KNOWLEDGE SHARING STRATEGIES IN UNIVERSITY LIBRARIES IN KWAZULU-NATAL PROVINCE OF SOUTH AFRICA

NDAKASHARWA MUCHAONYERWA

BA HONS, MLIS

University of Fort Hare

Thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy (Information Studies) in the School of Social Sciences, College of Humanities, University of KwaZulu-Natal, Pietermaritzburg, South Africa

Supervisor: Prof Stephen Mutula

Submitted: August 2015

DECLARATION

I, **Ndakasharwa Muchaonyerwa**, declare that:

(i) The research reported in this dissertation/thesis, except where otherwise indicated, is my original work.

(ii) This dissertation/thesis has not been submitted for any degree or examination at any other university.

(iii) This dissertation/thesis does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.

(iv) This dissertation/thesis does not contain other persons' writings, unless specifically acknowledged as being sourced from other researchers. Where other written sources have been quoted, then:

(a) their words have been re-written, but the general information attributed to them has been referenced;

(b) where their exact words have been used, their writing has been placed inside quotations marks and referenced.

(v) Where I have reproduced a publication of which I am an author, co- author or editor, I have indicated in detail which part of the publication was actually written by myself alone and have fully referenced such publications.

(vi) This dissertation/ thesis does not contain text, graphics or tables copied and pasted from the internet, unless specifically acknowledged, and the sources being detailed in the dissertation and in the references sections.

Signed……………………………………..Date………………………

Supervisor
Prof Stephen Mutula

Signed……………………………………..Date………………………

ACKNOWLEDGEMENTS

DEDICATION

I dedicate this thesis to my husband Pardon Muchaonyerwa, our children Knowledge and Ruvarashe for their patience, encouragement and unwavering support throughout the period of my study. I greatly appreciate you all.

ABSTRACT

Universities play an important role in knowledge creation, through research, and dissemination of findings. However, knowledge sharing among library staff in university libraries in Africa, generally, and South Africa in particular, is limited. The post-1994 merger of universities in South Africa brought about complex problems in the country's higher education sector, resulting in the integration of staff with different skills and aptitudes from different universities. This study investigated knowledge sharing strategies in University Libraries in KwaZulu-Natal Province of South Africa. The study sought to address the following research questions: (1) What is the extent of knowledge sharing in University Libraries in KwaZulu-Natal Province? (2) What strategies are available for knowledge sharing among library staff in the university? (3) What is the attitude and perception of library staff towards knowledge sharing? (4) What factors affect knowledge sharing among library staff?

The study was informed by the Knowledge Sharing Capability Model (KSC) complimented by the Socialization, Externalization, Combination and Internalization (SECI) Model of knowledge creation, also known as the Knowledge Conversion Theory. The study was guided by Post-Positivism paradigm, using the quantitative and/or qualitative approach. A survey research design and a self-administered questionnaire were employed. Interviews, observations and document review were utilized to validate the results from the survey questionnaire. The universities studied were the Durban University of Technology (DUT), the University of KwaZulu-Natal (UKZN), the Mangosuthu University of Technology (MUT) and University of Zululand (UNIZULU). The population of the study comprised all library staff (paraprofessional and professional) with a LIS qualification working in the public universities. A census was used as a sampling frame. The validity and reliability of the instruments were achieved using triangulation, adapting items in data collection tools from previous studies and pre-testing the questionnaire. Cronbach's Alpha enhanced and determined the reliability of the survey data collection instrument. The data collected were

analysed thematically and *SPSS* was used to generate frequencies, descriptive and inferential statistics.

The findings of the study revealed that the knowledge that was generated and acquired was not subsequently shared; university libraries lacked knowledge management policies and strategies to harness staff expertise for enhanced service delivery. In addition, the organizational culture and organizational structure were not conducive for knowledge sharing. The findings revealed that organizational structure in university libraries is protocol based making it unfavourable for knowledge sharing. The results revealed that staff needed to be trained to engage meaningfully in knowledge management activities, including knowledge sharing. These findings are important to inform the development of a knowledge sharing policy, infrastructure development and capacity building strategies, to facilitate knowledge sharing and skills transfer for enhanced competitiveness. The study recommended formulation of strategies that would encourage knowledge sharing. The strategies should include rewards, new skills development and team work. The study makes proposals to extend KSC Model to accommodate diversity of knowledge sharing variables and to make it more robust in the context of universities in developing countries.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

LIST OF ABBREVIATIONS

CKDB	Common Knowledge Database
Cops	Communities of Practice
DUT	Durban University of Technology
HEI	Higher Education Institutions
HR	Human Resources
IC	Intellectual Capital
ICTs	Information and Communication Technologies
IR	Institutional Repository
IT	Information Technologies
KBE	Knowledge Based Economy
KM	Knowledge Management
KMS	Knowledge Management Systems
KS	Knowledge Sharing
KSC	Knowledge Sharing Capability
KSS	Knowledge Sharing Strategies
KZN	KwaZulu-Natal
MN	New Brunswick
MNC	American Multinational Company
MUT	Mangosuthu University of Technology
OCSIT	Organizational Context, Structure and Information Technology
OSN	Online Social Networks
OULS	Oxford University Library Services
PEOU	Perceived Ease of Use
PU	Perceived Usefulness
SA	South Africa
SECI	Socialization, Exertanalisation, Combination and Internalization
SET	Social Exchange Theory
SME	Subject Matter Experts

SPSS	Statistical Package for Social Sciences
TAM	Technology Acceptance Model
U.S.A	United States of America
UCT	University of Cape Town
UJ	University of Johannesburg
UK	United Kingdom
UKZN	University of KwaZulu-Natal
UNISA	University of South Africa
UNIZULU	University of Zululand
UP	University of Pretoria
UWC	University of the Western Cape
VC	Virtual Communities
VIKS	Voluntary, Informal Knowledge Sharing
VUA	Victorian Universities in Australia

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The broad aim of the study was to explore knowledge sharing strategies (KSS) in public university libraries in KwaZulu-Natal Province of South Africa (KZN). A public university in the context of this study is a university that is predominantly funded by public means through national or government subsidies, as opposed to private universities (Salter and Martin, 2001:511). Knowledge management (KM) and knowledge sharing (KS) in university libraries are closely intertwined and it is difficult to discuss one without bringing the other into the equation. In this study, where the term KM is broadly used, it also incorporates KS. KM refers to all the activities of identifying, capturing, evaluating, retrieving and sharing all the information assets of an organization (Gartner Group, 2000:1). KS in contrast is a part of knowledge management and refers to the exchange of experiences, events, thoughts or understanding (Kim and King, 2004).

The focus of this study KSS refers to what needs to be done to achieve organizational goals and objectives (Holsapple, 2003), with regard to knowledge assets. Strategies for KS in university libraries include the leveraging of human resources, KM policies, ICT infrastructure, awareness about KS and KS organizational culture. The knowledge strategies are discussed below.

1.1.1 Human Resources

In the context of this study, human resources (HR) refer to library professionals trained to assist in the acquisition and dissemination of knowledge through the co-ordination of projects, workshops, conferences and seminars (Yahya and Goh, 2002:460). The daily task of HR is to assist in creating knowledge and establishing appropriate networks for users. According to Rah, Gul and Ashraf Wani. (2010) the major components of web-based knowledge management in libraries are the human resources. Therefore library professionals contribute to

KS by using expertise to develop other staff and users. For example, they provide knowledge from different sources such as print resources and online resources and conduct training on how to access such resources.

1.1.2 Knowledge Management Policies

KM envisages capturing, creating, sharing and managing knowledge (Gartner Group, 2000). In university libraries, KM policies facilitate access to resources, assist staff to create, share and use knowledge as part of their daily work and help shape a knowledge sharing organization culture. A proper KM policy is required to overcome the conflict of interest among individuals and encourage knowledge sharing in an organization (Knoco Consulting, 2014). According to Nonaka and Takeuchi (1995), KM policy in university libraries includes a set of procedures, rules, guidelines and regulations that guide staff on their work processes, for example, processes which include methods to acquire, create, organize, share and transfer knowledge to fit different situations. The technology includes the mechanisms to store and provide access to data, information and knowledge that must be integrated with the way people work and address their real needs (Department of Health Annual Report, 2011-2012). The absence of documented policies reflects an organization in dire need of business process re-engineering (Wamundila and Ngulube, 2011).

1.1.3 ICT Infrastructure

Information and communication technology (ICT) refers to a system for managing knowledge in organizations. ICTs support creation, capture, storage and dissemination of information (Rah, Gul and Ashraf Wani, 2010:25). Application of ICTs in university libraries has brought revolutionary changes in information processing, storage, dissemination and distribution. The information stored in libraries has thus taken a major shift from volume-limiting paper to limitless multimedia digital form that can be shared via an integrated system (Rah, Gul and Ashraf Wani, 2010). Generally, ICT infrastructure in university libraries is made up of knowledge management systems (KMS), databases and repositories that collectively enhance

knowledge sharing. Despite the role played by ICTs in universities, library staff remains the main actors in disseminating and sharing knowledge. Therefore a knowledge management strategy is needed to enable staff to have ready access to the organization's codified knowledge and to share tacit knowledge (Fei, 2011). Hence, ICT infrastructure can be seen as an enabler of knowledge sharing in an organization to overcome geographical boundaries, enabling staff to benefit from the expertise of others (Ramirez, 2006). ICTs as knowledge sharing tools can enable employees connect with individuals that possess the expertise that they are seeking in trying to solve their problems (Rosen et al., 2007).

1.1.4 Knowledge Sharing Awareness

In this study, awareness is defined as the degree to which library staff believe that understanding knowledge management principles and appreciation of the importance of knowledge sharing benefits will affect their knowledge sharing quality (Ismail and Yusof, 2010:5). Employee awareness at all levels is the main component of successful knowledge sharing in an organization. Staff awareness of knowledge in university libraries encourages the discussion process and provides space for critical and creative thinking, risk taking and the readiness to make mistakes for improvement (Lee and Al-Hawamdeh, 2002). All staff, inclusive of top management, in universities should be aware of and understand the importance of knowledge sharing to create an organizational culture that influences knowledge sharing (Cong and Pandya, 2003). According to Cheng (1989) good performance can only occur when employees know the culture of their workplace which has a direct effect on knowledge sharing. Organizational culture can influence an individual's work behaviour by affecting his knowledge and skills. Shepstone and Currie (2008) claimed that organizational culture plays an important role in creating an environment where employees are committed to share and contribute to the success of the organization.

Through knowledge sharing, university libraries can guarantee a competitive edge for their own survival. Knowledge sharing therefore helps organizations to harness human capital for enhanced competitiveness (Jarrar, 2002). Besides, knowledge sharing extends the

organization's capability from what it knows to what others know through connectivity using enabling technologies such as the internet, mobile phones, social media and blogs. Generally, sharing knowledge is about communicating knowledge within a group of people. This group of people may consist of members engaged in a formal or informal conversation with the aim of utilizing available knowledge to improve the group's performance (Alavi and Leidner, 2001; Salisbury, 2003). In the present study, knowledge sharing is viewed as a means through which employees (library staff) can assist each other to transform the library into a more efficient organization (Wang and Noe, 2010:115). According to Van den Hooff and De Ridder (2004), knowledge sharing is a process through which employees mutually exchange and create new knowledge.

Knowledge sharing is situated within the wider context of knowledge management. Knowledge management makes use of two categories of knowledge, explicit and tacit. The concepts explicit and tacit knowledge were first coined by Polanyi (1966) and elaborated by Nonaka and Takeuchi (1995). Explicit knowledge is therefore that type of knowledge that can be documented and codified in paper or electronic form and shared without need for judgment or evaluation. In contrast, tacit knowledge resides in the mind of people and its codification is important for the knowledge to be shared or stored in databases, knowledge management systems (KMS) and manipulated in various ways (Semertzaki, 2011). Knowledge, whether tacit or explicit is embedded in documents, repositories, organizational routines, processes, practices and norms (Davenport and Prusak, 1998:5) and people within the organisation. Therefore, the importance of knowledge sharing should not be overlooked in any organization, since it is the foundation of staff's competitive advantage and ultimately the main driver of its value in a knowledge economy which is characterised by extensive knowledge production and its application (Luo, 2009).

Knowledge management (KM) as a field of study and practice emerged in the business environment in the 1990s and has gained acceptance in the academic sector (Grant and Grant, 2008). In order to address one of the complex issues in modern organizations such as the management of change, university libraries around the world are increasingly adopting

knowledge management practices, in general and knowledge sharing, in particular, to drive transformation. The transformation of universities into competitive organizations is in part accompanied by change of their visions and missions to cope with a highly dynamic global information environment (Foo et al., 2002). As universities transform, their libraries are equally expected to innovate, to become competitive entities.

1.1.5 Impact of Knowledge Management in University Libraries

In university libraries KM is an important part of organizational knowledge and management as it involves codification of knowledge through converting knowledge into accessible formats that can be easily manipulated by users (Davenport and Prusak, 1998). Knowledge codification therefore represents knowledge in forms that can be shared, stored in databases and knowledge management systems (KMS) within or outside the organizations (Semertzaki, 2011). Km enables University libraries to access knowledge from external sources and facilitates knowledge sharing within their organisations (Maponya, 2004). University libraries are now better placed to support the KM needs of academics and students in their teaching and learning roles, respectively.

1.1.6 Global Context of Knowledge Management in University Libraries

Today, university libraries, especially in Western countries, are increasingly adopting knowledge management practices and knowledge sharing strategies to remain competitive in the knowledge based economy (KBE). White (2004), in a study which investigated perceptions of library staff towards knowledge sharing at Oxford University Library Services (OULS), revealed that the library had developed KM tools through which library staff shared tacit knowledge and exchanged skills and expertise. According to Foo et al. (2002), the transformation of universities and their libraries into competitive organizations revolves around knowledge sharing.

In knowledge based societies, universities and their libraries are faced with a number of challenges, such as the lack of requisite expertise, high staff turnover and limited integration of knowledge sharing in the culture of organizations (Mutula and Jacobs, 2010). In addition, top management commitment to transforming organizations into knowledge sharing entities is limited. This is exacerbated by the fact that no incentives and rewards are provided to motivate staff to become more productive. Inadequate financial resources and poor IT infrastructure to ensure effective integration of knowledge management does not make matters any easier (Nazim, Mukherjee and Hindu, 2012). The lack of knowledge management policies and strategies are also said to be contributing towards limited knowledge sharing in universities and their libraries. Staff resistance to change and lack of trust (Lwoga, Ngulube and Stilwell, 2010) has been reported as impediments to knowledge sharing in university libraries. Munyua (2011) stresses the importance of knowledge sharing policies to facilitate the collection, processing and dissemination of knowledge within organizations.

Roknuzzaman and Umemoto (2009:645) stated that library professionals are still struggling in integrating KM strategies in their work processes due to lack of sharing culture, lack of collaboration and limited skills for knowledge sharing (Roknuzzaman and Umemoto, 2009). Despite the fact that KM is of critical importance in university libraries, Mutula and Jacobs (2010:10), in a study of challenges facing higher education systems in South Africa, found that South African universities had not integrated KM practices within their strategic processes and operations. As a result, universities did not generally manage knowledge very well leading to information loss and duplication Akramet et al. (2011:132) noted that organizational culture was the biggest hurdle to the implementation of KM in the organizations. Similarly, Jain (2007), in a study of the challenges facing academic libraries in southern Africa found that libraries did not have a knowledge sharing culture. Knowledge sharing is central to enhancing knowledge acquisition and capturing (Gold and Arvind-Malhotra, 2001; Nonaka and Takeuchi, 1995).

In the South African context, the university mergers that commenced after 1994 to redress inequity in higher education resulted in several challenges because of amalgamation of

different organizational cultures, structures, visions and missions; leadership styles; staff with varying qualifications, experiences and work ethos (Jayaram, 2003). The university mergers accelerated the need for creating knowledge sharing trust, team work and co-operation among staff. Moreover, knowledge sharing in post-university mergers would encourage staff to develop and express new ideas and enable them to participate in all activities and decisions of the organizations and leverage the expertise of each employee (Shanhong, 2000 and Swanepoel, 2005).

Studies done by Mngadi (2007) and Maponya (2004) at the University of KwaZulu-Natal (UKZN) and University of Zululand (UNIZULU) found only limited evidence of knowledge sharing. The same situation is likely to happen in other universities within KwaZulu-Natal province, where the extent of knowledge sharing is currently not known. Knowledge sharing in university libraries is important in order to put in place measures to enhance knowledge retention from subject matter experts (SME) (Hernandez, 2006). Retention of knowledge in an organization is only possible through knowledge sharing and it is important that library staff impart the tacit knowledge they have to others, before it is lost to the organizations. Capturing of tacit knowledge is particularly critical, because this type of knowledge resides in the heads of employees and is not known unless it is shared (Nonaka, 1994 and Skyrme, 2007).

Knowledge sharing creates more opportunities for staff to interact and exchange ideas to maximize performance and eventually contribute to overall success of the organization (Argote, 1999;; Liebowitz and Chen, 2001). From an international perspective the extant literature indicates major problems facing university libraries in knowledge sharing (Argote, 1999; Liebowitz and Chen, 2001). These include lack of support, limited organizational culture in knowledge sharing, lack of knowledge sharing policies and strategies. This study sought to investigate knowledge sharing strategies among library staff in public university libraries in KZN. It sought to address the overarching question: What is the extent of knowledge sharing in university libraries in KwaZulu-Natal Province?

1.2 University Libraries in KwaZulu-Natal (KZN) Province

There are nine provinces in South Africa namely: Western Cape, Eastern Cape, Free State, Gauteng, Limpopo, Mpumalanga, North West, Northern Cape and KwaZulu-Natal. During the apartheid era these universities were categorised as White, African and technikons (now universities of technology). In order to address the imbalances in the post-apartheid South Africa, some of the universities were merged and renamed resulting in 23 public universities, from the previously 36 universities (Ministry of Education, 2006). Since 2012 three new universities have been established bringing the total number of public universities to 26.

The study was carried out in KwaZulu-Natal Province. The University Libraries in KwaZulu-Natal Province carter for staff of diverse cultural backgrounds (i.e. Indians White and Africans) as a result of university mergers. KS sharing in the context of post-merger posed unique challenges because the diverse background who were forced into mergers. The differences in their histories and their structures had an influence in the way they perceived and shared knowledge.

In terms of organizational structure, the libraries in KZN have three departments, namely reader services, technical services, research and special collections. The departments are subdivided into sections namely circulation, academic reserve, cataloguing, information systems (IT), collection maintenance and processes and periodicals sections. The circulation and academic reserve sections fall under the department of reader services, the cataloguing, information systems and collection maintenance fall under the department of technical services and the periodical section falls under the department of research and special collections. The libraries are headed by the library director, whose mandate is to oversee and support the activities of the library and attend institutional board meetings, among other duties. Senior management staff are also involved in teaching, research and training students and academic staff on how to use electronic databases. Apart from this, senior management staff offers consultancy services.

The literature (Mushi, 2009; Wamundila and Ngulube, 2011 and Maponya, 2004) show that libraries do not share knowledge of work-related activities. The literature further reveals that in the past, the communication channels that existed in university libraries were not used to share knowledge among library staff.

Four study sites are covered in this research namely the Durban University of Technology (DUT), the University of KwaZulu-Natal (UKZN), the Mangosuthu University of Technology (MUT) and the University of Zululand (UNIZULU).

1.2.1 Durban University of Technology

The Durban University of Technology (DUT) was established in 2002, the result of a merger between two much older institutions: the M L Sultan Technical College, which operated exclusively for the substantial Indian population in and around Durban; and the equally racially defined Natal Technical College, for whites only (Durban University of Technology, 2012). The DUT offers a variety of full-time and part-time programmes leading to tertiary qualifications. These programmes include Bachelor of Technology (B Tech) degrees and diplomas ranging from certificate courses (one year of full-time study) and National Diplomas (three years of full-time study) to Bachelors, Masters and Doctoral degrees in Technology. In pursuit of its vision, the DUT library is committed to being a student-centred library that enhances learning, teaching and research through the provision of information services, access policies and instruction programmes in line with the objectives of the university. The DUT has six campuses spread over Durban and Pietermaritzburg metropolis. The two main libraries of DUT are the BM Patel Memorial Library and the Alan Pittendrigh Library, all located in Durban. Two of the library campuses, namely Riverside Campus Library and Indumiso Campus Library, are situated in Pietermaritzburg (in the KZN Midlands). The campus libraries vary in size and subjects offered. Each campus library's collection reflects the historical influences and course offerings of that campus, which includes materials such as books, thesis, periodicals, audio-visual and multimedia materials and electronic media. The subject librarians at DUT campuses offer information services in the following faculties: Faculty of Commerce,

Faculty of Engineering, Faculty of Science and Faculty of Arts. The DUT library is a multi-site service, providing library and information services at the six DUT campuses. It has a staff component of 79 (Durban University of Technology, 2015).

1.2.2 University of KwaZulu-Natal

The University of KwaZulu-Natal (UKZN) was formed in 2004, after the merger between the then University of Natal and the University of Durban-Westville. The UKZN is one of the universities in South Africa which has achieved the transformation agenda to redress the imbalances caused by the apartheid system (Mouton and Strydom, 2013). The UKZN libraries comprise five campuses and a number of branch libraries. The campuses are Edgewood, Pietermaritzburg, Westville, Howard College and Medical School campuses all located in KwaZulu-Natal province. Four of the campuses are located in Durban and one of the campuses (Pietermaritzburg) is located in the KZN Midlands. In each library campus there are subject librarians who address the information needs of students and academic staff in the following academic disciplines: Architecture, Community and Development Discipline, Education, Engineering, Law, Management Studies, Medical Sciences, Sciences, Agriculture and Social Sciences (University of KwaZulu-Natal, 2009).

The libraries contain more than 1.4 million volumes of journals, books, thesis, reports and other print media. In addition, there is an audio-visual collection and access to a growing number of electronic resources. Electronic journals can be accessed through library subscriptions to journals and databases. Electronic books are available (University of KwaZulu-Natal, 2009). In an interview with one of the senior management staff it emerged that at present, the total workforce stands at 134. In terms of the mission, the libraries of the University of KwaZulu-Natal provide resources and information services to support the learning, teaching, research and development activities of the university.

1.2.3 Mangosuthu University of Technology

The Mangosuthu University of Technology (MUT) was established in 1979 with the aim of supporting the marginalized young people from disadvantaged backgrounds with the opportunity to further their education beyond secondary school level. MUT is situated in Umlazi, south of Durban. MUT has two libraries one on the main campus, and another on the campus of the Natural Sciences (Mangosuthu University of Technology, 2009). The libraries provide comprehensive access to a wide range of materials, across faculties and disciplines. The total number of staff working in the library is 34. The subject librarians at Mangosuthu University of Technology offer information services in the following disciplines: Management Science, Engineering Science and Natural Science. The library is headed by two directors, a senior library director and a deputy director. The Mangosuthu University of Technology library provides access to information in support of teaching, learning and research needs of students, staff of the university and the broader community through an advanced information system and professional expertise. The information services provided are mainly related to courses offered on campus (Mangosuthu University of Technology, 2009).

