring, (Mutula and Mooko, 2008; Jasimuddin and Zhang 2009; Jain, 2014b; Abbas, 2015; Tan, 2016). In face-to-face interactive communication, the sharing of tacit and explicit knowledge occurs through socialisation and externalisation exhibited in the SECI model that can be adapted by university libraries. According to Jasimuddin and Zhang (2009), the hard mechanism which shares chiefly explicit knowledge, allows knowledge to be codified and shared using ICTs. ICT infrastructure plays an important role in knowledge sharing by facilitating contact between those seeking knowledge and those who control access to knowledge. Such ICT infrastructure includes emails, web 2.0 applications such as, wikis, twitter, blogs, newsgroups and mailing lists.

Organisational structure and culture: The organisational structures of the university libraries need to be flexible for speedy decision making process among the diverse departments and sections of the institutions. Decentralised and flexible structures would lead to ccollaboration, coordination of teams, networking and enhanced communication resulting in successful knowledge sharing. A culture of trust and openness can promote active knowledge sharing among employees in university libraries. But, this can only happen with top management in terms of budget support for KM initiatives, staff training and incentives to motivate staff to deposit their academic work, and to openly share individual knowledge and concerns, which in turn would enhance knowledge sharing.

7.6 Suggestions for future research

The present study investigated knowledge sharing strategies in university libraries in Malawi. The study was limited to libraries in public universities only. Future research may be conducted across all spectrum of university staff to find out the strategies, practices and challenges of knowledge sharing in universities. Given that the current research was done in public universities only, future research may be carried out in private universities as well as in public and private organisations, to investigate their knowledge sharing strategies, practices and to compare the findings.

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APPENDICES

APPENDIX I: Informed Consent Letter (Interview Schedule for University and College Librarians)

University of KwaZulu-Natal

Department of Library and Information Studies

Private Bag X01

Scottville 3209

Pietermaritzburg

14 July 2016

Dear Respondent

<u>Informed Consent Letter</u>

I, George Theodore Chipeta a student of University of KwaZulu-Natal, kindly invite you to take part in the study called *Knowledge sharing strategies in University libraries of Malawi.* This research project is undertaken as part of the requirements of the PhD, which is undertaken through the University of KwaZulu-Natal, Information Studies Programme.

The purpose of this research is to examine the strategies of knowledge sharing in University libraries in Malawi with the view to providing interventions to enhance knowledge production. Partaking in this research assignment is discretionary. You may opt out or pull out from the research project at any stage and for any reason without any form of sanction. There will be no financial benefit from partaking in this research project. Your confidentiality and anonymity will be guaranteed.

If you have any queries or issues about partaking in this research, please feel free to communicate with myself or my promoter at the contacts indicated above.

Thank you for participating in this research project.

256

July   2016

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Signature   Date

I .... hereby agree to take part in the above research.

Name: .... Date: .... Signature: ....

Student's details

Researcher: George Theodore Chipeta

Institution; University of KwaZulu-Natal

Telephone number: 031 260 4373

Email address: 215081657@Stu.ukzn.ac.za

Supervisor's details

Supervisor: Prof S Mutula

Institution: University of KwaZulu-Natal

Telephone number: 033-260 5093

Email address: Mutulas@ukzn.ac.za

Time of interview   **Date**

A. Biographic and background information

1. Affiliation of respondent……………………..

2. Age category of respondent

   20-30

   31-40

   41-50

   51-60

   61 years and above

3. Gender of respondent----------------------

4. Highest qualification of respondent---------------

5. Designation--------------------

6. Please, could you describe your job?

   ----

7. Please describe services that your library offers to the clientele.

   ----

8. What are the qualifications of staff in your library and what are their responsibilities?

9. Are the qualifications held by the library staff suited for delivering the library mandate?

10. What strategies are used for capacity building and retention of staff?

11. What succession planning does your library have in place and how are they executed?

B. **Types Of Knowledge Generated Or Acquired by Library**

12. What types of knowledge are generated or acquired by your library?

----

13. How is the knowledge generated or acquired contribute to the mission of vision of the library?

----

14. To what extent is explicit and tacit knowledge acquired or generated by your library**?**

C. **Rationale for Knowledge Creation and Sharing among Library Staff**

15. How is the knowledge generated or acquired used in your library?

16. Who is involved in creating or generating knowledge in the library?
17. Who is involved in sharing the knowledge created or generated?
18. How is the knowledge created or generated stored?
19. How is the knowledge created or generated managed?
20. What innovations have you wholly conceived and successfully implemented in the library?