1.2.4 University of Zululand

The University of Zululand (UNIZULU) was established in 1960 as a constituent college affiliated to the University of South Africa (UNISA). It was established initially for the Zulu and Swazi groups. The Zulu and Swazi groups are the two main tribes found in KwaZulu-Natal province. In 1970 the university, situated north of the Tugela River and 162 km from Durban, achieved full university status and has grown steadily since then. The University of Zululand has two campuses. The main campus is situated in KwaDlangezwa, on the coastal plain about 150 kilometres north of Durban and another campus is situated in Richards-Bay approximately 190 km north of Durban along the east coast of South Africa. The total number of library staff working in the library is 35. The University of Zululand Library provides services to students and the surrounding community in support of teaching, learning and research (University of Zululand, 2012). The current study focuses on Public Universities in KZN province because these are the oldest universities which are perceived to have gone through the transformation

and restructuring process proposed by the Department of Education (2002). Knowledge sharing is central to the transformation of universities and their libraries to become competitive entities and hence the need for the present study.

1.3 Statement of the Problem

University libraries in the developed world are striving to develop KM tools to promote knowledge sharing among staff (White, 2004; Jantz, 2001 and Stover, 2004), in order to improve service delivery, enhance skills deployment and facilitate skills transfer through mentoring, education and training. However, knowledge sharing among library staff in university libraries in Africa, generally, and South Africa, in particular is limited. The post-1994 merger of universities in South Africa brought about complex problems in the country's higher education sector, resulting in uncertainties and anxiety; displacement of staff from their jobs; integration of staff with different skills and aptitudes; fusion of organizational structures and cultures; high student enrolments overburdened libraries and IT infrastructure, space, staffing and budget constraints. Muller (2006) identifies several factors that increased uncertainty during and after the merger, including issues surrounding staff retention and deployment; lack of formal communication; and a change process that was too drawn out.

Jayaram (2003) warned that the university mergers in South Africa impacted significantly on library service delivery, skills development, human resource planning, education and training. Jacobs and Mutula (2010) explain that while the transformative agenda in South Africa reshaped higher education, university libraries were compelled to adjust to new organizational and financial realities that affected staffing, capacity building plans and mentorship programmes. The core library functions, such as knowledge generation and acquisition, seemed compromised, by among other factors, the high rate of staff turnover and limited optimization of existing staff. In the post university-merger, libraries continued to evolve new organizational structures, organisational cultures, job expectations (promotion, demotion or retrenchment), thus causing instability in staffing skills needs, skills transfer and fear of the unknown. Staff from different racial groups needed to adjust how to work and relate with each other. Sharing of knowledge among different racial groups was therefore guarded and this was expected to

affect effective and efficient delivery of information services (Jayaram, 2003; Muller; 2006 and Jayaram, 2003).

However, the effect of these factors on information services delivery is not clearly known. This study is therefore aimed at examining knowledge sharing strategies within University Libraries in KwaZulu-Natal Province. The outcomes of the study are expected to help inform managers and practitioners on the implementation of knowledge sharing policies, knowledge sharing infrastructure development, education and training; and staff retention in public university libraries in KZN and impact on the rest of the South African university libraries.

1.4 Objectives of the Study

Two objectives were aimed at providing a broader perspective of the research questions. From the two broad research objectives, four specific research questions are derived. The approach of aligning each research question to each objective is debatable and there is a move away from this practice to one or a few broader objectives and more specific research questions. Recent research methodology books recommend not more than five research questions at PhD level (Mathipa and Gumbo, 2015).

(1) To assess the extent of knowledge sharing among staff in University Library in KwaZulu-Natal Province.
(2) To determine the knowledge sharing strategies available in University Libraries in KwaZulu-Natal Province.

1.5 Research Questions

The following specific research questions are addressed:

(1) What is the extent of knowledge sharing in University Libraries in KwaZulu-Natal Province?
(2) What strategies are available for knowledge sharing among library staff in a university?
(3) What is the attitude and perception of library staff towards knowledge sharing?
(4) What factors affect knowledge sharing among library staff?

The study used research questions instead of hypothesis as suggested by Creswell (2008:29) who recommended that inquirers in a qualitative or mixed method study state research questions and often attempt to answer questions that involve variables and statistical tests. Testing of hypothesis is not considered conventional especially in qualitative or mixed methods studies (Creswell, 2008:29). Thus qualitative researchers examine on-going social processes, study records, observe and talk to people who are selected as participants or affected by the process being studied in a natural setting (Creswell and Plano Clark, 2007). However, in pure quantitative studies testing of hypothesis tend to be common. In this study research questions were formulated based on the KSC and SECI Models variables. The KSC Model has been tested in public sector environments, of which the universities are a part. The study did not intent to generate and test a framework based on KSC or SECI Models. However, this has been proposed as future areas of research.

1.6 Scope and Delimitation of the Study

This study focuses on Public University Libraries in KwaZulu-Natal Province. This comprises four universities (DUT, UKZN, MUT and UNIZULU). The selection of the Public University Libraries in KZN Province is motivated by the fact that these are universities that went through the transformation process proposed by the Department of Higher Education. Besides the mergers as already pointed out brought together diverse racial groups and institutions with different organisations cultures than perhaps in any of the other nine provinces in South Africa. This diversity provided a perfect environment to investigate KS practices among library staff.

1.7 Significance of the Study

This study is aimed at providing useful insights into how knowledge is being shared in university libraries in KwaZulu-Natal. This emerges from the realisation that library staff plays a major role in knowledge generation, creation, acquisition and dissemination. Knowledge management, in general and knowledge sharing, in particular is one of the key success factors for attaining organizational competitive advantage. Consequently, continuous learning, improvement and process re-engineering have become priorities of most modern organizations.

The outcomes from this study are expected to assist university library managers and stakeholders in identifying gaps that exist in knowledge sharing and create room for new innovations and creativity. The outcomes are aimed at informing policy decisions on knowledge management, resource planning and capacity building for strengthening knowledge sharing in university libraries in KZN. The study makes significant contribution towards the existing body of knowledge in the field of knowledge management in University Libraries in South Africa.

1.8 Theories and Models

There are various theories and models for studying the subject of knowledge management and knowledge sharing. These include the Knowledge Sharing Capability Model (KSC) (Kim and Lee, 2006); the SECI Model of Knowledge Creation (Nonaka and Takeuchi, 1995), the Social Exchange Theory (SET) (Thibault and Kelly, 1952); the Technology Acceptance Model (TAM) (Davies, 1989) and Voluntary, Informal Knowledge Sharing Model (VIKS) (Lee et al., 2004). The KSC Model was used as the theoretical basis to underpin this study. This model was developed and tested in South Korea, a developing economy similar to South Africa. South Africa and South Korea are both classified as newly advanced economies and they both have had long histories of oppression that affected their economies (Lipsey et al., 1993). South Africa's population is 51.8 million at present (Statistics SA, 2011), while that of South Korea is expected to increase to 51.1 million by 2015 (*Encyclopaedia of the Nations*, 2007-2015). Both countries have invested largely in education and research and, in terms of global ranking of universities, some of the universities in South Africa and South Korea are among the top universities in the world (*Encyclopaedia of the Nation*s, 2007).

The KSC model has been proposed by the government of South Korea for enhancing competitiveness and performance at the work-place in public institutions. In particular, it emphasizes the use of rewards/incentives to improve working relationships and to address the imbalances in society. The model relies on rewards/incentives to motivate and improve the knowledge sharing capabilities of employees (Kim and Lee, 2006). The KSC Model has been

found to be useful in addressing the issue of the integration of different cultures. The KSC Model and related theories are discussed in a greater detail in Chapter Two (theoretical framework).

1.9 Research Methods

Many research paradigms exist and how they are used depends on the nature of the study. The research paradigms include interpretive, post-positivism, social construction and pragmatism. This study is based on the post-positivism paradigm. Post-positivism is a philosophical world view that holds the notion that science is not the only way to discover knowledge. The posit-positivism paradigm argues that "social reality can be discovered through empirical findings and existing theory" (Ramlo and Newman, 2011:175). Post-positivist studies use quantitative and qualitative approaches and result from how these approaches augment each other in comparing the findings. Many studies based on post- positivist framework are theory-driven and mainly concerned with testing or verifying theories, rather than developing them (Wildemuth, 1993).

In this study a post-positivist framework was adopted in which theory, quantitative and qualitative approaches were used. Chigada (2014) claimed that theory and research form the post-positivist paradigm (deductive approach), whereby research mainly starts with a theory/model and then concepts that represent a research problem are identified within a subject (Chigada, 2014). The researcher targeted professional and paraprofessional library staff as the unit of analysis. In this regard, a survey was employed to select respondents (librarians) in the four university libraries in KwaZulu-Natal. The selection of the universities was based on the fact that these are the oldest universities that achieved the transformation process and assumed to have well-established structures that support KS initiatives.

The present study used survey questionnaires, interview schedules, observations, document reviews and literature as methods of collecting data. The data collected were organized, labelled and analysed using *SPSS* for analysing quantitative data and thematic analysis for

analysing qualitative data. The results are presented using descriptive and inferential statistics captured in tables, charts and figures. Major steps were taken to enhance reliability and validity. To ensure validity most of the questionnaire items were largely adapted from similar previous studies (Jain, Manjit, and Gurvinder, 2007; Foss et al., 2009; Hussein and Nassuora, 2011; Kim and Lee, 2006). Reliability was achieved by making sure that all the questionnaire items adapted were measured by Cronbach's Alpha's scale. Reliability was further achieved by pre-testing questionnaire and by triangulation of data collection approaches and research instruments.

The study complied with the University of KwaZulu-Natal's ethics policy. The researcher also sought permission from the authorities of the respective universities surveyed. The respondents were notified about the purpose of the study and assured of their rights, including the right to consent, protection of information disclosure and respect for their privacy when collecting and reporting data. The detailed discussion of research methodology is presented in Chapter Four (Methodology).

1.10 Definition of Key Terms

This section provides the definition of key terms and concepts that were used in this study. This includes the following terms:

Knowledge Sharing

According to Kim and King (2004:54) knowledge sharing is about communicating knowledge within a group of people. The group may consist of members engaged in a formal or informal conversation. In contrast, Lin, Lee, and Wang (2009:26) define knowledge sharing as a social interaction culture, involving the exchange of employee knowledge, experiences, and skills through the whole department or organization. The underlying purpose is to utilize available knowledge to improve the group's performance. In this study knowledge sharing is viewed as a concept through which employees (library staff) can help transform the library into a more efficient, knowledge sharing organization through knowledge application and innovation if

utilized properly (Wang and Noe, 2010:11**5**). It is therefore a process through which library staff mutually exchanges knowledge and jointly creates new knowledge.

Knowledge Management

According Al-Hawamdeh (2003:21) knowledge management is defined as a of collection of processes and strategies used by an organization to identify, create, distribute, and enable adoption of insights and experiences either embodied in an individuals or rooted in organizational processes or practices. In this study, where the term knowledge management is broadly used, it also incorporates knowledge sharing. In the context of this knowledge management (KM) therefore refers to all the activities of identifying, capturing, evaluating, retrieving and sharing all the information assets of an organization that promotes the development and application of tacit and explicit knowledge to attain organizational growth (Gartner Group, 2000:1).

Knowledge Sharing Strategies

Knowledge sharing strategies (KSS) refers to what needs to be done to achieve organizational goals and objectives (Holsapple, 2003:237) with regard to knowledge assets. According to Carrillo, Anumba and Kamara (2000) organisational strategies provide a framework that guides decision making processes and it determines what plans should be undertaken to achieve organizational objectives.

Organizational Culture

Holsapple (2003:237) defines organizational culture as a set of accepted values, ideas, expectations, norms, behaviours, and patterns of interaction within an entity. Organizational culture is defined by McDermott and O'Dell, (2001:77) as the shared values, beliefs and practices of the people in the organization, reflected in its mission, vision and shared goals. In the context of this study organizational culture is defined as the existence of shared values, beliefs and norms that is cultivated through knowledge management support and motivational factors such as appropriate performance rewarding systems (Lee, 2005:6).

18

Organizational Structure

According to Al-Hawamdeh (2002:21) organizational structure represents the set of arrangements among the resources of the organization which may be people, facilities, information and technological infrastructure. In this study organizational structure reflects the way jobs are set within the organization and how people are supposed to perform their work based on the rules, procedures and regulations of the organization (Syed-Ikhsan and Rowland, 2004).

Public Universities

A public university in the context of this study is a university that is predominantly funded by public means through a national or government subsides, as opposed to private universities (Salter and Martin, 2001:511).

Social Networks

Social networks refers to some of the technologies of Web 2.0 that support collaboration, knowledge sharing, interaction and communication among users in different places who come together with a common interest or goal (Balubaid, 2013:409).

1.11 Structure of Thesis

The content of the structure of the chapters comprising the thesis is presented in the form of paragraphs reflecting the specific content covered in each chapter. This study comprises seven chapters, with each chapter starting off with an introduction and concluding with a summary.

Chapter One: Background to the Study

This chapter provides an introduction and background to the study; it identifies the research problem, questions, objectives, significance and delimitations of the study. The chapter gives an introduction to the subject of KM and KS and discusses the university public libraries in KwaZulu-Natal Province. Broader issues around the research problem such as the

organizational culture, organizational structure, management styles, intellectual capital, staffing and budget are outlined. The chapter finally provide a brief introduction to the theories (e.g. the KSC, SECI, SET, TAM and VIKS Models) and research methods (e.g. paradigms, quantitative and qualitative approaches, survey research design and data collection instruments) underpinning the study.

Chapter Two: Theoretical Framework

Chapter Two provides a detailed presentation of theories underpinning the study and develops the conceptual framework. The KSC, SECI, SET, TAM and VIKS Models are described. The motivation for choosing the KSC and SECI Models to underpin this study is adduced. A mapping of the objectives/research questions to key variables of the theoretical models is tabulated.

Chapter Three: Literature Review

Chapter three provides a review of related empirical and theoretical literature covering knowledge sharing, knowledge sharing strategies, attitude and perception of library staff towards knowledge sharing, organizational structure and organizational factors that influence knowledge sharing.

Chapter Four: Research Methods

This chapter provides a discussion of the research paradigms (e.g. interpretive, post-positivism, social construction and pragmatism) research approaches (e.g. quantitative and qualitative). The study used a survey research design. The data collection methods include questionnaire, interview schedule, observation and document review. Reliability and validity was achieved by pretesting and triangulating the data collection methods. A Cronbach's Alpha scale was also used to measure the internal consistency and reliability of items. The university libraries under study included the DUT, UKZN, MUT and UNIZULU. The target population consisted of all library staff with a LIS qualification. Permission was sought from various authorities at the universities where the study was conducted.

Chapter Five: Data Presentation and Analysis

The chapter provides descriptive and inferential statistics including thematic analysis, frequency distribution, percentage, mean standard deviations, and Pearson correlation analysis. In addition, the results of Cronbach's Alpha analysis for measuring internal consistent and reliability are presented.

Chapter Six: Discussions of the Findings

The chapter provides the discussions of the findings presented in Chapter Five. The findings are engaged with using related literature in the field of knowledge management and the knowledge management theoretical models that underpinned the study.

Chapter Seven: Summary, Conclusion and Recommendations

This chapter provides a summary of findings, conclusions and recommendations based on the four research questions that were investigated. The implication to research, policy practice and theory is discussed.

1.12 Summary and Conclusion

This chapter introduced the main research problem and laid the foundation for the subsequent chapters in the thesis. A general background to the study, highlighting the problem statement, objectives and research questions were provided. The chapter further discussed issues related to the significance of the study, delimitations, and a brief outline of the Public University Libraries in KwaZulu-Natal Province. Chapter Two discusses the theories and models underpinning the study.

CHAPTER TWO

THEORETICAL FRAMEWORK

2.1 Introduction

The major purpose of this study was to investigate knowledge sharing strategies in university libraries in KwaZulu-Natal Province of South Africa. Sharrat and Usoro (2003) observe that most of the views on knowledge sharing are rooted in the knowledge management theories. The study is informed by the Knowledge Sharing Capability Model (KSC) (Kim and Lee, 2006). This model was developed to examine the impact of the organizational culture, organizational structure and information technology (OCSIT) among employees in public and private sector organizations in South Korea.

The model is suited for the present study because it was developed and applied in South Korea, a developing country context similar to South Africa. The model has been tested in public sector environments, of which universities are a part. The KSC Model was complemented in this study by the Socialization, Externalization, Combination and Internalization (SECI) Model of Knowledge Creation also known as the Knowledge Conversion Theory (Nonaka and Takeuchi, 1995), to understand the strategies available for knowledge sharing in university libraries and how knowledge is generated and created among staff. Other relevant models and theories such as the Social Exchange Theory (SET) (Thibault and Kelly, 1952); Technology Acceptant Model (TAM) (Davies, 1989) and Voluntary, Informal Knowledge Sharing Model (VIKS) (Lee et al., 2004) are also discussed. A theory, according to Kaplan (1964), refers to a generalization about a phenomenon, an explanation of how or why something occurs. Similarly, Hawes (1975) points out that a theory is a system of generalizable statements that are logically linked together to understand or predict human phenomena. The function of a theory is therefore to describe, explain, predict, or control human phenomena in a variety of contexts (Kim, 2003). A theoretical framework provides a particular perspective from which to view a topic. It helps the researcher to make logical sense of the relationships of the variables to the problem being studied. It also provides guidance to a research project. A theoretical model, in contrast, provides the lens through which reality is viewed. It explains and predicts

the behaviour of phenomena. Theories help to make research findings meaningful and generalizable.

Chapter Two is divided into a number of sections based on the guidelines concerning how the theoretical framework chapter should be presented (Creswell, 2009). Section 2.2 discusses KSC Model; Section 2.3 elaborates on the SECI Model's four modes of Socialization, Externalization, Combination and Internalization; Section 2.4 discusses the SET Model while Section 2.5 discusses TAM Model. Section 2.6 describes the VIKS Model. This is followed by Section 2.7, which explains key variables gleaned from the theoretical frameworks. The last section, 2.8, gives the summary of key issues from the theories and models discussed.

2.2 Knowledge Sharing Capability Model (Kim and Lee, 2006)

The Knowledge Sharing Capability Model was developed by Kim and Lee (2006), to examine the impact of the organizational culture, organizational structure and information technology (OCSIT) among employees in public and private sector organizations in South Korea. According to Kim and Lee (2006:10), "employee knowledge sharing capabilities is the ability of employees to share their work-related experience, expertise, know-how, and contextual information with other employees through informal interactions within or across team or work units". The model was developed to test key variables affecting employee knowledge sharing activities such as performance-based pay systems, social networks and information technology (IT) applications focusing on end-users. The KSC Model (Kim and Lee, 2006) posits that knowledge sharing is determined by the organizational culture and organizational structure.

2.2.1 Organizational Culture

Organizational culture is defined by McDermott and O'Dell (2001:77) as the "shared values, beliefs and practices of the people in the organization, reflected in its mission, vision and shared goals". The components of organizational culture that are related to knowledge sharing are clear organizational vision and goals and social networks (Kim and Lee, 2006). According

to Kanter, Jock and Stein (1992), organizational vision leads to generation of a clear organizational purpose that assists in goal achievement. Literature reviewed indicated that a clear organizational vision and goal stimulate a sense of involvement and contribution among employees (Davenport, Sirkka, and Michae, 1996; O' Dell and Grayson, 1998 and Popovich, 1998). According to Kim and Lee (2006), top management should communicate clearly the vision and goals of the organization. A strong relationship between top management and employees enhances a culture of knowledge sharing and competitiveness of the organization as a whole. Lee (2005:6) states that a culture of knowledge sharing in an organization is cultivated through knowledge management support.

Neo (2002), found that KS was influenced by cultural factors such as motivation to share knowledge, management support, trust and a spirit of teamwork. McDermott and O'Dell (2001) noted that whether sharing is part of the business strategy or part of the way of doing business, lack of support from top management impedes communications between and across departments. According to Noor and Salim (2011), management should ensure that staff are aware and understand the benefits of knowledge sharing in an organization. Consequently, Kim and Lee (2006) observed that knowledge sharing depends on top management intentions to create and maintain a culture of knowledge sharing in an organization. In this case, top management in the organization has the capacity to influence people to share knowledge by guiding and creating an environment of trust among employees.

Previous studies have indicated that knowledge sharing in universities is profoundly influenced by cultural values of staff (Hambrick et al., 1998; Pfeffer and Sutton, 2000; Hofstede, 2001; Hutchings and Michailova, 2004). The cultural values include norms, beliefs, uncertainty avoidance, insecurity and collectivism (Thongprasert and Cross, 2008). Thongprasert and Cross (2008) showed that cultural differences such as uncertainty avoidance significantly impedes knowledge sharing behaviour of students and staff in universities in Australia. The study found that individuals were avoiding sharing of knowledge because of the fear of the unknown and also because they felt that they could be demoted or lose their jobs if they shared their skills and expertise (Thongprasert and Cross, 2008). In contrast, a study by Mustafa and

24

Nuraddeen-Abubakar (2009) revealed that university libraries in Saudi Arabia promoted the culture and willingness of staff to share knowledge.

Other aspects of organizational culture that influence employee knowledge sharing are trust and social networks (Kim and Lee, 2006). Trust is willingness to share knowledge. Trust involves intentions and concerns, openness and honesty to one another (Noor and Salim, 2011). Mutual trust is an important factor in developing positive interpersonal relationships among library staff. According to Kim and Lee (2006), a high level of trust among employees is associated with employee knowledge sharing. Trust among employees enhances effective communication by empowering members of an organization to freely share personal knowledge and concerns (Noor and Salim, 2011). The high levels of employee trust can lead to better knowledge sharing and shared goals. Willem (2003) found that KS was highly influenced by trust. Davenport and Prusak (1998) point out that, without trust, knowledge initiatives will fail, regardless of how thoroughly they are supported. Agrawal, Muhammed and Thatte (2008:22) caution that trust can be a risk, as the individual does not know for certain how the knowledge will be used. As a result, knowledge sharing can lead to failure or success in knowledge management initiatives if employees are not willing to share what they know with other organizational entities (Agrawal, Muhammed and Thatte, 2008:22).

The KSC Model (Kim and Lee, 2006) posits that when clearly designated channels of communication, such as social networks and storytelling, exist in organizations, employees would most likely share knowledge using such channels. Social networks as informal channels of communication allow communication, dialogue and individual or group interactions that support and encourage knowledge-related employee activities. In this case, social networks create a culture of knowledge sharing that increases staff motivation to contribute and generate valuable knowledge (Leonard and Sensiper, 1998; Kim and Lee, 2006). With regard to ICT infrastructure, active applications of ICTs, for example the use of Web 2.0 technologies such as social networking systems, allow library staff to interact with one another on a massive scale, thereby promoting knowledge sharing (Jones, 2009).