D. **Mechanisms and Infrastructure for Knowledge Sharing in the Library**
21. What infrastructures and mechanisms are in place to facilitate knowledge sharing in your library?

22. How would you describe the way knowledge created or generated or acquired is shared among staff in your library?

----

23. How does your library ensure retains and shares knowledge of staff leaving the library through retirement or for greener pastures elsewhere?

----

24. What activities are put in place by the library to facilitate knowledge sharing?

----

25. What training does the library provide to staff for enhanced service delivery and how often?

----

26. What Information technology infrastructure is in place to promote knowledge sharing among library staff?

----

27 What policies does the University have for knowledge sharing?

----

28 What strategies does the library employ to prepare current staff for future positions in view of senior staff leaving?

---

29 Factors Influencing Knowledge Sharing in the Library

_____

30 What in your opinion are the factors influencing knowledge sharing in University libraries in Malawi?

----

31 What kind of support do the Library leadership and Management render to encourage knowledge sharing among staff?

----

32 How would you describe organisational culture for knowledge sharing in your library?

----

33. How does the nature of your organisational structure enhance trust, communication and knowledge sharing among staff in your library?

----

34. What knowledge management strategies are available to enhance innovation and productivity among staff in your library?

----

35. Attitude Of Librarians Towards Knowledge Sharing

_____

36. What in your opinion is the attitude of library staff towards knowledge sharing?

----

37. What incentives are available to encourage staff to share knowledge?

----

38. How does the Library Management share the library vision/ goals with library staff?

----

39. To what extent are library staff happy to share their knowledge with others within or outside the organisation?

----

40. What issues, concerns, or challenges for knowledge sharing exist in your university as a whole and the library in particular?

APPENDIX II: Informed Consent Letter (Questionnaire for Senior and Assistant Librarians)

<div align="right">

University of KwaZulu-Natal

Library and Information Studies Programme

Private Bag X01

Scottville 3209

Pietermaritzburg

14 July 2016

</div>

Dear Respondent

<u>Informed Consent Letter</u>

I, George Theodore Chipeta a student of University of KwaZulu-Natal, kindly invite you to participate in the research project called *Knowledge sharing strategies in University libraries of Malawi.*

This research project is undertaken as part of the requirements of the PhD, which is undertaken through the University of KwaZulu-Natal, Information Studies Programme.

The purpose of this research is to examine the strategies of knowledge sharing in University libraries in Malawi with the view to providing interventions to enhance knowledge production. Partaking in this research assignment is discretionary. You may opt out or pull out from the research project at any stage and for any reason without any form of sanction. There will be no financial benefit from partaking in this research project. Your confidentiality and anonymity will be guaranteed.

If you have any queries or issues about partaking in this research, please feel free to communicate with myself or my promotor at the contacts indicated above.

It should take you about 15 minutes to complete the questionnaire.

Thank you for participating in this research project.

July 2016

---------------------   -------------------
Signature   Date

I .... hereby agree to take part in the above research.

Name: .... Date: .... Signature: ....

Student's details
Researcher: George Theodore Chipeta
Institution; University of KwaZulu-Natal
Telephone number: 031 260 4373
Email address: 215081657@Stu.ukzn.ac.za

Supervisor's details
Supervisor: Prof S Mutula
Institution: University of KwaZulu-Natal
Telephone number: 033-260 5093
Email address: Mutulas@ukzn.ac.za

APPENDIX III: Informed Consent Letter (Questionnaire for Para-professional library staff)

<div align="right">

University of KwaZulu-Natal

Library and Information Studies Programme

Private Bag X01

Scottville 3209

Pietermaritzburg

14 July 2016, 2016

</div>

Dear Respondent

<div align="center">

Informed Consent Letter

</div>

I, George Theodore Chipeta a student of University of KwaZulu-Natal, kindly invite you to participate in the research project called *Knowledge sharing strategies in University libraries of Malawi.*

This research project is undertaken as part of the requirements of the PhD, which is undertaken through the University of KwaZulu-Natal, Information Studies Programme.

The purpose of this research is to examine the strategies of knowledge sharing in University libraries in Malawi with the view to providing interventions to enhance knowledge production. Partaking in this research assignment is discretionary. You may opt out or pull out from the research project at any stage and for any reason without any form of sanction. There will be no financial benefit from partaking in this research project. Your confidentiality and anonymity will be guaranteed.

It should take you about 15 minutes to complete the questionnaire.

Thank you for participating in this research project.

July 2016

--------------------   -------------------
Signature   Date

I .... hereby consent to participate in the above study.

Name: .... Date: .... Signature: ....

Student's details

Researcher: George Theodore Chipeta

Institution; University of KwaZulu-Natal

Telephone number: 031 260 4373

Email address: 215081657@Stu.ukzn.ac.za

Supervisor's details

Supervisor: Prof S Mutula

Institution: University of KwaZulu-Natal

Telephone number: 033-260 5093

Email address: Mutulas@ukzn.ac.za

Section A: Characteristics of respondents

Kindly indicate your responses by ticking the relevant box (es) on the right column and providing further explanation where required.

s/no.	Question		
1	University	UNIMA	
		KCN	
		POLY	
		COM	
		CHANCO	
		MZUNI	
		LUANAR	
		MUST	
2	Department/Section	Technical Services (Cataloguing and Classification)	
		Acquisitions	
		Special collection	
		Readers' Services	
		Children's Library services	
		American Corner	
		Serials' Collection	
		Law Library	
		Reference	
3	Rank	Chief Library Assistant	
		Senior Library Assistant	
		Library Assistant	
		Library Attendant	
4	Number of years served in the current position	0-5 years	
		6-10 years	
		11-20 years	
		21 years and above	
5	Gender	M	
		F	
6	Age range	19-30	
		31-40	
		41-50	
		51-60	
		61 years and above	
7	Highest educational qualification	JCE	
		MCE	
		Certificate	
		Diploma	

		Bachelor's Degree	
		Honours Degree	
		Masters' Degree	
		PhD	
	Others, please specify		
8	Explain what services/activities your work involves		

Section B: Types of Knowledge Generated or Acquired By University Libraries in Malawi

9. Please indicate knowledge generated and acquired by the library

    ----

    ----

10. Please indicate the sources through which you acquire knowledge in your

    Library

    a. Colleagues   { }

    b. Experienced members of staff   { }

    c. Procedure manuals   { }

    d. Learn by doing   { }

    e. Internet and the library's databases { }

    f. Collaboration and teamwork   { }

    g. Networking   { }

    h. Other, please specify…………………………………………………………………

Section C: Rationale for Knowledge Creation and Sharing

11. State why knowledge generated or acquired in the library is shared by ticking in the box

s/no.	Why knowledge generated or acquired is shared?	
1	Innovation-	
2	Development of new products/services, e.g. embracing technology panacea (research, discovery, digital repository, mobile solutions and social media	
3	Knowledge sharing improves library services and productivity e.g. well-timed and worthwhile, customer-focused and 24 hours library services in a stable way	
4	Knowledge sharing is an answer to produce more with less during stagnant and declining budgets in academic libraries in general	
5	Knowledge sharing influences the existing knowlegde in the organisation	
6	Knowledge sharing helps in managing information explosion	
7	Knowledge sharing enables each person to make conversant decision making	
8	Knowledge sharing increases partnership among staff	
9	Knowledge sharing improves team building	
10	Knowledge sharing improves communication skills	
11	Knowledge sharing improves training, education and connecting of recently hired employees	

Section D: Mechanisms and Infrastructure used for Knowledge Sharing

12. Which of the following Management initiatives are adopted for enhanced knowledge sharing in your library?

s/no.	Mechanism for knowledge sharing	
1	Community of Practice	
2	Mentoring	
3	Story telling	
4	Staff retention	
5	Cross -functional project teams	
6	Knowledge management training and education	
7	Improved documentation of existing knowledge	

8	Training (either recently hired or current staff)	
9	Partnership and cooperation	
10	Formal and informal discussion	
11	Brainstorming	
12	Attending workshops	
13	Attending seminars	
14	Attending conferences	
15	Communication networks (internet, intranet and extranet)	
16	Making use of knowledge exchange tools (e.g. e-mails, document management systems, groupware)	
	Other (please specify)	

13. State the Technological Infrastructure available to promote knowledge sharing in university libraries in Malawi by ticking in the boxes below

s/no.	**Technological Infrastructure**	
1	The library uses the following tools for knowledge sharing:	
2	Email	
3	Phone	
4	Intranet	
5	Wikis	
6	Facebook	
7	Groupware	
8	Discussion blogs	
9	Electronic bulletin boards	
10	Institutional repository	
11	Social media	
12	Websites	
	Other (please specify)	