Similarly, Tan et al. (2010) found that ICTs play a very important role in knowledge management to support the necessary collaboration, communication and networking needs for knowledge creation and sharing. In addition, ICTs help with the capturing, storing, retrieving and distribution of the organization's explicit knowledge. Shanhong (2000) cautions that, in the modern society, knowledge is created with each passing day, it is almost impossible to accomplish such important tasks by using man's brains only. The application of ICTs as a tool for knowledge sharing promotes knowledge exchange among staff and promotes knowledge creation and innovation.

Noor and Salim (2011) used the KSC model to examine factors influencing knowledge sharing capabilities in electronic government agencies in Malaysia. They found that the application of ICTs positively influenced the knowledge sharing capabilities of employees. ICTs were mainly used to support the creation, capturing, storage and facilitating the dissemination and sharing of knowledge among employees. Cabrera and Cabrera's (2005:728) study on fostering KS through people management practices in the United States of America (U.S.A) found that a culture of knowledge sharing was influenced through well-established norms. The study revealed that KS norms were transmitted through a number of ways created and sustained through the socialization process, storytelling and formal procedures. Kim and Lee (2006) stress that a culture of knowledge sharing is well promoted through informal channels, such as storytelling that exist in an organization.

2.2.2 Organizational Structure

Organizational structure represents the set of arrangements among the resources of the organization which may be people, facilities, information and technological infrastructure (Holsapple, 2003). In fact, organizational structure reflects the way jobs are set within the organization and how people are supposed to perform their work based on the rules, procedures and regulations of the organization (Syed-Ikhsan and Rowland, 2004; Kim and Lee, 2006). The KSC Model (Kim and Lee, 2006) warn that hierarchical structures hinder the free flow of knowledge, making it difficult for collaboration and sharing of knowledge across departments.

According to Kim and Lee (2006), non-hierarchical structures positively influence KS. When an organization embarks on KS activities, it has to align its organizational structure to facilitate the creation and effective flow of knowledge throughout the organization. Organizational structures with top-down designs do not promote knowledge sharing, as decisions are made and proposed by management. In top-down structures, reporting procedures take too much time for communication/information to filter down to every level of the organization (Syed-Ikhsan and Rowland, 2004).

In hierarchical or top-down organizational structures knowledge sharing at different levels is a challenge because it is protocol based, where the reporting by staff is through their line managers (Kim and Lee, 2006). A flexible organizational structure is more appropriate as it facilitates knowledge sharing and collaboration, permitting the transfer of skills and expertise within the organization. In such organizational structures, people get together to solve problems and in the process tacit knowledge is shared (Kim and Lee, 2006).

In contrast, an organizational structure composed of departments and demarcated by function often results in communication silos, which may prohibit the knowledge sharing culture (Wang and Noe, 2010). Other aspects of organizational structure that influence employee knowledge sharing are centralised and formalised organization structures, performance based pay systems, and office layout (Kim and Lee, 2006). Knowledge sharing can be facilitated in less centralized and formalised organizational structures (Kim and Lee, 2006; Nonaka and Takeuchi, 1995).

Centralization is the degree of control that top management holds, and which affect employees knowledge sharing activities in the organization and formalization in contrast refers to the degree to which organizational activities are codified in documents regarding procedures, job descriptions, regulations, and policy manuals which guides employees work processes (Kim and Lee, 2006:374).

Kim and Lee (2006) assert that organizational structures that are too centralized on rules, regulations and control systems may serve as a barrier to the creation of knowledge". Despite

limited empirical studies on the impact of organizational structures on employee KS activities, several scholars have asserted that organizations which are too centralized and formalized might reduce the initiative to share knowledge between sections or departments (Miles and Huberman, 1994; Tsai, 2002; O'Dell and Grayson 1998).

Tsai (2002) found that lowly formalized organizational structures permit openness and variation which encourages new ideas to be generated. Similarly, Sharrat and Usoro (2003) observed that KS is influenced by flexible organizational structure. Sharrat and Usoro (2003) emphasised that flexibility in organizations allows the smooth flow of knowledge sharing as compared to more rigid organizational structures. Tsai (2002) explains that centralization can reduce the initiatives to share knowledge across departments/units, thus reducing interest in knowledge-sharing activities with other units in the organization. Various studies noted that effective knowledge management requires flexibility and less emphasis on work rules (Holsapple and Joshi 2001; Rapert and Wren 1998). Lack of formalization increases opportunities for staff in university libraries to interact and share knowledge with one another. A combination of formal and decentralised organizational structures serves to improve knowledge creation and sharing (Nonaka and Takeuchi, 1995; Kim and Lee, 2006). The KSC Model (Kim and Lee, 2006) suggest that people need to be recognized through rewards/incentives on their contribution to knowledge.

Neely (1998), in a study of performance-based pay reward systems, found that such systems promoted knowledge sharing. A study conducted in higher education institution in Singapore showed that rewards and incentives were the strongest predictors of knowledge sharing among staff (Wah et al., 2007). Similarly, Abdullah et.al (2008) were of the view that appropriate rewards should be given to employees as a mode of motivation for knowledge sharing.

Monetary incentives can positively change the knowledge sharing behaviour of individuals because they tend to draw attention to, and focus on, knowledge sharing as an activity that is remunerated (Bock and Kim, 2001). Tan et al. (2010:189) argue that a performance appraisal system could help to attract the right people with the right knowledge, skills and abilities into

the organisation. Szulanski (1996) opines that a performance appraisal or reward system motivates employees to share and transfer knowledge in an organization.

The KSC Model (Kim and Lee, 2006) indicates that those physical environmental factors such as office layout affect the smooth floor of knowledge among employees in different sections/departments. In this case a good office design with open space creates a work environment that encourages interaction among employees (Jones, 2005). For example, an office layout with accessible network and available infrastructure influences knowledge sharing among employees in different sections/units (Davenport and Prusak, 1998). Kim and Lee (2006) feel that employees should promote a culture of knowledge sharing through the use of open workspaces. There is need to incorporate knowledge sharing in the organizational structure, culture, processes and policies of the library. The Knowledge Sharing Capability Model (Kim and Lee, 2006) is presented in Fig 2.1.
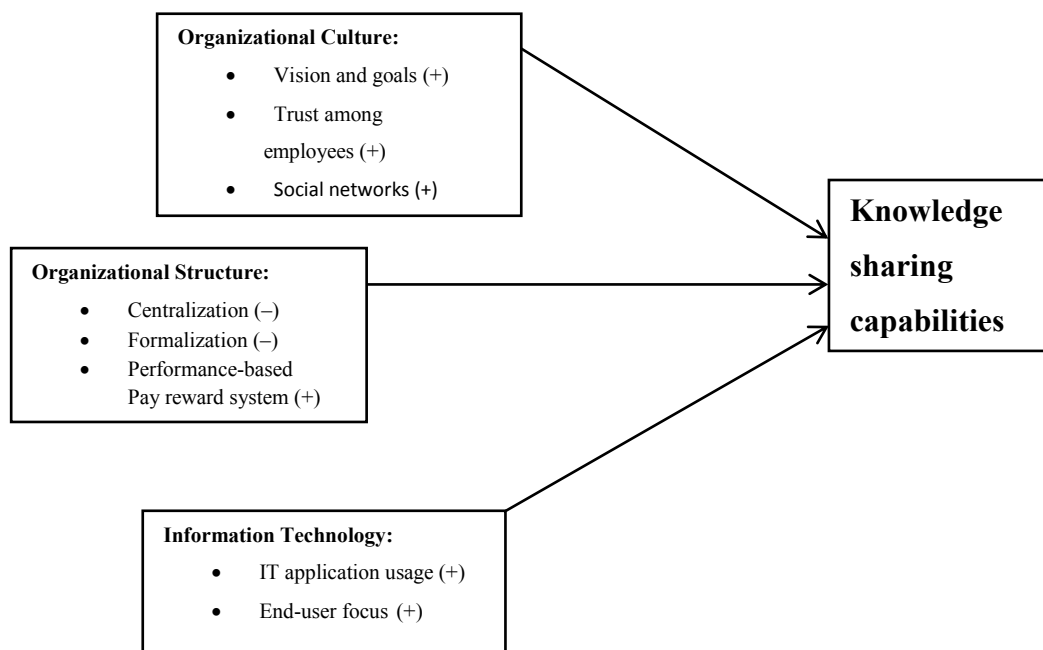
Figure 2.1: Knowledge Sharing Capability Model (Kim and Lee, 2006)

Legend: *(-) shows negative association with employee's activities of KS*
                     (+) shows positive association with employee's activities of KS

2.2.3 IT Applications

The KSC Model (Kim and Lee, 2006) is useful in elucidating the skills and expertise needed to use information and communication technologies for knowledge sharing. The KSC Model states that an end-user focus on information technology (IT) improves employee knowledge sharing capabilities. In this regard, IT applications influence the way knowledge is shared to end-users, such as library staff. User-friendly systems promote user acceptance and use. Furthermore, Kim and Lee (2006) observed that IT infrastructure supports knowledge sharing activities and assists in managing the knowledge assets owned by the organization, to get work done. IT can help library staff to capture and distribute important information and knowledge across different sections of the organisations, thereby reducing time and distance in knowledge sharing and dissemination (Fei, 2011). According to Kim and Lee (2006), IT application is significantly associated with current and future usage of individuals. The KSC Model explains how employees behave when particularly presented with a new system, based on their intentions to use and the perceived ease of use of the system. The greater the ease of use of the system the greater is the chance of staff using the system for knowledge sharing activities. The perceived usefulness of the system also increases opportunities for staff participation in knowledge sharing. The attitudes towards using a technology affects an individual's intentions to use information technology and this, in turn, influences actual use (Kim and Lee, 2006 and Davies, 1989).

Mustafa and Nuraddeen-Abubakar (2009) study on impact of the learning culture and information technology use on students in information sharing maintained that there was a positive relationship between learning culture and student IT use in knowledge sharing. Devadoss et al. (2002) reported that among the key requirements for adopting information technologies as knowledge sharing tools were management support for the new systems and end-user participation, which includes training of users on systems, providing them with skills and help tools. Other studies have identified IT as a variable that impacts knowledge sharing (Kumar, 2005; Kim and Lee, 2006). It can, therefore, be expected that library staff with more usage and favourable perception of IT can demonstrate more knowledge sharing behaviour.

According to KSC Model (Kim and Lee, 2006), demographic variables such as age, years of experience, position and level of education are control variables that are related to individual behaviour that discourages people from sharing knowledge. Kim and Lee (2006) feel that individuals with low levels of education do not feel comfortable with sharing knowledge, compared to individuals with high levels of education. Similarly, in situations where the age of retirement is identified as a driver for knowledge loss, knowledge sharing is viewed as a threat to job security (Davenport and Prusak, 1998; Kim and Lee, 2006; Keong and Al-Hawamdeh, 2002; Rubenstein and Geisler, 2003 and Hall, 2012). Dewah (2011) in his study on knowledge retention in Southern African public broadcasting corporations, found that expertise/skills and knowledge are lost due to staff retirements, especially when such expertise was not shared. When senior managers retire without sharing and transferring their skills, the job performance of the successors often does not equal that of the retiree (Dewah, 2011:86). Knowledge sharing within organisations is facilitated by enabling long service for the workers, where the senior employee often becomes a mentor to the junior employees (Noor and Salim, 2011).

The use of KSC Model to underpin the study was found suitable for investigating knowledge sharing practices in a developing country context such as South Africa. This model was developed and tested in South Korea, a developing economy similar to South Africa. The two countries both have had long histories of oppression that affected their economies (Lipsey et al., 1993). The KSC Model has been found to be useful in addressing the issue of the integration of different cultures. In particular, it emphasizes the use of rewards/incentives to improve working relationships and to address the imbalances in society. Another reason is that this model has been successfully used by other researchers. For example, Noor and Salim (2011) used the KSC Model on factors influencing employee knowledge sharing capabilities of employees and found that knowledge sharing was influenced by non-technical factors such as top management support, organizational culture and organizational structure and technical factors such as IT usage. Dewah and Mutula (2014) found that IT applications and the use of social networks were central to knowledge sharing activities of employees such as managing knowledge assets and assisting organizations to get work done. A similar study by Kim and

Lee (2006) found that both employees' usage of IT applications and friendliness of the IT systems significantly impacted on employee knowledge-sharing capabilities in public sectors. Although the KSC Model is robust in studying issues affecting knowledge sharing, one of its weaknesses is that it emphasises tangible rewarding systems as incentives, which have been found to change the expectations of what people consider moral behaviour (Bock and Kim, 2001). To overcome this weakness in the present study, the SECI Model (Nonaka and Takeuchi, 1995) was used to complement the KSC model. Non-monetary rewards covered by the SECI model include implementing enabling strategies such as a performance evaluation rewarding system, human resource development, mentorship programmes, and job rotation policies that encourage and motivate employees to share knowledge.

2.3 SECI Model of Knowledge Creation (Nonaka and Takeuchi, 1995)

According to Nonaka and Takeuchi (1995), the SECI Model of knowledge creation has four stages that need to be completed in order to convert tacit knowledge to explicit knowledge (namely socialization, externalization, combination and internalization (SECI). For Nonaka and Takeuchi (1995), explicit knowledge is available in the form of files, library collections, or databases, whereas some types of tacit (implicit) knowledge is available which also serve as an organization's intellectual capital. Tacit knowledge is either difficult or impossible to access, for example the accumulated experiences, creativity and skills that reside within individuals. The SECI Model incorporates inherent variables such as the organizational structure, organizational culture and information technology (IT) and management support for KS as discussed with the KSC Model (Kim and Lee, 2006).

Nonaka and Takeuchi (1995) assert that organisations can reduce the loss of knowledge if appropriate strategies such as performance evaluation, IT infrastructure, mentoring, human resources development/subject matter experts and job rotation polices are adapted. Nonaka and Takeuchi (1995) state that job rotation policies provide the opportunity to transfer skills and share knowledge within the organization. Nonaka and Konno (1998) indicate that the presence of a platform such as IT infrastructure is critical to allow for interaction and collaboration

between individuals. In addition, mentorship programmes have also been found to give the opportunity for senior management or well-experienced staff to share and transfer their skills to juniors before they retire or leave the organization (Nonaka, 1994). The Nonaka and Takeuchi (1995) SECI Model's four modes of knowledge creation are socialization, externalization, combination and internalization.

Socialization

According to Nonaka and Takeuchi (1995:62) SECI Model, "knowledge creation is a continuous process which involves interaction between tacit and explicit knowledge. According to the SECI Model socialization represents tacit to tacit communication which takes place between people in meetings or in team discussions. The SECI Model suggests that face-to-face meetings are critical for knowledge sharing to take place and gives room for interaction to happen. By communicating with each other, library staff gain new knowledge that can be shared whether through face-to-face, discussion forums, chat rooms or professional trainings such as attending conferences, workshops or seminars. In the socialization phase, knowledge is converted into tacit knowledge by sharing experiences. The model asserts that a culture of knowledge sharing is developed when people share their ordinary expectations and experiences. The transfer of skills and experiences through tacit knowledge sharing helps avoid knowledge loss when individuals retire or leave the organization. Knowledge is retained by new and young employees who remain behind (Gurteen, 2009).

Externalization

Externalization represents tacit to explicit communication through dialogue such as brainstorming sessions. In externalization, knowledge is converted into explicit knowledge that is expressed in a language or symbols understood and shared through accessible formats. If the knowledge had no explicit form, it would be difficult to distribute and share it across departments (Nonaka and Takeuchi, 1995:62). When tacit knowledge is converted to explicit (externalisation), knowledge is captured in the organisational system and the knowledge is retained in documents and databases. Retention of knowledge includes all activities that preserve knowledge and allow it to be shared (Tan et al., 2010).

33

Combination

Combination is the communication of documented (explicit) knowledge through meetings and conversations supported by online systems (Nonaka and Takeuchi, 1995:62). Explicit knowledge can be easily captured and transferred to worldwide audience. The combination phase allows for the new concepts generated through externalization and already existing knowledge to be organized into organizational structures, which becomes systemic knowledge. This knowledge can be gathered either from inside or outside the library (Nonaka et al., 2000).

Internalization

The internalization phase is the conversion of explicit knowledge into tacit knowledge. Internalization represents explicit to tacit communication. This involves taking explicit knowledge (e.g. a document) and sharing new ideas and taking constructive action. This process is facilitated by verbalized or visualized documents, manuals, reports or oral stories that originate from combination (Nonaka and Takeuchi, 1995). The SECI Model for Knowledge creation is shown in Fig 2.2.
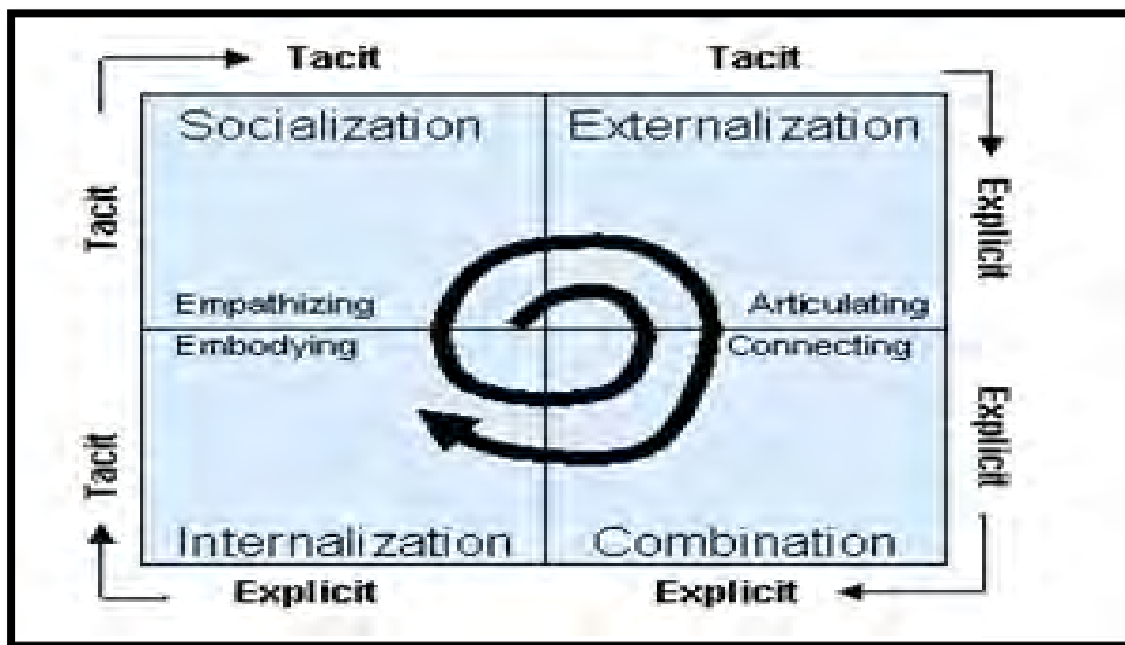
Figure 2.2: SECI Model of Knowledge Creation (Nonaka and Takeuchi, 1995)

34

The SECI Model is deemed useful for this study in investigating how knowledge is generated, captured and shared among library staff. It helps comprehension of the strategies available for knowledge sharing in university libraries. Nonaka and Takeuchi (1995) suggest that knowledge management in libraries can be classified according to three factors, namely humanistic/individual mode, information mode and collaboration mode.

Lam (2000:491) defined individual knowledge as "that part of an organization's knowledge which resides in the brains and bodily skills of the individual". According to Cao and Xiang (2012), the humanistic/individual mode refers to the sharing of knowledge or experiences from one person to another. Gurteen (2009) points out that sharing has the power to retain individual knowledge, as people do not take a job for a life. According to Mitchell (2005), the information mode refers to sharing of knowledge from person to database. With the high levels of information and communication technologies (ICTs) penetrations, university libraries are striving to link and share knowledge with people/individuals from different geographical areas. However, if the library has no culture of knowledge sharing it is possible that staff may not find ICTs useful and there is likely to be resistance to sharing knowledge through such systems (Mitchell, 2005).

The collaboration mode refers to sharing knowledge through integrated system such as an intranet, utilizing knowledge space such as a local Area Network (LAN) (Mitchell, 2005; Nonaka and Takeuchi, 1995). Library staff can share interior documents, reports, council records, statistical analysis reports, policies and procedures, operational brochures, notices and news, activities, training materials, and job opportunities, directly. Through communication with each other, tacit knowledge can be shared and transmitted. Through brainstorming among staff, new ideas and knowledge can be generated. In these ways, explicit knowledge can be converted to tacit knowledge, thus enhancing the efficiency of the library operations (Nonaka and Takeuchi, 1995 and Mitchell, 2005). Therefore, library staff needs, to acquire knowledge management skills to re-position themselves in an environment which is continuously changing (Foos et al., 2002). The key factors which impact whether knowledge can be shared or not lies in the organizational culture, especially if the library has the strategies that could enhance

knowledge sharing. University libraries as learning organizations must organize training sessions to give staff proper education opportunities, since collaboration and training are critical strategies of knowledge sharing (Nonaka and Takeuchi, 1995).

According to Edmonson (2010), the biggest part of knowledge in an organization is tacit knowledge which lies in the brains of staff. For this reason, tacit knowledge must be shared and transmitted. A study done by Jia, Song Gen and Shin (2012) in China used the SECI Model to investigate knowledge sharing practices in libraries and found that, through communication, tacit knowledge in everybody's brain was shared and transmitted. Similarly, a study done by Parirokh, Daneshgar and Fattahi (2008) in Iran, to identify knowledge sharing requirements in academic libraries used the SECI Model. The results revealed that the majority of libraries surveyed were quite friendly towards knowledge sharing and the majority of librarians valued the importance of knowledge sharing. The results confirmed that the knowledge academic staff mostly shared was intangible (tacit).

Nonaka's work is evidenced as the most referenced material in the field of knowledge management (Grant and Grant, 2008). However, the SECI Model of Nonaka and Takeuchi (1995) has received criticism from many scholars. For example, Adler (1995:111) points out that most of the SECI modes (Socialization, Externalization, Combination and Internalization) have been studied by other disciplines, something Nonaka appeared to have overlooked. Again, its weakness is that the model was developed specifically for the knowledge-creating company in a Japanese context, which relies heavily on tacit knowledge (Andreeva and Ikhilchik 2011; Weir and Hutchings 2005). In spite of disagreements with Nonaka's model found in literature (Adler 1995; Andreeva and Ikhilchik 2011; Weir and Hutchings 2005), the SECI Model of Knowledge Creation is useful, since each process is expected to improve the effectiveness of KS by providing library staff with the knowledge needed to perform their tasks.