Section D: Factors Influencing Knowledge Sharing

14. Kindly choose the following choices on a 5-point scale as follows:

	1=strongly disagree, 2= disagree, 3= neither disagree nor agree, 4= agree, 5= strongly agree					
	Statement	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
s/no.	**Leadership**					
1	The library has a vision on the strategic importance of knowledge for achieving library objectives. This is clearly outlined and communicated to all staff					
2	Library leadership sets goals for knowledge sharing					
3	Library leadership encourages knowledge sharing					
	Organisation Climate / Culture					
1	There is reciprocal trust among staff and between staff and library management					
2	Library management fosters a culture of good learning environment					
3	Library management fosters a culture of creativity and new ideas					
4	Knowledge exchange is generally applied in the library					
s/no.	**Organisation Structure**					
1	**Centralisation**					
2	The library has a greater amount of clearly expressed work regulations and guidelines					

3	Employees abide by the obviously distinct task procedures prepared by the organisation in knowledge sharing					
4	The library depends on close administration in regulating everyday processes					
5	**Decentralisation**					
6	Employees have the autonomy to share knowledge					
7	Employees contribute to the decision-making process					
8	Employees seek answers from various sources					
9	The environment speeds decision making					
s/no.	**Social interaction ties**					
1	I maintain close social bonds with co-workers in the library					
2	I spend greater part of time interacting with co-workers the library.					
3	I know some members in the library on an individual capacity					
4	I have regular communication with some co-workers in the library					
s/no.	**Trust**					
1	Employees in library have Mutually faith-based and trustworthy relationships.					

2	Employees in the library always keep promises that they make to one another.					
3	I can always trust the co-workers in the library to lend me a hand if I need it.					
4	I can always depend on the co-workers in the library to make my research and job easier					
s/no.	**Communication**					
1	Employees converse and deliberate with other members frequently					
2	Employees are ready to converse and deliberate with co-worker extensively					
s/no.	**Coordination**					
1	The duties of the staff are well organised					
2	The work processes and actions are well programmed					

Section E: Attitude of Librarians towards Knowledge Sharing

15. Please, rate the following statements on a 5-point scale as follows:

	1=strongly disagree, 2= disagree, 3= neither disagree nor agree, 4= agree, 5= strongly agree					
	Statement	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
s/no.	**Motivation**					
	Autonomous (Intrinsic motivation)					
	Knowledge self-efficacy					
1	I am self-assured in my capability to donate knowledge that others in the library would consider valuable.					
2	I have the know-how needed to contribute knowledge for other members in the library					
3	It does not really make any difference whether I share my knowledge with other members in the library.					
4	I have self-assurance in responding or adding comments to messages or articles posted by other members in the library					
5	Most other employees can provide more valuable knowledge than I can					
6	**Enjoyment in helping others**					
7	I enjoy exchanging my knowledge with					

	members in the library					
8	I enjoy assisting members in the library by donating my knowledge					
9	It feels good to assist other members in the library by donating my knowledge					
10	Sharing my knowledge with other members in the library is pleasurable					
11	It feels good to assist other members in the library solve their problems					
s/no.	**Attitudes toward knowledge sharing**					
	My knowledge sharing with other colleagues is …					
1	very unpleasant					
2	unpleasant					
3	very pleasant					
4	pleasant					
5	very bad					
6	Bad					
7	very good					
8	good					
9	very worthless					
10	worthless					
11	very valuable					
12	valuable					
s/no.	**Knowledge sharing intentions**					
1	I anticipate to exchange work reports and related documents with the members in the library more frequently in the future					
2	I plan to share my manuals,					

	methodologies, and models with the members in the library in the future.		276		
3	I have the expectations to exchange my experience or know how from work with the members in the library in the future				
4	I plan to share my know-where or know-whom at the request of the members in the library in the future.				
5	I intend to exchange my know-how acquired from education and training with the members in the library in the future.				
s/no.	**Expected organizational reward**				
1	I will get a an increased pay in exchange for my knowledge exchange				
2	I will get an improved bonus in exchange for my knowledge interchange				
3	I will get increased elevation prospects in exchange for my knowledge sharing				
4	I will get an increased job security				

276

s/no.						
	in return for my knowledge exchange					
s/no.	**Reciprocal benefits**					
1	When I share my knowledge with colleagues, …					
2	I reinforce bonds between existing members of the organization and myself					
3	I increase the reach of my association with other organisation members					
4	I anticipate to get knowledge in exchange when necessary					
5	I believe that my forthcoming demands for knowledge will be answered					
s/no.	**Shared vision and goals**					
1	The members in the library share the vision of assisting others resolve their work-related problems.					
2	The members in the library share the same goal of learning from each other					
3	The members in the library share the same value that helping others is pleasant					

Section F: Challenges of Knowledge Sharing

277

16. Which of the following challenges are faced by your library as regards to knowledge sharing?

s/no	Challenges	
1	Inadequate staff training	
2	Limited budgets	
3	Inadequate management support	
4	Lack of knowledge Management policy and implementation guidelines	
5	Inadequate skills and expertise of knowledge managers and workers	
6	Loss of knowledge through staff attrition	
7	Developing and sustaining an organisational culture that supports and promotes knowledge sharing and the ability to innovate	
8	Reliance of the institution on experienced staff who may exit the organisation without the organisation capturing their know-how	
9	Other (please specify)	

17. Please state how the challenges in question 14 above can be overcome.

APPENDIX IV: Informed Consent Letter (Questionnaire for University and College Registrars)

University of KwaZulu-Natal
Library and Information Studies Programme
Private Bag X01
Scottville 3209
Pietermaritzburg

14 July 2016, 2016

Dear Respondent

<u>Informed Consent Letter</u>

I, George Theodore Chipeta a student of University of KwaZulu-Natal, kindly invite you to participate in the research project entitled *Knowledge sharing in University libraries of Malawi.* This research project is undertaken as part of the requirements of the PhD, which is undertaken through the University of KwaZulu-Natal, Information Studies Programme.

The aim of this study is to examine the strategies of knowledge sharing in University libraries in Malawi with the view to providing interventions to enhance knowledge production. Participation in this research project is voluntary. You may opt out or withdraw from the research project at any stage and for any reason without any form of sanctions. There will be no monetary gain from participating in this research project. Your confidentiality and anonymity will be guaranteed.

If you have any questions or concerns about participating in this study, please feel free to contact myself or my supervisor at the numbers indicated above.

It should take you about 15 minutes to complete the questionnaire.

Thank you for participating in this research project.

July 2016

---------------------   --------------------

Signature   Date

I .... hereby agree to take part in the above research.

Name: .... Date: .... Signature: ....

Student's details

Researcher: George Theodore Chipeta

Institution; University of KwaZulu-Natal

Telephone number: 031 260 4373

Email address: 215081657@Stu.ukzn.ac.za

Supervisor's details

Supervisor: Prof S Mutula

Institution: University of KwaZulu-Natal

Telephone number: 033-260 5093

Email address: Mutulas@ukzn.ac.za

Section A: Characteristics details of respondents

Kindly indicate your responses by ticking the relevant box (es) on the right column and providing further explanation where required.

s/no.	Question		
1	University	UNIMA	
		KCN	
		POLY	
		COM	
		CHANCO	
		MZUNI	
		LUANAR	
		MUST	
2	Faculty		
3	Rank	University Registrar	
		College Registrar	
		Assistant Registrar-Administration	
		Assistant Registrar-Academics	
	Others, please specify		
4	Number of years served in the current position	0-5 years	
		6-10 years	
		11-20 years	
		21 years and above	
5	Gender	M	
		F	
6	Age range	19-30	
		31-40	
		41-50	
		51-60	
		61 years and above	
7	Highest educational qualification	JCE	
		MCE	
		Certificate	
		Diploma	
		Bachelor's Degree	
		Honours Degree	
		Masters' Degree	
		PhD	
	Others, please specify		
8	Explain what services/activities your work involves		

Section B: Factors Influencing Knowledge Sharing

9. Please rate the following statements on a 5-point scale as follows:

	1=strongly disagree, 2= disagree, 3= neither disagree nor agree, 4= agree, 5= strongly agree					
	Statement	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
s/no.	**Leadership**					
1	The library has a vision on the strategic importance of knowledge for achieving library objectives. This is clearly outlined and communicated to all staff					
2	Library leadership sets goals for knowledge sharing					
3	Library leadership encourages knowledge sharing					
	Organisation Climate / Culture					
1	There is reciprocal trust among staff and between employees and library management					
2	Library management fosters a culture of good learning environment					
3	Library management fosters a culture of creativity and new ideas					
4	Knowledge exchange is generally applied in the library					
s/no.	**Organisation Structure**					
1	**Centralisation**					
2	The library has a greater amount of clearly expressed work regulations and guidelines					
3	Employees abide by the obviously distinct task procedures prepared by the organisation in knowledge sharing					
4	The library depends on close administration in regulating everyday processes					
5	**Decentralisation**					
6	Employees have the autonomy to share knowledge					
7	Employees contribute to the decision-making process					
8	Employees seek answers from various sources					