2.4 Social Exchange Theory (Thibault and Kelly, 1952)

Thibault and Kelly (1952) developed the Social Exchange Theory (SET), which is founded on the exchange of rewards and costs that quantify the values in different situations for individuals. Perceived benefits/costs have been one of the most studied antecedents of knowledge sharing. Blau (1964), reasons that in the Social Exchange Theory individuals are perceived to engage in an interaction with others, expecting some rewards such as respect, reputation and tangible incentives. Molm and Peterson (2001) proclaim that people seek to maximize their benefits and minimize their costs through building social relationships with others by sharing their knowledge. The SET was developed to explain communication and interaction, as well as the factors that govern people's interactions. SET posits that people strive to interact and share knowledge when they know that they can get something in return and that they are likely to develop a relationship with one another.

Tiwana and Bush (2001) used the Social Exchange Theory to understand the behaviour of individuals in distributed web communities in their investigation of factors that impede and facilitate knowledge sharing. They found that social factors such as trust, status, job security and tangible rewards were important predictors of knowledge sharing behaviours. The authors (Tiwana and Bush, 2001) feel that people strive to interact and share knowledge with one another with the expectation that this will give them some rewards such as support, status, job security and respect. O'Dell and Grayston (1998) state that employees share their best practices because of their desire to be recognized by experts and peers. Kollock (1999) found that employees with high technical knowledge seem to have better status in the workplace. Blau (1964) points out that, in a social exchange relationship, an individual willingly makes a contribution to an organization or another individual based on a trust that his/her job will be secured and that one can be rewarded for the contribution made. Individuals base their action decisions on the expectation that their decisions will lead to tangible benefits (Blau, 1994). Motivational factors, such as an exchange relationship that involves both economic resources (e.g. money, goods and services) and socio-emotional resources (e.g. status, devotion and trust), have been found to reduce the initiative to share knowledge, with the belief that knowledge sharing is an activity based on intrinsic rewards (Bock and Kim, 2001; Lin, 2007

and Kollock, 1999). SET was not suited for the present study because of its emphasis on perceived benefits/costs as the only way of promoting knowledge sharing with the assumption that people recognize each other in some ways that are likely to engage in reciprocity (Wang and Noe, 2010).

2.5 Technology Acceptance Model (TAM) (Davies, 1989)

The Technology Acceptance Model (TAM) was proposed by Davies (1989). It is derived from the Theory of Reasoned Action (TRA), but tailored to address the broad needs of information technology research. TAM explains users' intentions to use information technology (IT) and their system usage (Money, 2004). TAM is also used within the broader perspectives of knowledge management to explain the information-related technologies that support knowledge management (Marick, 2001). These technologies include the Communities of Practices (CoPs) support technologies, structured and unstructured data indexing, categorization and taxonomy producing tools (Marick, 2001).

The Technology Acceptance Model (TAM) uses variables from TRA to explain an individual's voluntary use of information technology, namely *perceived usefulness (PU) and perceived ease of use (PEOU)*. Perceived usefulness is defined as "the degree to which a person believes that using a particular system would enhance his/her job performance, while perceived ease of use is the degree to which a person believes that using a particular system would be free of effort" (Davies, 1989:320). According to Davies (1989), people tend to use or not use a system to the extent that they believe it will help them to perform their job better (perceived usefulness). The beliefs of users about the efforts required to use a system can directly affect system usage behaviour (perceived ease of use).

Gilbert, Balestrini and Little Boy (2004) used TAM Model to examine why people prefer electronic delivery of government services over traditional means. They found that factors influencing a positive attitude towards knowledge sharing using IT included time, cost and personal interaction (categorized as relative benefit). Factors that influenced negative attitudes

towards knowledge sharing using IT were experience, information quality and trust. Shah and Mahmood (2013) used the TAM Model to study knowledge sharing behaviour in the dairy sector in Pakistan. It was found that social factors like demographic, cultural, and individual trust affected an individual's behaviour, with respect to knowledge sharing. Hong et al. (2001/2002) studied intention to use digital library in the Open University of Hong Kong and found that perceived ease of use and perceived usefulness were significant antecedents of the intention to use a digital library. Their results revealed that users with higher computer self-efficacy were more likely to report higher ease of use and were more likely to accept computing technology.

In a university library setting, ease of knowledge access among staff has been found to predict library staff's ultimate intention to share knowledge using IT (Watson and Hewett, 2006). A weakness of TAM in studying IT utilization in knowledge sharing is its lack of focus on social factors and strategies that influence knowledge sharing (Moon and Kim, 2001). Such weaknesses leave the SECI Model of Knowledge Creation unparalleled and as the most preferred foundation for understanding enabling strategies that support employee knowledge sharing.

2.6 Voluntary, Information and Knowledge Sharing (VIKS) Model (Lee, Foo, Chaudry and Hawamdeh, 2004)

The Voluntary, Information and Knowledge Sharing (VIKS) Model was developed using the grounded theory methodology. This Model focuses on understanding the perceptions of staff and motivations behind participation in knowledge sharing and factors that impact voluntary, informal knowledge sharing (Lee et al., 2004). According to the VIKS Model (Lee et al., 2004), knowledge sharing can either be formal or informal. Formal knowledge sharing can take place in meetings, conferences or workshops. Informal knowledge sharing can take place during lunch times in canteens or in informal meetings during spare time. VIKS Model asserts that voluntary information knowledge sharing is mainly perceived to be a face-to-face activity. Lee et al. (2004) noted that KS can either be voluntary or mandatory. Voluntary knowledge

sharing is the form of knowledge sharing that is normally expected as part of one's job (Lee et al., 2004). For example, in a university library setting, voluntary knowledge sharing may include activities such as workshops, online database training and library services provided by librarians.

The VIKS has received a lot of criticism from various scholars who claim that voluntary information knowledge sharing is a risk-taking activity (Lee and Al-Hawamdeh, 2002). The authors feel that personality plays an important role in VIKS. For example, people who like to talk find it easier to participate in VIKS and there is the risk that when a suggestion is volunteered, a person who volunteers the suggestion may end up having to implement the suggestion (Lee and Al-Hawamdeh, 2002). Therefore the degree of formality pervades knowledge sharing in VIKS, since the role-players are well defined and will act primarily as transmitters. The implication of this model for the present study rested on the assumption that the VIKS model is perceived to be a face-to-face activity which is voluntary or mandatory. Knowledge sharing can thus be supported through various ways such as implementing enabling strategies that recognize and support knowledge sharers if a culture of knowledge sharing exists in an organization**.**

2.7 Key Variables Gleaned from the Theoretical Framework

Based on the models discussed above, the following variables have been identified as central to studying knowledge sharing strategies in university libraries: organizational structure and organizational culture; attitude and perception; IT applications; mutual trust; incentives/rewards; and knowledge sharing strategies (mentoring, job rotation policies, staff training/human resources development and ICT infrastructure). Table 2.1 shows how the research questions and objectives correlate with the theoretical framework variables and key questions in data collection tools.

Table 2.1: Mapping of Research Objectives and Questions to Key Variables of Theoretical Framework and Questions from Data Collection Tools

S/No	Model	Objectives	Question	Key variables	Questions in data collection tools
1	KSC/ SECI	To assess the extent of knowledge sharing among library staff in University Libraries in KZN Province.	What is the extent of knowledge sharing in University Libraries in KZN Province?	Knowledge sharing Tacit and explicit KS (socialization, externalization combination and internalization).	**Appendix 2** (questions 9 and 10) **Appendix 3** (question 1; 2 and 3) **Append**ix 5(questions 6)
2	SECI	To determine knowledge sharing strategies available in University Libraries in KZN Province.	What strategies are available for knowledge sharing among library staff in a university?	KS strategies: performance evaluation, IT infrastructure, mentoring, human resources development/subject matter experts and job rotation polices.	**Appendix 2** (questions 11 ; 12 ; 13) **Appendix 3** (questions 4; 5; 6;7 ; 8 ; and 9) **Appendix 4** (questions 8 ; 9; 10) **Appendix 5** (2 ; 3 ; 4 ; 6)
3	KSC	To assess the extent of knowledge sharing among library staff in University Libraries in KZN Province.	What is the attitude and perception of library staff towards knowledge sharing?	Attitude, IT applications (Perceived usefulness and perceived ease of use).	**Appendix 2** (questions 14 ; 15 and 16) **Appendix 3** (questions 10)
4	KSC	To assess the extent of knowledge sharing among library staff University Libraries in KZN Province.	What factors affect knowledge sharing among library staff?	Organizational culture (top management support, trust, vision and goals,) Organizational structure (incentive/rewards formalization, centralization, office layout) age, years of experience, positions and education.	**Appendix 2** (questions 17 ; 18 ; 19 ; 19a ; 20 ; 21 ; 22 ; 23) **Appendix 3** (questions 11 ; 12 ; 13 14 ; 15 ; 15 and 17) **Appendix 4** (questions 4; 6 ; 8 ; 10) **Appendix 5** (question 5)

2.8 Summary

Chapter Two reviewed theories and models relevant to studying knowledge sharing. The theories and models discussed included the KSC, SECI, SET, TAM and VIKS. The study was largely informed by the KSC Model (Kim and Lee, 2006). The KSC Model was complemented by the SECI Model of Knowledge Creation (Nonaka and Takeuchi, 1995), especially with regard to how knowledge is captured, created and acquired in university libraries through the conversion of tacit and explicit knowledge via four patterns of communications (Socialisation, Externalization, Combination and Internalization). The SECI model was also suited for understanding the enabling strategies available for knowledge sharing among library staff.

SET was not used in this study as its focus is on incentives as the driver for knowledge sharing. A weakness of TAM is that it fails to reflect on availability of strategies and social factors that motivate people to share knowledge. TAM is also silent on how knowledge should be acquired and shared in the organization. VIKS could not be largely applied for the study as knowledge sharing in VIKS is perceived to be a face-to-face activity which is voluntary or mandatory. The implication of the VIKS Model for the study is that there is the risk that those who voluntarily make a suggestion may end up having to implement the suggestion. The next chapter is on literature review. Literature is reviewed based on variables gleaned from the theoretical models and research questions.

CHAPTER THREE

LITERATURE REVIEW

3.1 Introduction

The purpose of a literature review in research is to assist in identifying and evaluating studies related to one's field of study. The review of literature ensures that issues and variables related to the research topic, and which are likely to influence the problem situation, are discussed. In order to show how the research is related to previous studies, the literature review needs to be critical (Henning, 2004). It also needs to assess the strengths and weaknesses of previous work, including omissions or bias, taking into account justifiable arguments by referring to previous research (Kemoni, 2008:105). Therefore a good literature review identifies the different views, agreements, disagreements and trends of thought on the topic being researched (Stilwell, 2000).

The purpose of the study was to investigate knowledge sharing strategies in University Libraries in KwaZulu-Natal Province of South Africa. The objectives were to: (1) Assess the extent of knowledge sharing among library staff in University Libraries in KwaZulu-Natal Province; (2) Determine knowledge sharing strategies available in University Libraries in KwaZulu-Natal Province.

The following research questions were addressed: (1) What is the extent of knowledge sharing in University Libraries in KwaZulu-Natal Province?; (2) What strategies are available for knowledge sharing among library staff in a university?; (3) What is the attitude and perception of library staff towards knowledge sharing?; (4) What factors affect knowledge sharing among library staff?

Empirical and theoretical literature on knowledge management, in general, and knowledge sharing, in particular, is found especially in journal articles, books and online databases. All these sources were reviewed in the study. The study covers literature on related, cognate and broader issues. This chapter is organized according to the research questions in relation to the objectives, variables gleaned from the models underpinning the study in Chapter Two (see

section 2.7) and Table 2.1 on theoretical framework and broader issues to the research problem. The review of the literature is therefore organized around the following themes: knowledge sharing, knowledge sharing strategies, attitude and perception, organizational culture, organizational structure and organization factors.

3.2 Knowledge Sharing in University Libraries

The purpose of the study was to investigate knowledge sharing strategies in University Libraries in KwaZulu-Natal Province of South Africa. The first research question attempted to examine the extent to which knowledge is shared in university libraries. The question is discussed under the following attributes in Chapter Two (see Table 2.1): knowledge sharing (KS), tacit and explicit KS. According to Kim and King (2004:54), knowledge sharing is about communicating knowledge within a group of people. The group may consist of members engaged in a formal or an informal conversation. Kim and Lee (2006:380) define knowledge sharing as the ability of employees to share their work-related experience, expertise and know-how with other employees through informal knowledge sharing within or across team or work units.

The latter definition was adopted for the current study, as it encompasses an emphasis on knowledge sharing as a concept through which employees (library staff) mutually exchange knowledge and jointly create new knowledge that could assist in transforming the library into a more efficient knowledge sharing organization, if utilized properly. The underlying purpose is to utilize available knowledge to improve the group's performance. In this study, as discussed in Chapter One (see section 1.1) where the term knowledge management is broadly used, it also incorporates knowledge sharing. Knowledge management therefore refers to all the activities of identifying, capturing, evaluating, retrieving and sharing all the knowledge assets of an organization that promotes the application of tacit and explicit knowledge sharing (Gartner Group, 2000:1 and Nonaka and Takeuchi, 1995).

Jain (2012:141) explains that "university libraries are perceived as systems which integrate activities and business processes that work together to accomplish tasks". In actual fact, university libraries are viewed as knowledge based organizations which collect, create, organize and distribute knowledge to students and academics. As a way of responding and surviving in the knowledge era of knowledge based economy (KBE), university libraries are significantly transforming through adopting knowledge management (KM) practices and knowledge sharing strategies (KSS) in order to become competitive in the provision of services (Mavodza, 2010). For this reason, university libraries serve as knowledge repositories to enable researchers to share and exchange ideas and new insights. Storing and managing information is not new in universities; this has been always the case in higher educational institutions (HEI). The challenge with university libraries is to share the available knowledge, exchange experiences and expertise and to allow other library staff to utilize the knowledge generated and acquired within and outside the library (Cheng, Ho and Lau, 2009; Keramati and Azadeh, 2007).

Rah, Gul and Ashraf Wani (2010:25) investigated on how libraries can manage the creation and sharing of knowledge among their staff. They emphasized on the development of expert systems that could facilitate the creation and acquisition of knowledge among library staff. White (2004) reports findings of a case study she carried out at Oxford University of Library Services (OULS). The findings revealed how university libraries can benefit from utilizing a knowledge management system (KMS) by integrating explicit and tacit knowledge into the whole process of library services. Rah, Gul and Ashraf Wani (2010) state that university libraries are shifting towards KM and it is important for libraries to find ways of surviving in the KBE. The development of knowledge expert systems would facilitate knowledge production and sharing in university libraries.

Lee (2005) stressed that the knowledge and experiences of library staff are the intellectual capital of any library and should be valued and shared. Many organizations, including university libraries today are faced with ageing populations of whom many are retiring and resigning. The enormous amount of knowledge possessed by this group has to be passed on to

45

the next generation of workers and this can only be achieved through implementing knowledge sharing strategies. It is a challenge that requires university libraries to restructure their services to meet the needs of its users (Al-Hawamdeh, 2003).

McCarthy (2005) reveals that, as a way of responding to these challenges, university libraries are putting in place strategies such as formal staff development policies, selection and recruitment measures that outline the library's future plans. Integral to this planning is the need to identify the skills and attributes required by library staff in both the short term and the long term. Al-Hawamdeh (2003) and Sveiby (2001) stressed the need for organizations to motivate their staff, especially the highly skilled professionals to share skills and expertise to facilitate knowledge retention within the organization. Therefore knowledge sharing plays a key role in the whole process of knowledge management.

Lee (2007) found that in the 21st century university libraries around the world are putting in place knowledge sharing approaches, such as social gathering places like coffee shops, computer labs and Web 2.0 technologies, to complement their services, to support and build a more relaxed atmosphere which encourages employees to exchange and share knowledge among their peers. A study by Lim (1992) at the Victorian Universities in Australia (VUA) revealed that approaches such as organizing social activities were used to enhance knowledge sharing to improve the relationships of staff. The approaches were not considered as facilities for exchanging experiences and skills of work-related activities.

Many universities around the world are accepting the emerging demand for knowledge management practices and are ranking knowledge sharing as one of their top priorities (Kim and Lee, 2006). A research survey of universities in Western countries established that knowledge management and knowledge sharing are important features for organizational survival. As a way of responding to this demand, university libraries especially in developed countries have developed expert systems to facilitate the creation and acquisition of knowledge among librarians. The studies have shown that most universities are implementing knowledge management programmes and tools to improve knowledge sharing among academics and

library staff. For example, a study by Dankert and Dempsey (2002:351) in the United States of America (U.S.A) at DePaul University Libraries revealed that libraries had developed an annual programme of structured peer-to-peer instruction to keep communication open among subject librarians at all its campuses. This was meant to facilitate the sharing of subject expertise and to encourage co-operation and collaboration through providing an ongoing staff development.

Jantz (2001) explored the use of knowledge management systems in capturing the tacit and informal knowledge of reference librarians at the New Brunswick (NB) Campus Libraries of Rutgers University. A learning tool to capture the tacit knowledge of reference librarians called Common Knowledge Database (CKDB) was developed to improve knowledge sharing of experiences and skills among reference librarians. This was meant to overcome the barriers caused by geographical boundaries of university campus libraries. The study revealed that the importance of capturing tacit knowledge for such knowledge can be lost through retirement, resignation and death. Jantz (2001:6) stressed the importance of implementing knowledge management tools to promote knowledge sharing among library staff.

The studies of Dankert and Dempsey (2002) and Jantz (2001) are of particular importance in the present work as they focus on university library staff. A limitation is that the studies concentrate on sharing expertise of a particular group (reference librarians) of library staff and not considering other groups. The present study seeks to investigate knowledge sharing strategies appropriate for library staff in all categories (subject librarians, reference librarians, information librarians, acquisitions librarians and cataloguing librarians).

Many organizations, including universities, worldwide are now making attempts to integrate knowledge sharing into their operational milieu. A study carried out by Parirokh, Daneshgar and Fattahi (2008) in Iran on knowledge sharing requirements in university libraries revealed the need for university libraries to promote knowledge sharing among library staff. Jain (2007), in an empirical study on adoption of knowledge management practices in university libraries in East and Southern Africa, found that such libraries often did not have a culture of knowledge

sharing. Consequently, the knowledge people possessed was not being integrated into an organizational knowledge management system (KMS). For instance, the knowledge possessed by subject specialists was only known to themselves (Jantz, 2001). For such specialized knowledge to benefit the organization more, librarians needed to share their intellectual and operational knowledge within and outside the library (Ford, 2004).

Mushi (2009) investigated factors hindering knowledge sharing in public university libraries in Tanzania. These factors included inflexible organizational structures, lack of knowledge sharing culture and strategies and individual and technological factors. Mushi (2009) concluded that, with changing work practices, university libraries are increasingly faced with the need to change their norms, values and be able to motivate employees in order to promote knowledge sharing within their libraries.

Wamundila and Ngulube (2011), in a study of enhancing knowledge retention in higher education in Zambia, found that a number of gaps existed in the current knowledge management practices at the University of Zambia (UNZA). With regard to knowledge sharing, they discovered that relevant KM strategies such as KM policies, workforce planning, staff training and development, job rotation, succession planning and mentorship programmes were lacking. Wamundila and Ngulube (2011) concluded that the effects of these shortcomings and knowledge loss arising from staff attrition challenges, such as retirements and resignations, will possibly be a risk to university operations.

In the context of South Africa, a study by Mphidi and Snyman (2004), on the utilization of an intranet as a knowledge management tool in academic libraries, found that knowledge sharing was not widespread in university libraries even though the utilization of the intranet as a knowledge sharing tool was gaining momentum. Selhorst (2007), cited in Roknuzzaman and Umemoto (2009:646), recommends the replacement of the intranet with an internal wiki, followed by a knowledge audit to access hidden staff talent. However, it was found that the low willingness of staff to share their knowledge and difficulties in managing tacit knowledge were two general problems when applying KS in libraries.

Maponya (2004) and Trivedi (2007) identified similar problems at the University of KwaZulu-Natal (UKZN) Pietermaritzburg libraries and the Department of Health in the UK. The authors assert that staff usually did not recognize the importance of KS and ignores the KM policies and strategies in libraries. It was difficult to capture and share tacit knowledge of all internal staff. For example, no written KM policy on knowledge sharing is in place at the UKZN Pietermaritzburg libraries. Besides these two problems, Maponya (2004), states that tacit knowledge sharing assists in exchanging experiences and knowledge that has been acquired over the years, rather than what is usually explicitly codified. It is therefore important for university libraries to determine and manage their knowledge assets to avoid duplication of efforts. For Nonaka and Takeuchi (1995), the SECI Model of knowledge creation (see section 2.3 in Chapter Two), knowledge sharing involves the creation, capturing, acquiring, and gaining of skills and competencies through tacit and explicit knowledge sharing.

Knowledge Creation, Acquisition and Capturing

Knowledge creation refers to the ability to originate new ideas and come up with useful solutions (Bhatt, 2001). When organizations know what they need, they prioritize that knowledge and develop tools which enable sharing, leading to the creation of new knowledge (Huseman and Goodman, 1999). Acquisition is defined as an activity which deals with finding and acquiring knowledge in knowledge-based resources (Mohammad, Hamdeh and Sabri, 2010). Once knowledge has been created, it has to be captured. Knowledge capturing entails extracting tacit knowledge from individuals in order for knowledge to be documented and later shared among employees (Mpofu, 2011).

The findings from a study by Mohammad, Hamdeh and Sabri (2010:441), in developing a framework for knowledge-based organizations, revealed that many organizations are finding it difficult to retain knowledge, since many experts are frequently leaving for greener pastures. As a result, organizations do not keep knowledge within the organization since it is not easy to extract this type of knowledge from subject matter experts (SME) and this type of knowledge is not articulated. A study by Mpofu (2011:12415) on KM practices in Malawi revealed that, although organizations regarded knowledge capturing and acquisition highly, very few of these

organizations had introduced formal knowledge management systems as tools for knowledge sharing.

Maponya (2004) asserts that acquiring and capturing knowledge is a key to the success of knowledge-based organizations. Knowledge is often lost through dismissals, retirements and natural attrition and the reason for this is that knowledge is held in people's heads and not captured anywhere (Probst, Raub and Romhard, 2000:226). The conversion of knowledge into tacit/or explicit knowledge is only possible through sharing ideas (Nonaka and Konno, 1998). Research conducted at the University of Zambia on knowledge acquisition as a knowledge retention strategy showed that there was minimal support for training and development, especially on expert knowledge acquisition and sharing (Wamundila and Ngulube, 2011). Where staff training is poor and knowledge repositories are lacking, knowledge acquisition and sharing is compromised (Tsai and Lee, 2006).

A study by Parirokh, Daneshgar and Fattahi (2008:114) on the requirements of academic libraries in Malaysia found that library staff did not value knowledge sharing as a source of acquiring knowledge, but they viewed knowledge sharing as a mechanism for obtaining relevant information. Staff did not consider consulting colleagues as source of acquiring and sharing tacit knowledge. The study revealed that specific KM policies and strategies to acquire, capture and share knowledge were missing in university libraries. This is consistent with Maponya (2004) and Wamundila and Ngulube (2011), who confirmed that KM policies and strategies that enhances knowledge sharing are missing in academic institutions and as a result, knowledge is not captured and shared.

Shanhong (2000), cited in Mpofu (2011:12410), describes KM in libraries as focused on effective research and development of knowledge, creation of knowledge bases, training of library staff, exchange and sharing of knowledge between library staff and library users. In this case, university library staff may possibly become part of the knowledge creation process through acquiring competencies and skills that they do not have, both internally and externally (Teng and Al-Hawamdeh, 2002). It is for this reason that university libraries in KZN should

identify KS strategies of capturing employees' expertise before it is lost. Without putting in place proper strategies for knowledge sharing, they will lose competitive advantage, especially with the high staff turnover situations affecting universities worldwide.

In Africa, many studies have revealed knowledge management and knowledge sharing practices by some business organizations and academic institutions (Maponya, 2004; Dewah, 2011; Chigada, 2014; Mavodza, 2010). However, an analysis of the review of the literature revealed that university libraries in Africa did not have KM policies, ICT infrastructure and strategies that support knowledge sharing (Mushi, 2009; Wamundila and Ngulube, 2011; Maponya, 2004 and Adomi, 2006). Despite the growing literature on knowledge sharing and knowledge management practices, little attention has been paid to knowledge sharing strategies in university libraries. Much of the research that has been conducted in developing countries revealed that university libraries did not capture knowledge of talented individuals. Specific concerns regarding knowledge sharing and its applications in university libraries have not been clearly addressed. There has, however, been little empirical research specifically into knowledge sharing strategies that might affect library staff. The present study seeks to investigate knowledge sharing strategies that could be utilised to promote knowledge sharing among staff in University Libraries in KwaZulu-Natal province of South Africa.

3.2.1 Intellectual Capital

Intellectual capital, as one of the broader issues discussed in the study is addressed through socialization-the attribute in the SECI Model (Nonaka and Takeuchi, 1995). Intellectual capital is the accumulation of individuals' intellect that contributes to the achievement of an organization's vision and goals (Loh, 2000). The SECI Model of Knowledge Creation by Nonaka and Takeuchi (1995) posits that the real value of the organization lies in its intellectual capital in the form of knowledge and talent that each individual possesses (tacit knowledge). Findings from a study conducted in Australia to explore knowledge management practices (KM) and intellectual capital (IC) in firms, by Zhou and Fink (2003:87), revealed that KM was perceived to be more about human capital than customer capital and organizational capital. The

51

findings revealed that more focus was given to training and development and less to measurement and rewarding issues to improve and promote KS in organizations. It can be concluded that intellectual capital holds the greatest importance of KM in knowledge creation and sharing in university libraries. Given the fact that university libraries are faced with a challenge of staff retention, Bergeron (2003) argues that the intellectual capital that is the knowledge, skills and competences owned by employees, need to be retained. Without knowledge sharing strategies in place this could affect the operations of library services. When employees leave the organization, they take their skills, competencies and knowledge with them.

3.3 Knowledge Sharing Strategies

This section addresses the research question on knowledge sharing strategies available in University Libraries in KwaZulu-Natal (see section 1.5). The question covers aspects of channels of communication such as communities of practice, social networks and storytelling and enabling knowledge sharing strategies such as knowledge repositories, staff training/human resources development, performance evaluation/appraisal, mentorship programmes, succession planning and job rotation policies. A strategy is a plan set in place to achieve organisational goals and objectives. Therefore knowledge sharing strategies (KSS) refers to what needs to be done to achieve organizational goals and objectives (Holsapple and Joshi, 2001), with regard to knowledge assets. Organizational strategies provide a framework that guides decision-making processes (Carrillo, Anumba and Kamara, 2000). The major purpose of university libraries is to leverage the available knowledge more efficiently and effectively. In this case, implementing KS strategies could assist in transforming university libraries into knowledge sharing organizations (Maponya, 2004:13).

3.3.1 Channels of Communication Strategies

The channel is a medium by which knowledge is communicated or passed on from one part to another (Keong and Al-Hawamdeh, 2002). Literature on channels of communication will be reviewed.

Communities of Practice

Communities of practice (Cops), as a communication channel of knowledge sharing are formal and informal groupings of people who voluntarily share similar interests and goals. Cops enable organizations to tap into knowledge that is generated and held collectively (Keong and Al-Hawamdeh, 2002). Most Cops use internet or intranet discussion groups or other computer-mediated communications facilities, such as blogs, to exchange ideas and knowledge. Cops are another way of organizing work interactions between employees and they are very effective in leveraging knowledge flows (Cabrera and Cabrera 2005:720). A weblog, shortened to blog, is a type of electronic communications that is widely used in university libraries to capture information, publish stories, release news, express opinions, commentaries and create journals and provides links to other sites of interest (Ramirez, 2006 and Dewah, 2011). A weblog used in communities of practice could assist in sharing knowledge of a particular group of interest, through posing questions and comments and sharing ideas and experiences (Ramirez, 2007). However, blogs are very difficult to monitor and regulate. Caution must be therefore be exercised to avoid positing of unprofessional and inappropriate issues to be shared (Atwood, 2009).

Findings from a study by Wei (2010:40), on factors that impact employees' online knowledge sharing in business sectors in U.S.A, revealed that people were interested in using Cops as a knowledge sharing strategy, since it gave them an opportunity to draw up a list of people they were interested in and set up their own communities. The results showed that some people were not interested in communicating in Cops because of the nature of the questions they needed to ask, which were very sensitive. In this case, participants preferred the presence of multiple sharing channels like video conferencing and face-to-face meetings. The Knowledge Sharing Capability (KSC) Model (Kim and Lee, 2006) hypothesizes that when clearly designated channels of communication exist in organizations, individuals tend to rely more on informal relationships for communication. Consistent with the findings at the University of Zambia (UNZA) on knowledge retention strategies among academics, respondents revealed that they belonged to an informal grouping network where they shared knowledge with colleagues in their network activities (Wamulinda and Ngulube, 2011). De Long (2008) and

53

Mngadi (2007), reached the same conclusion in their studies. Cabrera and Cabrera (2005:7), feel that informal networks built in Cops are one of the most important mediums through which knowledge is shared.

In South Africa, Buckley and Giannakopoulos (2011), in their study of sharing knowledge the Cop way among academics at the University of Johannesburg, revealed that sharing knowledge within Cops was very complex. Empirical evidence show that time constraints, unwillingness among academics to share knowledge and a lack of support or participation from management were the major obstacles to Cops as a strategy for KS. Volumes of literature have been written about communities of practice, but the greatest majority dealt with the issue of KS within communities of practice in the business sector and academics. There is little empirical research on KS within Cops among staff in university libraries.

Social Networks

This refers to a more formal and structured institutional capacity of knowledge sharing especially those in spheres that are critical to the organization. Social networks are one of the most common tools of Web 2.0 technologies that support collaboration, knowledge sharing, interaction and communication among users in different places who come together with a common interest or goal (Balubaid, 2013:409).The literature revealed that the use of social networks has gained impetus in many organizations, particularly university libraries. ICTs like Web 2.0 are playing an important role in dissemination of knowledge and in communication. The term Web 2.0 refers to a new generation of web applications which provide for online participation, collaboration and interaction. It involves the use of social media software services such as blogs, wikis, multimedia and social networks (Howe and Kekwaletswe, 2010). Shanhong (2000) explained that the application of information technologies enlarges the scope of knowledge acquisition, which is a key process in managing knowledge in university libraries. Examples of social networks that can enhance or support knowledge sharing in university libraries are: video-conferencing/telephone, groupware such as lotus notes, intranets/internet, portals, expertise location, electronic bulletin boards, knowledge directories, databases, electronic mails, intelligent search engines and weblogs, Facebook and Twitter.

Facebook and Twitter are some of the most recent social networks used in university libraries. Social networks are commonly used in university libraries to improve communication and knowledge sharing among users and staff. Facebook has become popular as one of the social networking tools in university libraries where staff and students get to know each other and exchange information and share ideas about library services, university policies, events and many other things, Twitter is described as a social networking and micro blogging service that users like to use for short messages. In university libraries Twitter allows informal collaboration that provides relief from rising email volumes (Balubaid, 2013).

A study by Sarrafzadeh, Martin and Hazeri (2010) on KS and its potential applicability for libraries suggested that providing a variety of communication channels as strategies for KS for librarians enhances both the efficiency and effectiveness on knowledge sharing activities. The development of Web 2.0 technologies has provided an excellent platform to meet this need. Increasingly, libraries are employing blogs, wikis and other applications as knowledge sharing strategies (Hazeri, 2010, cited in Mayekiso, 2013).

In the U.S.A McManus (2009) found that university libraries have leveraged the power of Web 2.0 as a strategy for knowledge sharing to provide better services to users and to improve communication between staff and users in accessing and sharing online electronic resources and/databases. A study by Charnigo and Barnett-Ellis (2013) on Facebook among university librarians in the U.S.A provides useful insights into how librarians have been using Facebook as a knowledge sharing tool in delivering library and information services to patrons. A study by Makori (2011:32) at the Catholic University of Eastern Africa in Kenya found that few libraries have embraced the use of and the application of Web 2.0 as knowledge sharing tools in Africa. Consequently, many libraries in Africa are still struggling to engage themselves with such kinds of tools. The development of Web 2.0 as a knowledge sharing strategy has been very slow and unplanned.

In South Africa, university libraries at the University of Pretoria (UP), the University of Johannesburg (UJ), the University of Western Cape, (UWC) the University of Cape Town

(UCT), the University of KwaZulu-Natal (UKZN) and the University of South Africa (Unisa) have introduced Web 2.0 technologies in promoting a knowledge society, supporting open distance learning, promoting online collaboration and online resource sharing (Makori, 2011). However, the development of such tools as a knowledge sharing strategy among library staff members is still very slow. Many organizations remain sceptical about the use of online social networks (OSN) within the organization, with the perception that employees will abuse the tools for social purposes rather than for organizational knowledge sharing (Stafford and Mearns 2009:2). There is also an assumption that information about a company could fall into the wrong hands, threatening the competitive advantage of the organization. Findings from a study by Stafford and Mearns (2009) found that knowledge sharing in a multinational business solutions corporation in South Africa disclosed that the use of online social networking tools was effective and that management encouraged employees to make more use of such tools to share knowledge.

It is the use of these tools, such as blogs, wikis, Facebook, virtual communities and instant messaging that employees are able to use to collaborate and share ideas and knowledge in an informal setting. This study maintains that OSNs tools are highly effective in promoting knowledge sharing among library staff. The value is driven by knowledge of its people if they understand the perceived ease of use and perceived usefulness of the tools in sharing knowledge (Stafford and Mearns 2009). In relation to the KSC Model (Kim and Lee, 2006), perceived ease of use and the user friendly system motivates users' intensions to use the system and that they can see the perceived usefulness of the system.

Storytelling

This refers to a storytelling session, whereby the person who attends an event or training session is given the opportunity to disseminate the knowledge gained to others within the organization. Storytelling is an in-depth discussion that happens during and after completion of a project, workshop or an activity, to capture what lessons were learnt during the entire activity (Faul and Camacho, 2004). Stories are used to impart tacit knowledge from one person to another. Sharing stories enables people to learn through other peoples' experiences (Wijetunge,

2012). The KSC Model (Kim and Lee, 2006) and SECI Model (Nonaka and Takeuchi, 1995) confirm that stories are powerful informal channels of communication, as they allow employees to share their experiences and learn from others.

The main idea behind a meeting is to share feedback with decision-makers, improve support from the team and ultimately enhance team building. However, in the modern business world, storytelling is emerging as an important informal strategy of communication to convey experiences of work whilst communicating shared knowledge. Storytelling as an informal strategy of knowledge sharing among library staff is useful in preserving the organizational knowledge to convey values and reveal how things work within the library (Keong and Al-Hawamdeh, 2002:50). However, storytelling in an organization setting can be seen negatively as stories circulated are probably not work-related (Reamy, 2002). Wijetunge (2012), in a study of organizational storytelling of tacit knowledge sharing in university libraries in Sri Lanka, found that the use of stories as a strategy for sharing tacit knowledge was absent. Employees did not value storytelling as a knowledge sharing strategy with the assumption that stories related by individuals are told from the perspective of one individual. Such a single point of view may not be particularly relevant to others (Wijetunge, 2012).

Findings from a study in understanding the perception of employees on the usage of stories to share knowledge in institutions of higher learning in Malaysia revealed that stories were mainly used to share work-related experiences in the organization (Khalid and Mahmood, 2008). A similar study by Khalid and Mahmood (2008) on the perception of storytelling among government employees in Malaysia indicated a lack of understanding and unfamiliarity with the concept of storytelling as a knowledge sharing strategy. Understanding of storytelling as a strategy for knowledge sharing in informal settings among staff in university libraries surveyed is still unclear.

3.3.2 Enabling Knowledge Sharing Strategies

The SECI Model of Knowledge Creation of Nonaka and Takeuchi (1995) indicates that knowledge sharing strategies include resources such as policies, IT infrastructure/knowledge

repositories, staff training/human resources development, performance evaluation system; mentorship programmes, succession planning and job rotation policies and they focus mainly on gaining competencies. According to Nonaka and Takeuchi (1995), policies and guidelines are needed to shape the human resource requirements of staff. Human expertise has always been discussed as one of the university library's greatest assets. Recognizing that library staff and their collective knowledge is important, knowledge sharing brings opportunities for staff to perform efficiently (Foo et al., 2002:4). Enabling knowledge sharing strategies will now be reviewed.

Knowledge Repositories

Knowledge repositories as a strategy for knowledge sharing facilitate the documentation of relevant operational knowledge in order to mitigate attrition challenges and aid in the learning period for new employees (Business Consulting Services, 2003). Akramet et al. (2011:127) defines knowledge repositories as "organizational knowledge that consists of large databases, data warehouses, internet and intranet". According to Nonaka and Takeuchi (1995), documenting operational knowledge could assist individuals to internalize their experiences, thus enriching their tacit knowledge. Integrated systems such as databases, internet and knowledge management systems (KMS) facilitate the sharing and transferring of explicit knowledge to other people, thus transferring experiences of others indirectly. With complete documented knowledge, explicit knowledge can be easily channelled to the person where it is needed. A study on enhancing knowledge retention in higher institutions revealed that knowledge repositories to document explicit knowledge did not exist (Wamundila and Ngulube, 2011).

Townley (2001) states that library staff are learning to be proactive in the delivery of intellectual knowledge and will need to use many of these systems to share operational knowledge within the library. Commitment to training and development is needed to enhance knowledge sharing, using such systems. If library personnel are not well trained in the use of knowledge management systems it is likely that efforts to capture and share tacit knowledge will fail (Wamundila and Ngulube, 2011).

Staff training/Human Resources Development

Among different types of training, Clark and Kay (1986) claims that the one-to-one instruction mode of teaching is the best and the most common one in library training. The SECI Model of Knowledge Creation (Nonaka and Takeuchi, 1995) explains that after gaining organized knowledge in order to improve the daily operational process, staff can utilize know-how through knowledge sharing. The use of extensive training and development programmes could help library staff to gain skills and build confidence to interact and share tacit knowledge with others. By increasing interaction it helps to increase interpersonal ties, shared norms and trust with each other. Kang et al. (2003), cited in Cabrera and Cabrera (2005:726), emphasise that training is very useful in retaining organizational knowledge and intellectual intelligence.

Staff training enables employees to update their skills and to promote knowledge sharing through the exchange of experiences and new ideas (Parry, 2008:48). A report compiled by the Association of Commonwealth Universities on the state of Commonwealth libraries on the development of new skills of librarians indicated that 90% of libraries surveyed cited a need for staff training and development on the use information and communication technologies (ICTs) as knowledge sharing tools (Harle, 2009:18). Consistent with findings from a study by Jain (1998:56), on perceptions of empowerment and productivity in academic and public libraries in Botswana, it was found that library staff working in universities and public libraries often lack basic skills to use the facilities for knowledge sharing purposes and to improve their skills to cope with the changing environment. In South Africa, Shepherd (2010:507) found that there was a lack of IT competencies in using ICTs for knowledge sharing purposes among librarians in universities. The findings revealed that staff training/human resources development as a strategy for knowledge sharing are limited in university libraries and libraries do not adequately address the need for basic skills and training required on the ground in library operations.

Performance Evaluation and/ Appraisal Strategy

A study done by Cabrera and Cabrera (2005:727) in the United State of America (U.S.A) on fostering KS practices confirmed that performance-based pay rewarding strategy encouraged

employees to share tacit knowledge. The study revealed that rewarding and recognizing employee's contributions sent a strong signal to the employees that the organization valued knowledge sharing. Nonaka and Takeuchi (1995) reason that performance based-pay rewarding system as a knowledge sharing strategy may cause drawbacks and destroy the perception to share knowledge, since it is based on costs and benefits. The SECI Model of Knowledge Creation (Nonaka and Takeuchi, 1995) stressed the appraisal and incentive systems based on performance evaluation/appraisal. Indeed, literature in information systems research has anonymously agreed that performance evaluation/appraisal is what motivates people to share knowledge (Wei, 2010). This position is supported by Cabrera and Cabrera (2005) who found that performance evaluation as a strategy for knowledge sharing motivated employees to share knowledge in knowledge based organisations.

An empirical study by Ling (2009:125) on knowledge sharing in an American multinational company (MNC) based in Malaysia found that knowledge sharing was linked with rewards and performance appraisal. This position is supported by Jain (2005), who believes that linking KS with performance appraisal increases the opportunity to share knowledge. If people know that one aspect of the performance appraisal is linked to KS they will certainly like to ensure that they are ranked high on this dimension.

A research conducted in Taiwan by Liu and Liu (2011) on exploring relationships between human resources practices (HR) on individual knowledge sharing found that the willingness of individuals to share knowledge depended on their assessments of costs and benefits. In this case, KS occurs in a situation where knowledge possesses value and can be exchanged with other products (Blau, 1964). A review of the literature found little empirical evidence on performance evaluation as a KS strategy among library staff in universities.

Mentorship Programmes

Mentorship is one way in which knowledge in an organization can be shared or transferred. In mentoring, the mentor demonstrates how an activity is to be performed and can enhance the learning experience (Level and Mach, 2005:309). Mentorship programmes as a knowledge

sharing strategy enable senior employees to share their knowledge, specific insights and skills with their juniors within a short space of time, such that when the experienced employees leave the organization the knowledge is retained within the organization (Rusanow, 2004, cited in Level and Mach, 2005). Darwin and Palmer (2009:133), studying mentoring circles in higher education in Australia revealed that mentoring groups worked for those who felt comfortable working in a group. However, the results established that individuals sometimes did not feel comfortable to share knowledge with colleagues who had different personalities, values, beliefs and motives from themselves. The idea that individuals did not have one-to-one contact with the mentor also discouraged learning and sharing (Darwin, 2000).

Level and Mach's (2005) study in the U.S.A on peer mentoring on academic librarians found that peer mentoring with top-down support contributed time to the group as part of the regular workday routine. In this case, mentoring involved matching a senior person with a less experienced individual, where a mentor was to provide guidance and share experiences and skills to the junior staff member. The approach gave employees at all levels the opportunity to be considered for a series of experiences that would prepare them for undertaking new responsibilities, or moving into new leadership positions (Level and Mach, 2005). The SECI Model of Knowledge Creation of Nonaka and Takeuchi (1995), proclaims that peer mentoring provides an opportunity to externalize knowledge by turning tacit knowledge into explicit knowledge. From the Nonaka and Takeuchi (1995) SECI Model, mentorship is regarded as one way of externalizing tacit knowledge from the experienced to new employees, from mentor to mentee. Such knowledge is shared and transferred from the experienced to the less experienced. As a result, the organization benefits in the event that the more experienced employees retire or leave the organization for other options. This process is supported by Bryant (2005:324), who asserts that "peer mentors share or externalize knowledge through sharing knowledge of processes (such as accessing the network or how to enter a record in a database), knowledge of people (such as who to contact for help on particular issues), and knowledge of systems (such as how customer feedback is collected and shared in the organization". There is little evidence of empirical studies done on mentoring as a strategy of knowledge sharing among library staff in university libraries.

61

Succession Planning

"Succession planning refers to the attempt to plan for the right number of skilled employees to cover retirements, death, serious illness or promotion and any new positions which may be created in future organization plans" (Sambrook, 2005:580). According to Durst and Wilhelm (2012:640), succession planning is a long-term approach and should take up an important part of an organization's human resource management. Similarly, Groves (2007:256) outlines how organizations can improve leadership development through succession planning, that is, by fully utilizing managerial personnel in developing the organization mentor network, identifying and codifying high potential employees' expertise and establishing a supportive organizational knowledge sharing culture .

This position concurs with a study by Topper (2011:480) on succession planning in libraries in the U.S.A., who revealed that libraries were making succession planning a priority of human resource management strategy to retain individuals' knowledge through codification and tacit knowledge sharing. As knowledge is stored in people's minds specifically that of the owner, the library might be at risk without him/her, since libraries' most valuable asset is its people. In line with the findings by Durst and Wilhelm (2012:646) on knowledge management and succession planning in small and medium enterprises (SMEs) in Germany, the study confirmed that firms were engaging in activities related to succession planning to retain knowledge and to alleviate the danger of knowledge attrition. However, succession planning as a knowledge sharing strategy is a challenge in situations of high staff turnover and this could lead to lack of awareness of expertise required in a particular area. The resignation of one employee would exacerbate the resource scarcity even further and might cause disruptions in the workflow (Durst and Wilhelm, 2012).

In South Africa, Garg and Weele (2012:96) studied succession planning as a knowledge sharing strategy in the performance of small, micro and medium enterprises (SMMEs) within the manufacturing sector. They found that most of the managers surveyed were retiring and the companies had no proper succession plans in place. A lack of proper succession planning might have a direct effect on the company's production, especially when experts leave the business

upon retirement or in pursuit of other options (Garg and Weele, 2012). University libraries need to establish effective succession planning policies as a knowledge sharing strategy to ensure knowledge retention and expertise. Durst and Wilhelm (2012:639) observed that implementation of knowledge sharing strategies such as succession plans is one way university libraries can survive in the knowledge economy. Wamundila and Ngulube (2011:9), affirmed that succession planning as a common knowledge sharing strategy avoids knowledge loss through attrition challenges.

Job Rotation

Job rotation as a strategy for knowledge sharing is a form of staff development to improve the professional skills of staff (Jarvi and Uusitalo, 2004:339). A study on job rotation among nursing personnel at Helsinki University in Finland, by Jarvi and Uusitalo (2004:346), revealed that staff benefited from job rotation by acquiring competencies and skills through sharing of experiences and expertise. This position is supported by Farrant Earney and Martins (2009:224) who believe that job rotation gives employees an opportunity to gain a wider picture of the whole operation of an organization. However, job rotation is considered to be a challenging experience, which requires extra energy and courage, since it involves learning new things. A study on job rotation among library assistants at Cardiff University, by Earney and Martins (2009) in the United Kingdom (UK), also found that job rotation increased motivation to share knowledge on technical skills, which arose from the rotations between different areas of the library services. Similarly, Olorunsola (2000:97) and Adomi (2006:66) in studies of job rotation in university libraries in Nigeria found that, of those surveyed respondents, 100% believed that job rotation gives workers opportunities to share knowledge of different skills and 79% believed it would decrease job dissatisfaction.