9	The environment speeds decision making					
s/no.	**Social interaction ties**					
1	I maintain close social bonds with in the library members					
2	I spend greater part of time interacting with library members.					
3	I know some members in the library on a personal level					
3	I have regular communication with some library members					
s/no.	**Trust**					
1	Employees in library have Mutually faith-based and trustworthy relationships.					
2	Members in the library always keep promises that they make to one another.					
3	Members in the library always trust their colleagues to lend them me a hand if they need it.					
4	Members in the library always depend on their colleagues to make their research and job easier					
s/no.	**Communication**					
1	Employees converse and deliberate with other members frequently					
2	Employees have readiness to converse and deliberate with co-workers extensively					
s/no.	**Coordination**					
1	The duties of the staff are well organised					
2	The work processes and actions are well programmed					

Section C: Attitude of Librarians towards Knowledge Sharing

10. Please, rate the following statements on a 5-point scale as follows:

	1=strongly disagree, 2= disagree, 3= neither disagree nor agree, 4= agree, 5= strongly agree					
	Statement	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
s/no.	**Motivation**					
	Autonomous (Intrinsic motivation)					
	Knowledge self-efficacy					
1	Library staff have the know-how needed to contribute knowledge for other members in the library					
2	Most of the library employees can contribute more valuable knowledge than others					
3	**Enjoyment in helping others**					
4	Members in the library enjoy exchanging knowledge with their colleagues in the library					
5	Members in the library enjoy assisting their colleagues in the library by donating knowledge					
6	Library staff feel good to assist others members in the library by donating their knowledge					
7	Library staff consider it pleasurable exchanging their					

s/no.						
	knowledge with other members in the library					
8	Library staff feel good to assist other members in the library solve their problems					
s/no.	**Attitudes toward knowledge sharing**					
	I perceive library staff's knowledge sharing with other colleagues to be …					
1	very unpleasant					
2	unpleasant					
3	very pleasant					
4	pleasant					
5	very bad					
6	Bad					
7	very good					
8	good					
9	very worthless					
10	worthless					
11	very valuable					
12	valuable					
s/no.	**Knowledge sharing intentions**					
1	Library staff anticipate to exchange work reports and related documents with their members in the library more regularly in the future					
2	Library staff plan to share their manuals, methodologies, and models with the members in the library in the future.					
3	Library staff have the expectations to					

	exchange their experience or know how from work with the members in the library in the future					
4	Library staff plan to share their know-where or know-whom at the request of the members in the library in the future.					
5	Library staff intend to exchange their know-how acquired from education and training with the members in the library in the future.					
s/no.	**Expected organizational reward**					
1	Library staff expect to get an increased pay in exchange for their knowledge exchange					
2	Library staff expect to get an improved bonus in exchange for their knowledge interchange					
3	Library staff expect to get increased elevation prospects in exchange for their knowledge sharing					
4	Library staff expect to get increased job security in return for their knowledge exchange					
s/no.	**Reciprocal benefits**					
1	When library staff share their knowledge with colleagues, …					
2	They reinforce bonds between existing					

s/no.						
	members of the organization					
3	They increase the reach of association with other organization members					
4	They anticipate to get knowledge in exchange when necessary					
5	They believe that forthcoming demands for knowledge will be answered					
s/no.	**Shared vision and goals**					
1	The staff in the library share the vision of assisting others resolve their work-related problems.					
2	The staff in the library share the same goal of learning from each other					
3	The staff in the library share the same value that helping others is pleasant					

APPENDIX V: Observation Checklist

University ---

List of activities to observe

1. Availability of each of the communication tools; computers, internet, intranet, mobile, fixed phone and others. Yes { }   No { }Presence on social media

2. Availability of knowledge infrastructure.

   Brochures   Yes { }   No { }
   Library newsletters and Magazines Yes { }   No { }
   Emails   Yes { }   No { }
   Web 2.0 applications (twitter, wikis, blogs, newsgroups, facebook, Myspace, WhatsApp and mailing lists).   Yes { }   No { }
   Website   Yes { }   No { }

3. Organisational structure of the library (centralisation and decentralisation

4. Layout of office space

5. Organisation of Library sections

6. Line of communication (horizontal and vertical)

7. Availability of programmes, schedule and places for discussions or meetings on current issues. Yes { }   No { }

8. Programmed workshops, seminars, training programmes.   Yes { }   No { }

9. Mentoring programmes

10. Presence of staff notice boards

APPENDIX V1: Document Review Checklist

1. University Name--

2. Types of documents reviewed

   a. Policies for knowledge sharing

   b. Annual reports

   c. Strategic plans

   d. Budget for capacity building

3. Programmes / schedule for knowledge sharing

   Yes {   }   No {   }

4. Internal records available for capacity building strategies

   Yes { }   No {   }

5. Review of mission statements and policies

6. Statistical analysis for workshops, seminars and trainings attended

   Yes { }   No { }

APPENDIX VII: Informed Consent Letter (Audio And Video Recording)