Adomi (2006) believed that a job rotation policy in libraries creates opportunities for staff to share knowledge of new skills and competencies learnt and to be conversant with operations of different units and sections of the library. Furthermore, Wamundila and Ngulube (2011) noted that rotation of staff in different roles help to share and transfer relevant operational knowledge. Therefore, job rotation as a knowledge sharing strategy provides skills needed for

63

new positions (Arnold and Feldman, 1986, quoted in Adomi, 2006). Job rotation policies in university libraries may create an opportunity to improve knowledge sharing and enhances efficiency and productivity in the library especially, during times of restructuring or mergers.

A literature review revealed limited scientific research on strategies for knowledge sharing in university libraries (Jain, 1998, Shepherd, 2010; Earney and Martins, 2009; Jarvi and Uusitalo, 2004; Level and Mach, 2005; Cabrera and Cabrera, 2005; Wamundila and Ngulube, 2011). Most of the studies reviewed seemed focused on small and medium enterprises. Knowledge sharing strategies have been identified as communities of practice, social networks, storytelling and enabling strategies such as mentorship programmes and human resources development. Limited scientific research on knowledge sharing strategies in university libraries is a clear indication that management has not realised and recognised the importance of knowledge sharing and retaining critical knowledge in the organization, for future use.

3.4 Factors Affecting Knowledge Sharing

This section addresses the fourth research question on factors that affect knowledge sharing among library staff. The section also covers the third research, question which sought to examine the attitude and perception of library staff towards knowledge sharing (see section 1.5). The following factors influencing knowledge sharing are discussed: attitude and perception, organizational culture, organizational structure and organizational factors.

3.4.1 Attitude and Perception

Attitude is defined as the degree of one's personality (Davies, 1989). In fact, knowledge sharing has to be voluntary and cannot be forced. Studies on attitude and perception have identified several factors that affect an employee's attitudes towards knowledge sharing (Szulanski, 1996; O'Dell and Grayson, 1998 and Yang, 2007). According to Yang (2007:540), many employees are unaware of the importance of knowledge sharing and do not value sharing and transferring knowledge. Individuals tend to develop an attitude due to personal insecurity,

such as a fear of job loss and loss of status. They view knowledge sharing as a way of demotion that will ruin their status or career opportunities. This is sometimes described as the notion that 'knowledge is power'. Individuals may tend to develop an attitude as a way of protecting their intellectual capital (Yang, 2007).

In the United Kingdom (UK), Fullwood, Rowley and Delbrige (2013) explored knowledge sharing factors affecting academics in UK universities. The study found that academics had a positive attitude towards KS. This was attributed to the belief that KS will improve and extend their relationships with colleagues and bring other opportunities for internal promotion and external appointments. Similarly, Seonghee and Boryung (2008) studied the attitude and perception of staff towards KS in an academic institution in South Korea. They found that perception was the most influential factor affecting faculty knowledge sharing since by nature, faculty jobs deal with creating, disseminating, sharing and utilizing knowledge for research and teaching purposes. Hussein and Nassuora (2011:404) found that, in higher education institutions (HEI) in Jordan, students had a positive attitude towards KS. It is interesting to note that, many people consider knowledge sharing as an additional responsibility and a time-consuming activity.

In South Africa, Jacobs and Roodt (2011:229) investigated the role of knowledge sharing in predicting turnover intentions of registered professional nurses and found that the attitude of staff to turnover was due to lack of motivation and trust, which resulted in a brain drain and loss of expertise and skills of qualified nurses. The findings showed that the attitude to share knowledge was driven by several factors, such as motivation to share, perceived power attached to knowledge, reciprocity and relationship with the recipient involving matters such as trust. In addition, KS relationships are built from perceived benefits and costs (Seonghee and Boryung, 2008 and Blau, 1964).

Much of the literature describes employees' attitude and perception towards knowledge sharing from an information technology (IT) perspective (Syed-Ikhsan and Rowland, 2004; Freeman, 1999 and Kim and Lee, 2005). The KSC Model (Kim and Lee, 2006) on employee perceptions

indicated that IT application usage is the most significant employee knowledge sharing aspect. The attitude towards using information technology may affect users' intentions or rejection of technology which, in turn, affects users' attitude and perceptions of its usefulness. The intentions to use IT are determined by the staff's attitude and perception of its perceived usefulness and perceived ease of use. Conversely, an employee's attitudes and competencies towards IT usage may impede knowledge sharing. Chen et al. (2009:139) claim that social interaction ties have direct positive impacts on individuals' intentions to perform on online knowledge sharing. As a result, a positive attitude between social networking ties and the intentions of online knowledge sharing is expected. From the reviewed literature, little is known about the attitude and perception of library staff regarding knowledge sharing in a university library environment in South Africa.

3.4.2 Organizational Culture

Organizational culture is often defined as "the way we do things and it provides a sense of identity to employees; and supplies unwritten guidelines as to how to behave" (Holbeche, 2005:27). Organizational culture is a collective understanding among individuals gained through sharing of perceptions, memories, values and attitudes within the organization. In fact it is the organizational culture that gives identity, provides collective commitment, builds social system stability and allows people to make sense of the organization (Sannwald, 2000). The importance of organizational culture cannot be overlooked (Dewah, 2011). Many studies indicated that culture plays an important role in influencing knowledge sharing (Mushtaq and Bokhari, 2011, Jacobs and Roodt, 2011, Kim and Lee, 2006). This position is supported by Ragsdell (2009), who found that organisational culture facilitated knowledge sharing through collective understanding and commitment among employees.

Previous studies on organizational culture revealed that knowledge sharing within groups and organizational units is influenced by a number of cultural factors, on the individual, social, and organizational level (Terra and Godorn, 2002 and Freeman, 1999). Terra and Godorn (2002) observe that at the individual level, a culture of trust among individuals determines their

relationship with one another and sharing of knowledge within the organization. At the social level, Freeman (1999) observed that the use of information and communication technologies (ICTs) influences KS through capturing and distributing the knowledge, both tacit and explicit. Walczak (2005:333) observed that, at the organizational level, organizational structures are seen as impacting significantly on knowledge sharing. McManus and Laughridge (2002) in their study of corporate culture and KM in university libraries in the UK revealed that corporate culture was the major factor affecting perceptions of staff in trying to implement KS initiatives. The authors found that the culture was not conducive to KS. Staff viewed KS as a move to manipulate people to 'empty' their brains.

Findings from a study on KS practices in companies in South Africa (Finestone and Snyman, 2005:139) revealed that cultural differences are still prevailing in many companies including universities. The results showed that management styles were still dominant in the principles of capitalism (self-interest, self-preservation and competitiveness). In this organizational culture, sharing is actually discouraged, because employees feel that they will lose their job if they share their accumulated knowledge. Especially in the South African situation, this could mean layoffs in favour of affirmative action (Finestone and Snyman, 2005).

Studies conducted in university libraries in Asia have shown that knowledge sharing practices among staff encountered several cultural barriers. Personal factors, like recognition as experts in relevant areas, group identity and self-esteem, were found to be important considerations determining the passion to share knowledge (Hahn and Subrami, 2000; Syed-Ikhsan, 2004; Sondergaard et al., 2007). Basu and Sengupta (2007), established that there was a missing culture of knowledge sharing among staff in a university library in India, as most work activities were individualistic, limited to internal peer groups, and interactions with external experts were limited to personal acquaintance.

Finestone and Snyman (2005:136) identified culture as a barrier in terms of knowledge sharing in eliciting techniques used by knowledge managers, because they viewed knowledge as a competitive advantage. In this regard, cultural conflicts are likely to arise, especially during

times of organizational change or restructuring. It is this kind of culture that needed to be changed, particularly in university libraries in South Africa, to allow everyone to learn from accumulated successes and mistakes. Therefore organizational culture has significant positive effects on knowledge creation and knowledge sharing in university libraries (Haque and Anwar, 2012b).

Jacobs and Roodt (2011) investigated the relationships between organisational cultures, knowledge sharing and turnover intentions in the nursing profession of South Africa in private and public hospitals. Their findings revealed a positive correlation between organisational culture and knowledge sharing; nurses were likely to share knowledge if they perceived favourable outcomes of their efforts. In the same vein, university libraries are experiencing high staff turnover, resulting in brain drains. Managers are encouraged to establish the most effective means of managing brain drain through establishing a culture where knowledge sharing is a responsibility of everyone and part of everyday responsibilities. Based on the Knowledge Sharing Capability Model (Kim and Lee, 2006), culture is positively associated with employee knowledge sharing behaviour. An ideal knowledge sharing culture is characterised by trust, openness, teamwork, risk-taking, tolerance for mistakes, autonomy, common language, courage and time for learning (Chigada, 2014).

3.4.3 Organizational Structure

According to Al-Hawamdeh (2002:21), "organizational structure represents the set of arrangements among the resources of the organization which may be people, facilities, information and technological infrastructure". In the context of this study, organizational structure reflects the way jobs are set within the organization and how staff are supposed to perform their work based on the rules, policies, procedures and regulations of the organization (Syed-Ikhsan and Rowland, 2004). In fact, organizations that attempt to introduce knowledge sharing initiatives without well-established managerial structures are likely to experience problems and do not produce any perceived benefits (Al-Alawi, Al-Marzooqi and Mohammed, 2007). According to Al-Alawi, Al-Marzooqi and Mohammed (2007:25), "structures that are

characterized by complicated layers and lines of responsibility restrict free flow of knowledge to filter through every level".

A study by Stewart (2007:4) on issues in South African academic libraries in the post-merger period revealed that university mergers created organizational uncertainties, inequalities and tensions during and after the merger. The author identifies several factors that increased uncertainty, including issues surrounding staff retention, inadequate resources, and a lack of formal communication, especially when one institution integrates into another institution with an already compromised financial situation. Thus KS sharing in the context of post-merger poses unique challenges to management, since sharing occurs for different people with previous separate organizational structures and cultural backgrounds (Heo and Yoo, 2002). Implementing effective KS strategies should play an important role in redressing the challenges caused by the post-merger in University Libraries in KZN Province of South Africa.

According to Kim and Lee (2006) flexible organisational structures encourage knowledge sharing within the organisation, whilst formalised and centralised structures (rigid structures) are major stumbling blocks to knowledge sharing. An organisational structure that facilitates the flow of knowledge is shaped by an organisation's policies, processes and systems of rewards and incentives, which determine the channels from which knowledge is accessed and how it flows (Leonard, 2007, cited in Chigada, 2014; Kim and Lee, 2006; Nonaka and Takeuchi, 1995).

Findings from a study by Senaji and Nyaboga (2011:151) on KM process capability in Kenyan firms revealed that decentralization impacted KS. As a result, organizations that decentralized decision making processes responded quickly to complex issues than those that maintained centralization, making decision-making more formalized. This is supported by Syed-Ikhsan and Rowland (2004), who noted that knowledge sharing prospers with structures that support ease of information flow with fewer boundaries between divisions.

From the studies reviewed, knowledge management and knowledge sharing initiatives have attained great attention from corporate organizations and academic institutions on addressing the impact of the organizational culture and organizational structure. However, the studies did not provide a thorough explanation of how knowledge sharing can be improved among staff. In order to fill this gap, the present study has contributed through investigating strategies that could improve organizational performance, knowledge creation and sharing among library staff in university libraries.

3.4.4 Factors Influencing Knowledge Sharing

Organizational factors that influence knowledge sharing have been discussed by various authors. Factors that influence KS were identified as communication technologies (ICTs), mutual trust, reward system/incentives, job design/office layout, management/leadership support, staffing and budgets (Nonaka and Takeuchi, 1995; Riege, 2005; Kim and Lee, 2006; A-Alawi, Al-Marzooqi and Mohammed, 2007 and Dewah and Mutula, 2014).

Influence of ICTS on Knowledge Sharing in University Libraries

Information and communication technologies are effectively used to facilitate knowledge sharing through the codification, integration and dissemination of organizational knowledge. It allows organizations to expand available social networks to overcome boundaries in geographical locations, to achieve effective collaborative activities (Lin, 2007:317). In relation to the KSC Model by Kim and Lee (2006), one of the best ways to reduce the perceived cost of sharing knowledge is to have a well-designed, user-friendly technological tool that simplifies the task and reduces the time necessary for sharing one's ideas. As stated by Dewah (2011), ICT tools provide an enabling platform for knowledge capturing, sharing and retention. Gold and Arvind-Malhotra (2001) concur with this assertion that IT facilitates knowledge flow and eliminates barriers to communication and knowledge sharing within an organization.

Conversely, the KSC model (Kim and Lee, 2006) presented in Chapter Two (section 2.2) asserts that organizational structures which are more centralized and formalized are also

barriers to KS. Dewah and Mutula (2014), in their study of knowledge retention strategies in public sector organization in sub-Saharan Africa, established several barriers for managing knowledge assets that included lack of appropriate technology; limited shortage of skills; lack of incentives or rewards to share knowledge; and limited commitment from senior management. Technology was also seen as a barrier to knowledge sharing in all cases, especially if it is not user-friendly or tailored to the company or unit's specific needs. Pauline and Mason (2002), in an empirical research on barriers of KS in New Zealand, found that barriers were also within the organization and were linked to lack of ICTs, leadership/management styles, lack of rewards and lack of awareness and vision on KS activities.

Mutual Trust

The KSC Model (Kim and Lee, 2006) theorises that a strong support is achieved by linking knowledge sharing with factors that motivate employees' KS. According to Noor and Salim (2011), trust is willingness to share knowledge. Mutual trust involves intentions and concerns, openness and honesty in developing positive interpersonal relationships with one another. According to the KSC Model (Kim and Lee, 2006) high level of trust is one of the KS factors that enhances effective communication and is positively associated with employee-knowledge sharing behaviour. A study by Xiaoping and Lin (2007) on the knowledge innovation culture (KIC) of libraries revealed that when trust and collaboration are built among library staff it improves human resource development and cultivates knowledge innovation among talented individuals. Trust creates and maintains relationships, which, in turn, may lead to knowledge sharing. Moreover, attitudes and perceptions of individuals in informal settings are difficult to evaluate. Trust is particularly important in such behaviours like knowledge sharing in virtual communities (VC) (Chiu, Hsu and Wang 2006).

A study carried out in by Paliszkiewic (2011:172) on trust and knowledge sharing revealed that, within organizations' settings, trust has been demonstrated to be an important predictor of KS. The results showed that 69% of the surveyed managers agreed that managers trusted each other and they were willing to share tacit knowledge. Consistent with a study by Chang et al.

(2012) on social capital and knowledge sharing on patient safety in Taiwan, the results revealed that trust among professional registered nurses (NRs) in relation to KS was significant and positive. By trust and collaboration, individuals contributed their own knowledge, skills and expertise. Consequently, based on trust and collaboration, library staff can realize knowledge creation so much the better through the discussion of problems either by acquiring new knowledge or sharing tacit knowledge (Xiaoping and Lin, 2007:38).

Many studies have found that people would most likely share their valuable tacit knowledge when there is mutual trust among participants (Yang and Farn, 2009; Holste and Fields, 2010). Holste and Fields (2010) add that there is a positive relationship between trust and the intention to share tacit knowledge. Therefore, knowledge sharing is directly affected by the existence of mutual trust among participants. Joia and Lemos (2010), in their discussion concerning the indicators of tacit knowledge sharing also confirmed that mutual trust reduces perceived risks and uncertainties associated with tacit knowledge sharing. It is also worth mentioning that it is common for people with the same background, using the same language and known vocabulary, to establish mutual understanding and relationships which, in turn, enhances mutual trust (Lin and Lee, 2006; Laschinger et al., 2000 and Chiu, Hsu and Wang, 2006).

The studies reviewed are limited in a number of ways. Firstly, the studies reviewed were limited to trust and did not extend to all members of the organization. Again, the studies were done on work relations within certain organizations. The literature review showed limited studies regarding knowledge sharing in the South African perspective.

Incentives/Rewards

Various studies have put emphasis on the use of rewards as a necessary factor that stimulates people to share knowledge within an organization. McDermott and O'Dell (2001:8) explained that "the corporate culture of an organization consists of visible culture, which is the culture that can be easily noticed (e.g. an organization's mission statement, policies and procedures) and invisible culture, which is deeply rooted in people's minds and is difficult to notice" (e.g. the way people act). Rewards are part of visible culture as they can be easily perceived and are

claimed to be a good way of motivating employees to share their knowledge (McDermott and O'Dell, 2001).

According to McDermott and O'Dell (2001), rewards should be part of an overall performance evaluation system included in the organization's policy to encourage employees to share their tacit knowledge. Employees should be rewarded according to their performance. Similarly, Wright and Snell (1998) proclaim that the rewarding system that recognizes and encourages employees to share all kinds of knowledge within an organization is recommended. In view of this Bartol and Srivastava (2002:67-68) claim that the introduction of extrinsic rewards encourages employees to share knowledge. Therefore, rewards that bring benefits and provide recognition are expected to motivate people to share their knowledge (Bartol and Srivastava, 2002:67). Husted and Michailova (2002) also stressed the importance of the implementation of feedback systems, to inform employees whether or not their contributions are useful and what they can do to improve them.

However, Bock and Kim (2001) found some negative influences on using intrinsic rewards such as money and promotion in return for knowledge sharing. The results of Bock and Kim (2001) are contrary to the Knowledge Sharing Capability Model (Kim and Lee, 2006), which claims that individuals will perform a task as soon as its benefits exceed the cost. Bock and Kim (2001) explain that providing tangible rewards for knowledge sharing do not encourage people to share their knowledge but instead expected rewards may negatively affect the attitude towards knowledge sharing. Kwok and Gao (2006:49) revealed that the idea of thinking about knowledge sharing in exchange for some monetary rewards is not a good idea. The authors feel that intrinsic motivation should play a crucial role in its performance.

The study of Bock et al., (2005) revealed a negative effect of organizational extrinsic rewards on the attitude towards knowledge sharing. Instead, the implementation of the performance evaluation system as a knowledge sharing strategy in university libraries was found to encourage knowledge sharing among library staff. The lack of KS strategies creates

misperceptions about the value of contributions, which might discourage people from sharing knowledge, as they may feel that they are being cheated and their knowledge is being stolen.

Work Design and Office Layout

Work design refers to "deciding on the actual job structure by identifying the relevant tasks and activities across teams in a way that allows an organization to reap benefits" (Foos et al., 2002:873). Since knowledge flows across different departments or units, work design may impact significantly on library staff motivation to share knowledge. Cabrera and Cabrera (2005:724) in their study of social dilemmas in fostering KS in organizations in the U.S.A., found that work design directly affected knowledge sharing among employees. The results showed that work designed into teams gave employees an opportunity to work together and share ideas.

Noe et al. (2003), reason that teams encourage problem solving, especially when members are held accountable for the results. Action occurs because achieving positive results requires that team members share what they find with others. Thus organizing work around teams increases the need for coordination and collaboration. According to the KSC model (Kim and Lee, 2006) work designs with open space is positively associated with employee sharing capabilities. The layout of offices for staff to meet informally is important to encourage the exchange of ideas and knowledge sharing (Soliman and Spooner, 2000:340).

Management/Leadership Support

Management/leadership support, as an attribute of the knowledge sharing process, is considered one of the related organizational factors which influence organizational success. Li Chang, Mirmirani and Ilacqua (2009:469), in their study of distributed leadership and knowledge sharing in multinational organizations in the U.S.A., found that distributed leadership as a management style worked for such firms with different cultures. The study confirmed that such kind of leadership promoted achievement of goals through different styles of management practices. Consistent with the KSC Model (Kim and Lee, 2006), a strong

relationship between top management and employees support enhances knowledge sharing that leads to the success of the organization as a whole. Moreover, top management support is positively associated with employee knowledge sharing capabilities in university libraries.

The findings from an empirical study by Lin (2007:319) on knowledge sharing and firm innovation capability at one of the national universities in Taiwan, found that top management support was effective for employee willingness to donate and share knowledge with colleagues. The study revealed that managers enhanced the positive mood of employees regarding social exchange through providing monetary incentives and useful feedback to improve knowledge sharing. The findings agree with Haque and Anwar (2012a:122), who confirmed that support from senior management plays a vital role in the effectiveness of knowledge based decisions through providing timely funding for knowledge application. Therefore management support enhances trust among library staff in creating, sharing and using knowledge in university libraries.

Top management are bound to influence knowledge sharing among staff in university libraries through inspiring, mentoring, setting examples, creating mutual trust and respect, listening, learning and teaching (Holsapple, 2003:114). Li Chang, Mirmirani and Ilacqua (2009:472) note that one of the leadership concerns in a knowledge-based economy is knowledge management, since knowledge sharing involves the protection of patents, copyrights, and other intellectual properties. There is little evidence of empirical studies done on top management or leadership support on KS in university libraries, especially in South Africa.

Influence of Staffing and Budgets on Knowledge Sharing

Staffing and budgets are some of the organizational factors that affect knowledge sharing in university libraries since knowledge sharing requires trust, openness, knowing who knows what and time to nurture and acquire (Keong and Al-Hawamdeh, 2002). With high staff turnover and restructuring experienced by university libraries sometimes it will be difficulty to create the atmosphere needed to share knowledge among staff. Knowledge sharing can be seen as a strategy to downsize or retrench staff to cut budgets. Downsizing/retrenchment is defined

as an "organization's strategy designed to reduce the number of staff to make significant changes in the structure of the organization in an attempt to improve its efficiency and effectiveness" (Carbery and Garavan 2005:489). It involves cutting down the number of staff due to budget deficits and it may also involve hiring, freezing posts and forcing employees to retire early to cut budgets (Carbery and Garavan, 2005).

Similarly, Davenport and Prusak (1998) noted that downsizing/retrenchment of staff can create knowledge scarcity with layoffs of personnel, which can lead to failed processes and even hiring external knowledge sources. As knowledge represents power, knowledge sharing becomes difficult in most organizations, particularly university libraries. Cutting down/reducing the number of staff may make knowledge sharing difficult as making knowledge public may be seen as threatening with the recognition that knowledge is a valuable resource (Keong and Al-Hawamdeh, 2002:50). The findings from a study by Hall (2012:17) at the University of Phoenix, in the U.S.A., on perspectives of organizational knowledge sharing showed that knowledge was lost; staff were not willing to share as they view knowledge sharing as a way of retrenching. It was found that employees were faced with uncertainty, anxiety, or doubts regarding how they would fit in and/or be perceived within the newly restructured organization. Employees may actually steer the organization culture towards becoming a culture of knowledge hoarding in lieu of knowledge sharing. As a result, KS can be viewed as a threat to job security and could have a negative impact on employees' perceptions. Within restructured organizations it seems to be a culture that embraces an ideal that knowledge is power. Unless specifically asked, information is typically not freely or willingly shared (Rubenstein and Geisler, 2003).

Mutula (2004:282) found that university libraries in Sub-Saharan Africa are hard hit during times of budgets cuts. For example, at the University of Zambia (UNZA) and the University of Zimbabwe (UZ) it was found that libraries did not receive any funding for quite a number of years. As a result staff turnover increased and many people lost their jobs. Consequently, downsizing/retrenchment is seen as one way of dealing with budgets deficits in university libraries. Roknuzzaman and Umemoto (2009:653) explain that staff retrenchment is a common

response to economic situations in university libraries as many libraries suffer from lack of resources. The revenues of most university libraries usually come from the national or provincial governments, through their parent organizations, and the budgets are not adequate.

Carbery and Garavan (2005), point out that cutting down the number of staff to reduce budget deficits has become one of the inevitable outcomes of living in a global economy, where universities are required to make continual adjustment strategies to the cost of labour in order to survive. As a result, organizational knowledge, both explicit and tacit, may be lost through retrenchment, since such knowledge is embedded in the people's minds and work processes that evolve over time (Carbery and Garavan, 2005). Knowledge lost through retrenchment/downsizing requires re-creation through implementing knowledge sharing strategies. Individuals must share their knowledge and transfer skills to other employees for organizational learning to occur and to facilitate the creation, or re-creation of the organizational knowledge needed to perform successfully (Sitlington and Marshall, 2011:117). To deal with problems of financial budgets and staff turnover, university libraries should find ways to implement knowledge sharing strategies to facilitate knowledge retention of the skills and expertise of their staff.

3.5 Summary and Gaps in Literature

Chapter Three provided a review of the empirical and descriptive literature from different studies related to the subject under study. The literature reviewed was organized thematically using themes gleaned from the models underpinning the study, the research questions and the broader aspects of the study. The following issues were discussed: knowledge sharing, knowledge sharing strategies, attitude and perception, organizational culture, organizational structure and organization factors. Empirical studies under each theme were highlighted and discussed, where possible.

The extant literature on knowledge sharing reveals limited studies in this area, especially in the context of South African universities. The literature reviewed indicated that many universities

in South Africa, including those in KZN, lack KM policies and strategies to harness staff expertise for competitive advantage, and enhanced service delivery. As a result of these gaps, existing human resources that are in short supply are not optimized to enhance library service delivery. Capacity building and mentoring is not taking place, thus affecting knowledge retention, as more experienced staff leave the service on account of retirement or natural attrition. The libraries are not playing their rightful role in enhancing knowledge production within the framework of the mandate of their missions and visions. The success of knowledge sharing relies on the availability of strategies which promote and enhance knowledge sharing. Many of the theoretical and empirical studies reviewed on knowledge sharing focused on factors that affect knowledge sharing.

The literature revealed lack of understanding and unfamiliarity with the use of informal channels for knowledge sharing among staff in university libraries. The literature reviewed showed that university libraries, especially in Africa, have not yet embraced these tools as a strategy for knowledge sharing among staff. It is with the use of these tools, such as blogs, wikis, Facebook, virtual communities and instant messaging, that library staff are able to collaborate and share ideas and knowledge in an informal setting. From the literature reviewed, enabling strategies for knowledge sharing were identified as mentorship programmes, human resources development and job rotation policies. Limited scientific research on knowledge sharing strategies in university libraries may suggest lack of awareness about the value of KS in enhancing competitiveness in organisations.

The literature also indicated that, in most cases, individuals present a negative attitude towards knowledge sharing, with the belief that knowledge sharing is an activity that should be rewarded, based on intrinsic rewards. Providing tangible rewards does not encourage people to share their tacit knowledge but instead expected rewards may negatively affect the attitude towards knowledge sharing. Intrinsic motivation should play a crucial role in knowledge sharing performance. Instead, the implementation of knowledge sharing strategies would motivate staff to share knowledge. Organization factors, such as organizational culture, organizational structure, leadership and trust, were identified as factors that influence KS

among staff. The studies reviewed suggest (Chang, Mirmirani and Ilacqua, 2009:469; Lin, 2007:319; Kim and Lee, 2006) a lack of consensus on the key determinants of knowledge sharing strategies. Accordingly, this study therefore seeks to understand the knowledge sharing strategies in University Libraries in KZN Province through an investigation of library staff's intentions to share knowledge. The study fills the gap in literature by examining the strategies that support knowledge sharing and recommending a policy framework which support KS. The next Chapter Four discusses methods employed in conducting the study. The sampling techniques and methods of collecting and analysing data are described to fulfil the objectives of this study.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 Introduction

Research methodology is aimed at exploring, describing and explaining the research problem/phenomenon through an understanding of how research is done scientifically. Research methodology encompasses the rationale behind the methods used to collect data and why we are using a particular method/technique and not using other methods (Babbie and Mouton, 2001:75). There are various steps that are generally adopted by a researcher in studying his research phenomena, along with the rationality behind them (Neuman, 1994). The researcher must be familiar with all the research techniques and methodologies on which the research is based. The methodological approach of the present study and the steps followed are outlined in the sections below.

The purpose of this study was to investigate knowledge sharing strategies in University Libraries in KwaZulu-Natal Province of South Africa. The study was aimed at making a contribution towards the knowledge sharing strategies that could be used to promote knowledge sharing among staff in university libraries in South Africa. The research objectives of the study were to: (1) Assess the extent to which knowledge is shared in University Libraries in KwaZulu-Natal Province; (2) Determine the strategies available for knowledge sharing among library staff in University Libraries in KwaZulu-Natal Province. The study seeks to address the following research questions: (1) What is the extent of knowledge sharing among staff in University Libraries in KwaZulu-Natal Province?; (2) What strategies are available for knowledge sharing among library staff in a university?; (3) What is the attitude and perception of library staff towards knowledge sharing?; (4) What factors affect knowledge sharing among library staff?

Chapter Four is organized in the following sections: research paradigms, research methods, research design, population of the study, sampling procedures, data collection procedures, data

analysis strategies, validity and reliability of data collection instruments, ethical considerations and summary.

4.2 Research Paradigms

Researchers commence a project with certain claims and assumptions about how they will learn and what they will learn during their inquiry. These claims are called paradigms (Guba and Lincoln, 2005; Martens, 1998); or broadly conceived research methodologies (Neuman, 2003). Philosophically, researchers make claims about what is knowledge (ontology), how we know it (epistemology), what values go into it (axiology), how we write about it (rhetoric), and the processes for studying it (methodology) (Creswell, 2009). There are many research paradigms which can be used to guide a study in research. Different scholars, like Guba and Lincoln (2005:54) for example, have identified paradigms such as pragmatism, interpretive and positivist, while Crossan (2003) and Zammito (2004) suggest two broad categories: positivism and post-positivism. A paradigm is a set of assumptions, concepts, values and practices that constitute a view of reality (Robinson, 2009; McGregor and Murname, 2010).

There are three main types of research paradigms namely: interpretive, positivist and post-positivist. An interpretive paradigm posits that social reality is obtained when people participate and interpret a situation. According to Creswell and Miller (2000), the researcher studies these individuals in their natural setting for prolonged periods in order to gain a sense of the context or setting for participants' views. The interpretive approach has been criticized because of its view that meaning is constructed through interaction in defining a situation and making sense out of it (Sarantakos, 1998). In interpretive paradigm the researcher does not adopt a theory but forms a theory, inductively from views and experiences of participants in the research.

Positivist studies are designed to maximize the generalizability of the findings and determine whether a theory is applicable to situations other than those in which it was developed (Wildemuth, 1993). Chigada (2014), explained that positivist studies are deductive where the

researcher starts with a theory, while interpretive studies are inductive in approach, where the researcher starts with observations in order to build up theories and generalizations. Thus, in positivist studies, new knowledge is generated by testing or confirming a theory through generalizing the findings.

Besides the traditional interpretive and positivist approaches to research, there has emerged an approach called post-positivist paradigm and positivism. The post-positivist paradigm denotes the thinking after positivism and shares most of the basic principles in positivist paradigm (Alasuntari, Bickman and Brannen, 2008:18 and Creswell 2009:6-7). Post-positivism posits that social reality can be discovered by identifying certain regularities to explain and understand the relationships between them. Thus the problems studied by post-positivism assists in identifying the causes and effects that influence the outcome (Creswell, 2009). Proponents of post-positivism argue that there are laws or theories that govern the world and these need to be tested and evaluated to understand the real world (Neuman, 1994 and Creswell, 2009).

The post-positivism paradigm challenges the positivist traditional notion that there is only one truth, an objective reality that exists independent of human perception (Phillips and Burbules, 2000). It postulates that there are many ways of knowing reality apart from scientific methods (Robinson, 2009). Within the post-positivist framework "reality is multiple, subjective, and mentally constructed by individuals" (Crossan, 2003:54). In contrast, positivism is essentially the belief that the social world can be studied the same way as the physical world. In other words, science is the only way to discover knowledge and this must be done in a value-free manner (Johnson and Gray, 2010 and Mertens, 2010). A post-positivism paradigm was adopted in the present study, to allow the researcher to compare results and overcome limitations caused by using one approach. A post-positivism paradigm allows the use of quantitative and qualitative approaches. It also allows the researcher to advance a theory by collecting data to test it, and in addition reflect on confirmation or rejection of the theory by the results (Phillips and Burbules, 2000 and Chigada, 2014). The advantage of using a post-positivism paradigm in this study allowed the theory to be tested and the results generalized. Using a post-positivism

paradigm enabled the researcher to get a clear understanding of whether the KSC Model could be applied in the University Libraries.

4.3 Research Methods

The choice of philosophical underpinning must be consistent with the approach that is chosen for a research project. A post-positivist approach necessitates the triangulation of qualitative and quantitative methods or the use of a mixed methods approach. The use of qualitative and quantitative methods in a single study allows the generalizability of results by generating numeric descriptions, attitudes and opinions of a population by studying a sample of that population (Babbie, 1990 and Creswell, 2009:12). A quantitative method has its roots in post-positivist paradigm, as it allows the researcher to describe variables that determine the cause and effect of relationships between variables (Mouton and Marais, 1989:157). A qualitative method, which is also aligned with post-positivist paradigm allows for more probing and in-depth exploration of a particular view. A qualitative method allows the researcher to capture the 'insider' perspective of those who are part of the investigation (Babbie and Mouton, 2001:368).

In the present study, the qualitative approach was used to gain a clear understanding of the extent to which knowledge is shared among staff in university libraries. University library directors and the most senior library staff were interviewed. Furthermore a quantitative research approach was applied to allow quantification of the variables under study (Bryman, 2006). The essence of collecting quantitative and qualitative data was to compare and contrast results from the questionnaires, interviews, observations and documents reviewed to obtain a rich set of data, thus enabling the researcher to develop complete and well-substantiated conclusions about the knowledge sharing strategies in University Libraries in KwaZulu-Natal Province of South Africa. Data were collected through a survey using self-administered questionnaires and a structured interview schedule, with the intent of generalizing from a population (Babbie, 1990) on variables that included factors that impact knowledge sharing such as the organizational culture, the organizational structure, information technologies (IT),

trust, management/leadership styles, individual attitude and strategies for KS. The dependent variable is the knowledge sharing strategy.

The choice of quantitative and qualitative approaches in this study was informed by the fact that results from quantitative and qualitative approaches augment each other (Silverman, 2010). The idea of combining quantitative and qualitative approaches in a single study "owes much to the past discussions about linking paradigms to methods and combining research designs in all phases of a study" (Creswell, 2000:174). In recent times, research has emerged combining both methods (Lather, 2006). Many studies have accommodated the use of both quantitative and qualitative approaches with a single paradigm to explain variables of knowledge sharing and knowledge management (Mushi, 2009; Parirokh, Daneshgar and Fattahi 2008 and Chigada, 2014). Mushi (2009) clarified the importance of applying qualitative and quantitative research methods for studying issues related to knowledge sharing using a post-positivist paradigm.

4.4. Research Design

The sample was considered adequate because the study aimed at gaining an in-depth understanding of KS among staff in university libraries within multiple cases. The study used survey design within multiple cases (i.e. universities). The choice of universities in KZN Province was based on the fact that the university libraries carter for staff with diverse cultural backgrounds (e.g. White, Indians and Africans) as a result of university mergers. The differences in their histories and their structures would suggest that they have different backgrounds in terms of KS since KS has been found to be influenced by organizational structures and cultural backgrounds.

Surveys can be free-standing or can be embedded in larger research designs such as ethnographies, case studies, or experimental research (Gable, 1994). The present study employed a survey research design in examining knowledge sharing strategies in university libraries in KwaZulu-Natal. The survey research design is in line with the post-positivist paradigm, which uses quantitative and qualitative methods to analyse data and or as data collection methods. As

aligned to the post-positivist paradigm, "a survey research design follows a deductive approach in which the researcher begins with a theoretical or research problem and ends with empirical measurement and data analysis" (Neuman, 1994:225). Surveys usually apply statistical techniques to numerical data to establish relationships between variables which are identified at the beginning of the research and stated as research questions to allow conclusions to be drawn (Burns, 2000:566 and Bell, 1999:13). The survey research design allows for the generalization of the results to a wider group and it gives a true representation of the group under investigation. A survey research design is used to discover trends and patterns within the sample group that can be generalized to the defined population of the study (Pickard, 2007:96). The advantage of using a survey method is that it is wide in scope and it allows large quantities of data to be obtained from a large population located in different geographical areas. A survey method is also noted for its cost efficiency (Soper, Osborne and Zweizig, 1990). The Universities Libraries in KwaZulu-Natal are located in different geographical areas. The survey method was thus cost effective and appropriate for collecting data for the study.

Neuman (1997:231) points out that in survey research, control is achieved statistically by measuring variables that represent alternative explanations and statistically examines the effect of these variables to seek clarification. Neuman (1994:225) claims that "in the first phase of conducting a survey, the researcher develops research instruments such as a questionnaire or interview schedule which he uses to measure the variables". In this study a self-administered questionnaire with questions assessing knowledge sharing strategies among library staff was used to gather quantitative data. A five-point Likert scale with assessments ranging from strongly disagree to strongly agree, was used to measure the extent to which respondents agree with the statements provided. A structured interview schedule was designed to capture qualitative data from deputy library directors and senior library staff. Questions measuring qualitative data were structured with open-ended questions, to allow respondents to give their views. However, during the course of the interview some new issues continually emerged, which the researcher had to engage with respondents. Surveys are used for studies targeting certain individuals as the unit of analysis (Bubbie and Mouton, 2001). Since the university libraries are located in different places in KwaZulu-Natal, the survey method was appropriate

for collecting data. The researcher targeted library staff as the unit of analysis. In this regard, a survey was employed to select respondents (librarians) in the four university libraries in KwaZulu-Natal. Similar studies have employed a survey research design to understand the knowledge sharing perspectives of students and staff in academic institutions (Chennamaneni, 2006; Jo and Joo, 2011; Parirokh, Daneshgar and Fattahi, 2008).

4.5 Population of Study

The population of the study is that group or objects about which we want to draw conclusions. It usually refers to the specific cases that the researcher wants to study (Neuman, 1994:195; Babbie and Mouton, 2001). The population in this study consisted of the entire library staff working in the University Libraries in KwaZulu-Natal Province, as presented in Table 4.1. The universities under study included the Durban University of Technology (DUT), the University of KwaZulu-Natal (UKZN), the Mangosuthu University of Technology (MUT) and the University of Zululand (UNIZULU). The target population consisted of all library staff (professional and paraprofessional) with a qualification in Library and Information Science (LIS). The respondents were selected from across library sections including acquisitions, circulation cataloguing and information services. In this study a professional librarian was defined as a member of the library staff who is trained in LIS with a high qualification such as a degree, postgraduate diploma, Masters or doctorate (Boone, 2003). Paraprofessional library staff refers to a trained worker with a lower qualification such as a certificate or diploma in LIS who assists the professional librarians in their work (Oberg, 1992). Table 4.1 shows the relative numbers of library staff at each university.

Table 4.1: Relative Numbers of Library Staff at each University

University	No. of Library Staff with LIS Qualification	Source of data
DUT	33	DUT http://www.library.dut.ac.za/back ground/htm Library director
UKZN	41	UKZN http://www.libray.ukzn.ac.za/ Library director
MUT	27	MUT http://www.mut.ac.az.library. Library director
UNIZULU	29	UNIZULU http://www.unzulu.ac.za/res_library.php Library director
TOTAL	**130**	

4.6 Sampling Procedures

They are two types of sampling strategies namely: probability sampling and non-probability sampling. In probability sampling every member of the wider population has equal chance of being included in the sample. In contrast in non-probability sampling the chance of every member being selected from the wider population is unknown (Cohen, Manion and Morrison2011:153). The present study used a census where all 130 library staff were surveyed and eight interviews were conducted with library directors or senior managers. Creswell (2009) recommended the use of a census when studying the whole population. Conversely, Israel (1992) indicates that if the sample size is 200 or less it is advisable to conduct a census. He noted that conducting a census for a small population eliminates sampling error and provides data on all the individuals in the population. The total population of all library staff with a LIS

qualification was 130 less than 200 and the researcher considered it appropriate to conduct a census as suggested by Israel (1992). University websites were used as the sampling frame to identify the respondents. However, because of the possibility that information on websites becomes out-dated quickly, the researcher made follow-up telephone calls to library directors and/or senior librarians to verify the staffing information that is presented on the websites.

The professional and paraprofessional staff were selected because the researcher was targeting all the library staff with any LIS qualification. Professional librarians were selected because they are the knowledge managers who assist in capturing and acquiring new knowledge, whereas the paraprofessionals assist with library duties. Interviewing selected managers was motivated by the fact that senior managers were cited in the study as facilitators and catalysts to knowledge sharing. Conducting interviews with top management such as the library directors led the researcher to establish their roles and level of influence in knowledge sharing.

4.7 Data Collection Procedure

Gaining access to the research site requires informing gatekeepers about the inquiry through writing a formal letter of request asking permission to conduct research. The researcher should specify the nature of the research stating exactly what he or she will be doing on the site (Pickard, 2007:73). In this study, letters of request for permission to access the respondents in the respective university libraries were sent to universities. Before the researcher made a visit to any research site, an appointment was scheduled through the library director or the personal assistant to the library director and the other library staff were informed about the researcher's visit. At the UKZN and the MUT the researcher was provided with a list of all the respondents to enable them to be reached by telephone.

Several visits were made especially for the interviews because appointments were arranged for different dates. Data collection commenced on 16 November 2013 and ended on 28 April 2014. Research assistants were employed at the University of KwaZulu-Natal and the University of Zululand to assist in data collection by distributing and collecting the survey

questionnaires. At the Durban University of Technology the researcher left questionnaires with the heads of sections/managers to distribute and collected them once they were completed. Letters of request to conduct data are attached (Appendices 6-10).

Several data collection methods exist and their use depends on the type of information sought. The data collection methods employed in this study were survey questionnaires, an interview schedule and observation and document reviews. Data collected by each method is elaborated in sections 4.7.1-4.7.4. Extensive literature (Chapter Three) related to knowledge sharing strategies in University libraries and related variables gleaned from the theories and models were reviewed.

4.7.1 Survey Questionnaire

A questionnaire is a "printed document that contains instructions, questions and statements that are compiled to obtain answers from respondents" (Wimmer and Dominick, 2006:130). Many surveys use a self-administered questionnaire, where the questionnaire is administered to respondents either by mail or directly (Punch, 2003). The strength of using a self-administered questionnaire is that respondents can exercise their right of choosing not to respond and responses are expected to be anonymous and confidential. However, the weaknesses or limitations of a self-administered questionnaire is that the response rate may be low, people take their time to return the questionnaires and there is a lack of control over the nature of responses, resulting in bias, inaccuracies or incompleteness (Babbie and Mouton 2001). In this study an attempt was made to try to overcome these limitations by using multiple data collection methods.

A self-administered questionnaire, with both closed and open-ended questions, was distributed to library staff in the four university libraries in KwaZulu-Natal and data were collected. All the librarians, including deputy and senior library staff, completed the self-administered questionnaire before being engaged for interviews. Babbie and Mouton (2001) claim that self-administered questionnaires are only appropriate when the population under study is

adequately literate. In this study the population of the study included professional librarians and paraprofessional librarians and they were all literate in terms of reading and writing, since they all had a LIS qualification to varying extents.

A questionnaire with six sections was prepared. A survey questionnaire used for this study is shown in Appendix 2. The narrative of what is contained in each of the sections of the questionnaire is given. Section A of the questionnaire contained demographic/background information (excluding identifiers to individual personalities). The demographic and background variables include the name of the university/library, section, position/rank, gender, age, highest level of education and work experience. The KSC Model of Kim and Lee (2006) posit that demographic variables such as age, educational level, position and years of experience are controlling variables that affect knowledge sharing in an organization. Section B had questions on the extent of knowledge sharing in University Libraries in KwaZulu-Natal Province. Section C of the questionnaire contained questions on strategies available for knowledge sharing. Section D contained questions that targeted general attitudes and perceptions of library staff towards knowledge sharing. Section E had questions on factors affecting knowledge sharing. The respondents were given a mix of positive and negative statements in order to understand their general attitude towards knowledge sharing.

A five-point Likert scale was used to measure items in the questionnaire relating to knowledge sharing strategies. The Likert scale, as defined by Pickard (2007:188), is a "bipolar scaling technique, which allows respondents to select a choice that best demonstrates their level of agreement with a given statement". The self-administered questionnaire was structured on a response system of strongly disagree, disagree, neutral, agree and strongly agree. There were four to five statements under each question. The questionnaire had only one question with 10 statements, which addressed the factors that influence knowledge sharing. The participants were asked to mark their responses from 1 to 5 against each statement. In other sections the respondents were asked to choose or select the most appropriate statements applicable to their situation. The benefit of using a five point-Likert scale is that the response systems are

arranged in a random way, by mixing positive and negative statements to prevent respondents ticking in one column only (Pickard, 2007).

Other sections had open- ended questions, where respondents gave their own opinions. Similar previous studies used a survey-based questionnaire to assess knowledge sharing among students and academics in universities (Mustafa and Nuraddeen -Abubakar, 2009; Jain, Manjit and Gurvinder, 2007 and Hussein and Nassuora, 2011). In terms of reliability, the survey questionnaire items used in previous studies had Cronbach's co-efficient values ranging from 0.777 to 0.926, revealing high reliability of items measuring knowledge sharing (Mustafa and Nuraddeen -Abubakar, 2009; Jain, Manjit and Gurvinder, 2007 and Hussein and Nassuora, 2011).

4.7.2 Interview Schedule

The interview schedule was used to collect data from the library directors and senior library managers in order to obtain an in-depth understanding and a clear picture of how knowledge sharing was strategically planned and shared in university libraries in KwaZulu-Natal Cohen, Manion and Morrison (2011:411), suggests that an interview may be used in conjunction with other methods to follow up issues to validate other methods and to get more clarification from respondents and their reasons for responding as they did. Library directors and senior management staff were selected because of experience and the knowledge they have about the organization. Eight interviews were conducted by senior management staff.