<div align="right">

University of KwaZulu-Natal

Library and Information Studies Programme

Private Bag X01

Scottville 3209

Pietermaritzburg

14 July 2016, 2016

</div>

Dear Respondent

<div align="center">

Informed Consent Letter

</div>

My name is George Chipeta. I am a Library and Information Studies PhD candidate studying at the University of KwaZulu-Natal, Pietermaritzburg campus, South Africa.

The purpose of this study is to examine the strategies of knowledge sharing in University libraries in Malawi. Target cases being studied include, Mzuzu University, University of Malawi, Lilongwe University of Agriculture and Natural Resources and Malawi University of Science and Technology. Your university is one of the case studies. To collect this data, I am keen conducting a face-to-face interaction with you.

Please note that:

- Your privacy is assured since contributions will not be credited to you individually, but stated only as a respondents' overall views.
- The interaction may proceed for 1 hour and may be organised upon your liking.
- Data gathered will solely be utilised for the objective of this study only.
- Data will be kept in a safe place and discarded after 5 years.
- You will not be sanctioned by not taking part in this research.
- The research aims at examining the strategies of knowledge sharing in University libraries in Malawi.

- There are no financial benefits involved.

- Tick as applicable in box the equipment to be used recording the interview should you be willing to be recorded:

	willing	Not willing
Audio equipment		
Photographic equipment		
Video equipment		

Student's details

Researcher: George Theodore Chipeta

Institution; University of KwaZulu-Natal

Telephone number: 031 260 4373

Email address: 215081657@Stu.ukzn.ac.za

Supervisor's details

Supervisor: Prof S Mutula

Institution: University of KwaZulu-Natal

Telephone number: 033-260 5093

Email address: Mutulas@ukzn.ac.za

Research Office's details

Name of Research Ethics Officer: P. Mohun

Institution: University of KwaZulu-Natal

Telephone number: 031 260 4557

Email address: mohunp@ukzn.ac.za

Thank you for your support to this study.

DECLARATION

I……………………………………………………………………….(full names of participant) hereby pledge that I comprehend the subjects of this letter and the type of the study, and I agree to partaking in the study.

I comprehend that I am free to pull out from the research at any time, should I wish. I appreciate the purpose of the study. I hereby agree to take part.

SIGNATURE OF PARTICIPANT   DATE

………………………………………………………………

APPENDIX VIII: Gatekeeper's Letter (University Of Malawi)

UNIVERSITY OFFICE

TELEPHONE: 522 622	UNIVERSITY OFFICE
FAX: (265) 524031	P.O. BOX 278
E-Mail: provc@unima.mw	ZOMBA
	MALAWI

OFFICE OF THE VICE-CHANCELLOR

17th May, 2016

Mr. George Theodore Chipeta
Department of Library and Information Studies
University of Kwa Zulu-Natal
P/Bag X01
Scottsville, Pietermaritzburg
Kwa Zulu-Natal
Republic of South Africa

E-mail: gchipeta5@gmail.com

Dear Mr. Chipeta,

PERMISSION TO CONDUCT A STUDY AT UNIMA LIBRARIES

I refer to your e-mail dated 9th May, 2016 on the above matter and hereby advise you that you have permission to carry out the intended study at UNIMA Libraries of Chancellor College, College of Medicine, Kamuzu College of Nursing and the Malawi Polytechnic.

By copy of this letter, College Librarians are being kindly requested to facilitate your study.

Yours sincerely,

Professor Al D. Mtenje
PRO VICE-CHANCELLOR

CC: Vice-Chancellor
        University Registrar
        Deputy University Registrar
        Principal (C, CoM, K, P)
        Registrar (C, CoM, K, P)

293

APPENDIX IX: Gatekeeper's Letter (Mzuzu University)

MZUZU UNIVERSITY

DIRECTORATE OF RESEARCH

Mzuzu University
Private Bag 201
Luwinga
M z u z u   2
M A L A W I
TEL: 01 320 722
FAX: 01 320 348

Friday, 01 April 2016

College of Humanities
PhD Research Proposal and Ethical Clearance Committee
[Human and Social Sciences]
University of Kwazulu-Natal
SOUTH AFRICA

PERMISSION TO CONDUCT RESEARCH STUDY AT MZUZU UNIVERSITY

This letter serves to inform you that George Chipeta is a PhD student studying at University of Kwazulu-Natal in South Africa and a member of staff in the Department of Library and Information Science at Mzuzu University. He would like to conduct a research study entitled: "*Knowledge Sharing in University Libraries: Case of Malawi*" at Mzuzu University. This is part of his fulfilment towards the award of his PhD in Library and Information Science.

Permission has been granted to conduct this study at Mzuzu University. This permission is granted on the understanding that the information that will be collected will be used strictly for academic purposes and that where necessary informant consent will be sought before interviews and that respondents' confidentiality will be maintained.

Yours sincerely,
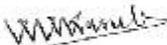
Assoc. Prof. Victor Kasulo PhD
DIRECTOR OF RESEARCH

MZUZU UNIVERSITY
DIRECTOR OF RESEARCH
2016 -04- 01
PRIVATE BAG 201, LUWINGA
MZUZU 2 - MALAWI

294
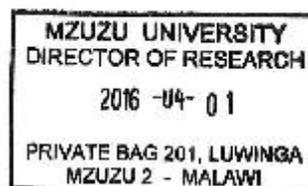
APPENDIX X: Gatekeeper's Letter (Lilongwe University Of   Agriculture And Natural Resources)

VICE CHANCELLOR
Prof. G. Y. Kanyama-Phiri, Dip, BSc, MSc, PhD

Our Ref: BC/1/1
Your Ref:

BUNDA CAMPUS
P. O. Box 219, Lilongwe, MALAWI
Tel: (265) 01 277 222/260
Fax: (265) 01 277 364
Email: vc@bunda.luanar.mw

Knowledge Innovation Excellence

5ᵗʰ October, 2016

George Chipeta
University of KwaZulu-Natal
Bag X01
Scottsville 3209
SOUTH AFRICA

Dear Mr Chipeta,

RE: APPLICATION FOR RESEARCH DATA COLLECTION

Reference is made to your letter dated 28ᵗʰ September, 2016 on the same subject.

Please be advised that permission has been granted and LUANAR has no objection for you to collect data from its Library.

Yours faithfully,

Lilongwe University of Agriculture
and Natural Resources (LUANAR)
Registrar
2016 -09- 0 5

295

TELEPHONE: 01478000
FAX: 01 478 220
All correspondence to be addressed to:
The Vice Chancellor
vicechancellor@must.ac.mw

Malawi University of Science and Technology
P.O. Box 5196
Limbe
Malawi

Our Ref:

Information Studies
School of Social Sciences
University of KwaZulu Natal
Private Bag X01
Scottvile 3209
South Africa

Attention: Professor Stephen Mutula
             Dean and Head of School of Social Sciences

Dear Sir

                    Re: Application for Research Data Collection

Reference is to your letter dated 28th September 2016 on the above subject.

I write to inform you that management has approved your request to conduct research at the Malawi University of Science and Technology (MUST) Library from November 2016.

Kindly contact the University Librarian (copied) once you arrive at MUST.

Yours faithfully

Martha Sambani
For: University Registrar

2016 -10- 0 7

Cc: Vice Chancellor
       University Registrar – on file
       University Librarian

296

APPENDIX XII: University Of Kwazulu-Natal Ethical Clearance Approval Letter

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

16 November 2016

Mr George Theodore Chipeta 215081657
School of Social Sciences
Pietermaritzburg Campus

Dear Mr Chipeta

Protocol reference number: HSS/1860/016D
Project title: Knowledge sharing strategies in university libraries in Malawi

Full Approval – Expedited Application

In response to your application received 25 October 2016, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted FULL APPROVAL.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Dr Shenuka Singh (Chair)
Humanitities & Social Scinces Research Ethics Committee

/pm

cc. Supervisor: Prof S Mutula
cc. Academic Leader Research: Professor Maheshvari Naidu
cc. School Administrator: Ms Nancy & Shulika Lukong Stella

Humanities & Social Sciences Research Ethics Committee
Dr Shenuka Singh |Chair|
Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001 Durban 4000
Telephone: +27 (0) 31 260 3567/8350/4557 Facsimile: +27 (0) 31 260 4609 Email: ximnsp@ukzn.ac.za / snymanm@ukzn.ac.za / mohunp@ukzn.ac.za
Website: www.ukzn.ac.za

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