Several types of interviews exist and their use depends on the nature of the research topic and the type of data the researcher needs to collect (Pickard, 2007). An example is a structured interview, which is the type of interview in which an interviewer asks each respondent a series of pre-established questions (Pickard, 2007:175). The interview may have either a fixed response or a standardized open-ended interview. In this case, a structured interview with standardized open-ended questions was used, to allow deputy directors/senior managers to give their own views. Face to face interviews were conducted for the purpose of clarifying questions

which respondents did not understand. Some of the questions asked during the interview were also asked in the self-administered questionnaire. At some instances the researcher was asking pre-established questions and writing down the responses from the interviewee. Other respondents were comfortable to write down their responses on their own. Each interview session took about thirty minutes.

Guba and Lincoln (2005:269) feel that the structured interview is useful when the researcher is aware of what she does not know and therefore is in a position to frame questions that will supply the knowledge required. In standardized open-ended interviews, the sequence of questions is determined in advance. All interviewees are asked the same basic questions in the same order. The advantage of structured open-ended interviews is that respondents answer the same questions, thus increasing comparability of responses; data are complete for each person on the topics addressed in the interview (Guba and Lincoln, 2005). The interviews conducted for this study were structured, using open-ended questions, and this helped the researcher to avoid bias from certain individuals. However, the weakness of structured interviews is that there is little flexibility in relating questions asked to particular individuals and circumstances. Sometimes questions may constrain and limit the flexibility and relevance of questions and answers (Guba and Lincoln, 2005). The Interview schedule is attached as Appendix 3.

4.7.3 Observation

The qualitative aspect of the research was facilitated by observation. Several observation techniques have been discussed and their use explained by several authors. There are two types of observations, obtrusive and non-obtrusive. The researcher used the non-obtrusive type, which is also called a non-participant observation, where the researcher has nothing at all to do with the setting being observed. In a non-obtrusive method the purpose of the researcher's identity is not known to the group, even though the group knows about the researcher's presence (Guba and Lincoln, 2005). The researcher also observes, takes notes and interprets what has been seen in the context of the research questions. The advantage of using non-obtrusive observation as a field technique is that information obtained may be more valid

because the subjects are not aware that they are being observed. However, its limitation is that "making notes or openly using a recording device could make participants feel uneasy and influence the spontaneity of their responses" (Pickard, 2007).

It is necessary not to allow data collection procedures to limit the researcher from accessing additional data she may need (Pickard, 2007:205). To avoid this challenge, one is to enter the setting with a briefing or observation checklist of activities you may want to record (Pickard, 2007). In this study an observation check-list was designed with all the activities the researcher anticipates to observe. The observation schedule focused on the layout of organization's structure and line of reporting, communication tools and facilities available such as notice boards, discussion rooms, computers, internet and intranet and fixed phone, knowledge repositories. The observation also looked at schedules/announcements of trainings/programmes (workshops, seminars and conference) on the notice boards. The details of the observation checklist are provided in appendix 4. The observation checklist was used to supplement the findings obtained through questionnaires and interviews.

4.7.4 Document Review

A document review is a research technique which involves a review of documents relevant to the study. Such documents might take a number of forms, such as existing databases of information, policies and manuals (Bennett, 2003:94). In this study, assessing institutional documents was part of the qualitative information that was gathered on KSS in the university libraries surveyed. Yin (2002:80) stated that the use of documents as data collection tools are important, as it augments or supports evidence from other sources. A document review checklist is attached as Appendix 5.

Unfortunately, some of the documents did not exist in some of the university libraries surveyed. Such documents included capacity building, plans which were kept by the human resources management (HRM) department and could not be easily obtained. The researcher reviewed policies, mission statements and annual reports on the university websites. All the

university libraries surveyed except one were not practising knowledge management and therefore did not have a policy on KM practices.

4.8 Data Analysis Strategies

The data collected was organized, labelled and analysed quantitatively and qualitatively. In this study the two approaches, quantitative and qualitative, complemented each other to generate different kinds of knowledge. They allowed for the comparison of data. The weaknesses of one approach could be covered by the strengths of the other and *vice versa*.

4.8.1 Quantitative Data Analysis

The computer software programme *SPSS* was used to analyse the quantitative data from the set of closed questions in the survey questionnaire measuring knowledge sharing strategies in university libraries. *SPSS* is a computer software program that enables the input of raw data, modification and re-organisation of data to carry out a wide range of simple, statistical analyses (Blaxter, Hughes and Tight 2006). A major feature of quantitative data analysis is coding (Cohen, Manion and Morrison, 2011:564). Coding in quantitative data analysis reduces the time required to analyse data and reduce errors involved in coding and analysing data. Results are clearly presented, with in-depth statistics and charts (Pickard 2007:278). In the present study a code was assigned to each category or variable that contains an idea or a piece of information that relates to an item from the questionnaire (Gibbs, 2007:38). *SPSS* version 21 was used to analyse quantitative data. Data were presented using frequency distribution, mean, standard deviation, reliability, the Cronbach's Alpha scale and Pearson correlations using Levene's t-tests in grouping raw data. The results of data analysed were presented in the form of tables, figures, charts and verbal descriptions.

94

4.8.2 Qualitative Analysis

Qualitative data was analysed using thematic analysis. Qualitative data was collected using interviews, observations and document reviews. Open-ended questions from the survey questionnaire were also analysed. Firstly, data was coded, in which reduction of qualitative data was done before analysis. Data reduction refers to volumes of data being reduced to meaningful facts through the process of selecting, focusing, simplifying, abstracting and transforming the data for the sake of manageability (Miles and Huberman, 1994). In this study, not only do the data need to be manageable, they also had to be transformed so that they can be understandable and relate to the issues being addressed. In initiating the process of data reduction, the focus was on distilling different views from participants about knowledge sharing. Cohen, Manion and Morrison (2011:559) claim that data reduction is a key element of data cleaning in qualitative analysis. One common procedure of achieving this is content analysis. According to Weber (1990:15), "content analysis is a process by which many words of a text are classified into fewer categories/themes". The goal is to reduce data given in different ways and categories are usually derived from theoretical constructs (Flick, 1998:15). In this study, content analysis was achieved by making sure that the data collection instruments were measuring variables or theoretical constructs that relate to knowledge sharing. Put simply, content analysis was achieved by coding, categorizing and comparing data to create meaningful links between categories.

Creswell (2009) points out that data obtained by qualitative methods are too voluminous. A plan should thus be identified on how to reduce the data by identifying a coding procedure that assists in reducing information given into themes or categories. In this study, qualitative data obtained from the interviews, document analysis and observations were first coded and categorised into themes for easy interpretation, since analysis and interpretation are closely interlinked in qualitative methods (Leedy and Ormond, 2005). The analysed qualitative data was organised and presented according to the research questions, to bring together all the relevant data that pertains to the exact issue of concern under study and preserves the coherence of the content (Cohen, Manion and Morrison 2011:468). The presentation of

qualitative data involved the discussions of themes and, categories and in some instances, interviews were reported verbatim.

4.9 Reliability and Validity

Several major steps were carried out to enhance reliability and validity of the data collected. Content validity, which determines the adequacy of the characteristics in describing the study, was met, since most of the survey questionnaire items were largely adapted and edited to suit the study. Questionnaire items were largely adapted from similar previous studies, where the scale items were found to be valid (Nunally, 1978). For example, items measuring preferred channels of communication were measured by items adapted from Kim and Lee (2006); items related to factors affecting KS; strategies encouraging knowledge sharing; attitude and perception towards KS were measured using items from Jain, Manjit and Gurvinder (2007) and organizational knowledge sharing was measured using items from Mustafa and Nuraddeen-Abubakar (2009).

Therefore the survey questionnaire used in this study was built upon existing research, where the scale items were found to be valid. The researcher adapted items in which a factor analysis technique was used to assess validity of instruments. Kerlinger (1973) asserts that one technique widely used to assess validity of an instrument is factor analysis. To identify the validity of the instrument all items that loaded less than 0.40 were removed. Various items that represented each dimension were analysed to see if they were properly assigned to the appropriated scale. According to Zeller and Carmines (1980), a factor analysis which loaded less than 0.40 should be considered as invalid. Construct validity was achieved by linking instruments to theoretical variables, discussed in Chapter Two (see Table 2.1).

Reliability (trustworthiness) of the data collection tools was achieved by making sure that the instruments measured the constructs of interests (Powell, 1985:38). Pre-testing of the questionnaire was done for the purpose of ensuring reliability and validity. The questionnaire was pre-tested by 10 members of library staff at Unisa, to determine their understanding of the

items included in the questionnaire and also to incorporate any useful suggestions that were made. The questionnaire was improved and modified, based on the feedback obtained. The purpose of pre-testing is to determine whether the wording of the research instruments is understandable and whether or not the content of the instrument is relevant and adequate (Polit and Beck 2004; Krishnaswami and Ranganatham, 2010). A similar study by Chigada (2014) and Dewah (2011) achieved reliability and validity by the use of pre-testing and triangulation. Another study by Mushi (2009), on "Knowledge sharing perspectives in public libraries in Tanzania", achieved reliability and validity by the use of pre-testing while the studies by Hussein and Nassuora (2011) demonstrated their internal consistency by calculating the Cronbach's Alpha values on the students' attitudes and perceptions towards knowledge sharing in institutions of higher education in Jordan.

Most of the questionnaire items used in the study had Cronbach values of more than 0.7, except for items measuring attitude and perception of library staff. Jain, Manjit and Gurvinder (2007:26) define "Cronbach's alpha scale as a model of internal consistency based on the average inter-item correlation". Measures in the study are judged to be reliable if a Cronbach's coefficient alpha is 0.7 or greater (Sekaran, 2000). Cronbach's coefficients larger than .0.70 indicate high values of reliability (Guilford, 1965). However, a Crobach's coefficient alpha of 0.61 is also acceptable (Sekaran, 2000). The table below summarised the reliability of the questionnaire items used in this study.

Table 4.2: Reliability Analysis

Items	Cronbach's Alpha scale
approaches to KS	0.768
channels of communication	0.705
attitude and perception	0.611
skills and expertise	0.900
organizational KS items	0.929
factors affecting KS	0.773
contribution to KS	0.896

Source: Field Data 2014

Overall, items used in this study had Cronbach values of higher than 0.7, except for items measuring attitudes and perceptions, which had Cronbach values of 0.611. This research thus demonstrated high reliability of items measuring knowledge sharing, as depicted in Table 4.2.

Reliability was also achieved by triangulating data. Yin (2002:92) claims that "the purpose of triangulation is to collect information from multiple sources aimed at verifying the same facts or phenomenon". It gives a true reflection on a situation by combining different ways of looking at it (methodological triangulation) or different findings (data triangulation) (Silverman, 2010:227). In the present study, triangulation involved using different data collection techniques and approaches to collect information from different sources of evidence (see section 4.7.1-4.7.4). Triangulation was based on the assumption that bias is reduced in a particular data source when used in conjunction with other sources. As a result, decisions were

made based on comparing results from different sources of data (Neser, Joubert and Sonnekus, 1995:59). The mapping of research questions to sources of data is reflected in Table 4.3.

Table 4.3: Mapping of Research Questions to Sources of Data

S/No.	Research questions	Respondents	Source of data	Data analysis procedure
1	What is the extent of knowledge sharing in university libraries in KwaZulu-Natal Province?	Library staff and senior managers/directors	Literature/Survey questionnaire, interviews and observation	Thematic analysis and descriptive statistics
2	What strategies are available for knowledge sharing among library staff in a university?	Library staff and senior managers/directors	Literature/Survey questionnaire, interviews and document analysis	Thematic analysis and descriptive statistics
3	What is the attitude and perception of library staff towards knowledge sharing?	Library staff and senior managers	Survey questionnaire Observation and Interviews	Thematic analysis and descriptive statistics
4	What factors affect knowledge sharing in university libraries?	Library staff and senior managers/directors	Literature, survey questionnaire, Observation and Interviews	Thematic analysis and descriptive statistics

4.10 Ethical Considerations

The researcher sought permission from various authorities at the universities where the study was conducted. Institutional gate keepers' letters granting permission to conduct research (see attached Appendices 11-14). The University of KwaZulu-Natal's ethics policy was complied with (see Appendix 15). Respondents were notified that participation was voluntary and they were free to withdraw from the study at any time without any penalties. Diener and Crandall

(1978) claim that the most transparent way to achieve ethical compliance in research is to prepare a formal informed consent form that is read, understood and signed by all research participants. Informed consent has been defined by Diener and Crandall (1978:57) as the "procedures in which individuals choose whether to participate in an investigation being informed of facts that would be likely to influence their decisions". According to Pickard (2007:74), informed consent is "part of an agreement between the researcher and the participant that creates a mutual understanding that remains constant throughout the research". Furthermore, Schinke and Gilchrist (1993:83) claim that all informed consent procedures must meet three criteria:

- Participants must be competent to give consent,
- There must be sufficient information to allow for a reasoned decision,
- Consent must be voluntary and uncoerced.

In this study, respondents were notified about the nature of the study and assured of their rights, including the right to consent, protection of information disclosure and respect for their privacy when collecting and reporting data. Cohen, Manion and Morrison (2011:77), reason that "informed consent is a cornerstone of ethical behaviour as it respects the right of individuals to exert control over their lives and to take decisions for them". The informed consent letter is attached as Appendix 1.

4.11 Summary

Chapter Four outlined the research methodology of the study. The chapter discussed various issues including the research paradigm, research methods, research design, study population, census and data collection procedure, data analysis, validity and reliability, and research ethics. Chapter Five discusses the presentation of findings.

CHAPTER FIVE

DATA PRESENTATION AND ANALYSIS

5.1 Introduction

The purpose of data analysis in research is to transform raw data and give meaningful facts to the data obtained. Data for this study were obtained through a self-administered questionnaire, structured interviews, non-obstructive observation and document reviews. Descriptive statistics were used to organise, summarise and visualise quantitative data. Most of the data obtained from quantitative analysis were measured by a five point-Likert scale, ranging from strongly disagree to strongly agree, in which a frequency distribution was used in grouping raw data. The results of data analysed are presented in the form of tables, figures, charts and verbal descriptions. Creswell (2009) feels that data obtained by qualitative methods are too voluminous; the researcher should make a plan on how to reduce the data by identifying a coding procedure that assists in reducing the information put into themes or categories. In this study, qualitative data obtained from interviews, observations and document reviews were first coded and categorised into themes for easy interpretation since analysis and interpretation are closely interlinked in qualitative methods (Leedy and Ormond, 2005). In some instances, interviews were reported verbatim.

A total of four universities were surveyed. They were the Durban University of Technology (DUT), the University of KwaZulu-Natal (UKZN), the Mangosuthu University of Technology (MUT), and the University of Zululand (UNIZULU). The study sought to address the following research questions:

(1) What is the extent of knowledge sharing in university Libraries in KwaZulu-Natal Province?
(2) What strategies are available for knowledge sharing among library staff in a university?
(3) What is the attitude and perception of library staff towards knowledge sharing?
(4) What factors affect knowledge sharing among library staff?

The results in this chapter are organised and presented according to the research questions outlined above; variables gleaned from a theoretical framework in Chapter Two (see Table 2.1) the themes obtained from the research questions indicated in section 5.1. The themes were discussed as follows: knowledge sharing, attitude and perception, organizational culture, organizational structure and factors influencing knowledge sharing. For each of the research questions, data from the survey questionnaire is presented first, followed by qualitative data from the interviews, observations and, lastly, documents reviewed. Out of 130 questionnaires distributed, a total of 102 questionnaires were returned giving a response rate of 78%. According to Babbie and Mouton (2001) a response rate of more than 70% is considered acceptable.

5.2 Demographic Profile of Respondents' Institution

In order to understand the general nature of the respondents, their demographic profiles were sought. Table 5.1 is a breakdown of the numbers of respondents by various demographic characteristics.

Table 5.1: Demographic Profile of the Respondents

	Category	Frequency	Percentage
Institution **(N=102)**	DUT	28	27.5
	MUT	18	17.6
	UKZN	39	38.2
	UNIZULU	17	16.7
Total		**102**	**100**

Section (N=102)	Not mentioned	3	2.9
	Acquisitions	10	9.8
	Management	9	8.8
	Circulation	31	30.4
	Information service	41	40.2
	Cataloguing	8	7.8
Total		**102**	**100**
Position/Rank (N=102)	Not mentioned	1	1.0
	Acquisitions Librarian	5	4.9
	Manager/coordinator	23	22.5
	Library Assistant	30	29.4
	Subject Librarian	41	40.2
	Director	2	2.0
Total		**102**	**100**
Work experience (N=101)	0 - 5 years	20	19.8
	5- 10 years	28	27.7
	10 - 15 years	19	18.8
	15 - 20 years	21	20.8
	20 - 25 years	8	7.9
	More than 25 years	5	5.0
Total		**101**	**100**

Source: Field Data (2014)

Firstly, the researcher wanted to know the institution from which the respondents came from. The responses given show that the majority 39(38.2%) were from the University of KwaZulu-Natal, 28(27.5%) from the Durban University of Technology (DUT), 18(17.6%) from the University of Mangosuthu (MUT) and 17(16.7%) from the University of Zululand (UNIZULU). Generally, most of the respondents were from the UKZN, possibly because the UKZN is the largest university with the highest enrolment of students and staff. The UKZN has

103

got five campuses and in each campus there is a library and branch libraries as compared to other three universities. Respondents were further asked to indicate their departments in the library where they are working and the rank/position they hold. The majority 41 (40.2%) indicated that they were subject librarians working in information services, 30(29.4%)) were librarians assistants working in various sections of the library, such as the circulation desk, acquisitions and cataloguing.

Although many respondents 23(22.5%) indicated that they were managers and co-ordinators from various sections holding management positions, of those who responded only 9(8.8%) were managers and heads of sections in departments such as the information services and technical services. Only 2(2.0%) were library directors, while 3(2.9%) did not mention the section they worked for and the other 1(1.0) failed to give the position/rank they hold. The distribution of work experience shows that: the majority 28(27.7%) have worked for over 5-10 years, 20(19.8%) worked for less than five years, 19(18.8%) have worked between 10-15 years, 8(7.9%) have worked for 20-25 years and those who have worked for more than 25 years were numbered 5(5.0%).

5.2.1 Gender of Respondents

Among the 102 respondents, 76(74.5%) were female and 26(25.5%) were male (see Table 5.2).

Table 5.2: Gender of Respondents (N=102)

Gender	Frequency	Percentage
Female	76	74.5
Male	26	25.5
Total	**102**	**100**

Source: Field Data (2014)

5.2.2 Respondents' Age Group

The results in Table 5.3 show that the respondents' ages ranged from the early 20s to over 45 years; with 27(26.7%) were over the age of 45.

Table 5.3: Respondents' age (N=101)

Age	Frequency	Percentage
20 - 24 years	2	2.0
25 - 30 years	19	18.8
31 - 35 years	21	20.8
36 - 40 years	9	8.9
41 - 45 years	23	22.8
Above 45 years	27	26.7
Total	**101**	**100**

Source: Field Data (2014)

It would seem that most of the library staff in the universities surveyed were within the age range of 41-45 years and above 45 years. An interview with one of the library directors indicated that young people were leaving the library to look for better positions and promotion elsewhere, resulting in knowledge loss for the organization. This may possibly be caused by the lack of opportunities for promotions, low salaries and motivation in their current organisations. Mohammad, Hamdeh and Sabri (2010:441) confirmed that many organizations are finding it difficult to retain knowledge assets, since many experts are leaving for other opportunities elsewhere.

5.2.3. Qualifications of Respondents

In terms of qualifications, the majority 26(25.5%) of the respondents held a bachelor's degree in Library and Information Science (LIS), 25(24.5%) held honours degrees, 20(19.6%) held a

Master's degree, 16(15.7%) held a diploma, 6(5.9%) held a certificate while 6(5.9%) held a Bachelor of Technology (B.Tech) in LIS. Only 3(2.9%) held a PhD in LIS. The results are presented in Table 5.4.

Table 5.4: Qualifications of Respondents (N=102)

Qualification	Frequency	Percentage
Certificate	6	5.9
Diploma	16	15.7
Bachelor's degree	26	25.5
Master's degree	20	19.6
B. Technology	6	5.9
Honours	25	24.5
PhD	3	2.9
Total	**102**	**100**

Source: Field Data (2014)

5.3 Knowledge Sharing in University Libraries in KwaZulu-Natal Province

The purpose of the study was to investigate knowledge sharing strategies in University Libraries in the KwaZulu-Natal Province of South Africa. The first research question sought to understand the extent to which knowledge was shared in University Libraries in KwaZulu-Natal. The results are presented in the following aspects:

- Knowledge creation and acquisition
- Promotion of working relationships
- Awareness of vision and goals

Table 5.5 shows respondents' views on the approaches used to generate knowledge among library staff. Statements addressing this research question are presented in section B (see question 9) of the survey questionnaire (Appendix 2).

Table 5.5 Approaches used to Generate Knowledge

		Approaches used to generate knowledge					Percentage Positive	Mean	SD	Latent Factor		
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree				Coefficient	(Cronbach's Alpha)	% of Total Variation
9.1(N=99)	Frequency	7	11	44	26	11	37.4%	3.23.	1.03	0.323		
	%	7.1%	11.1%	44.4%	26.3%	11.1%						
9..2(N=101)	Frequency	10	9	39	29	14	42.6%	3.28	1.12	0.356		
	%	9.9%	8.9%	38.6%	28.7%	13.9%					0.768	59.84%
9..3 (N=102)	Frequency	8	14	35	30	15	44.1%	3.29	1.12	0.350		
	%	7.8%	13.7%	34.3%	29.4%	14.7%						
9.4 (N=102)	Frequency	13	18	30	31	10	40.2%	3.07	1.18	0.254		
	%	12.7%	17.6%	29.4%	30.4%	9.8%						

9.1: Staff gain new ideas through social gatherings

9.2: Staff improves their skills by learning from other   Organizations and institutions

9.3:   Individuals are committed to professional development

9.4: Seminars, workshops, training and development are held periodically and adequately to help gain new
      knowledge

Source: Field data (2014)

Statements measuring individuals' commitment to professional development have the highest mean of 3.29 which is the average of the frequency values and the highest positive percentage (44.1%). In addition, 42.6% reflect that the library staff members improve knowledge sharing by learning from other organizations and institutions, whereas 40.2% were positive that seminars, workshops, training and development workshops held periodically help staff to gain new knowledge. Of those who responded, only 37.4% were positive that knowledge is gained through social gatherings and shared for the benefit of others. A majority of the respondents were neutral on the approaches used to share knowledge perhaps suggesting that they were not aware of any approaches used to share knowledge, in their libraries. The responses given revealed that staff were not aware of any approaches used for knowledge sharing in their libraries. The four items in Table 5.5 used to measure approaches for knowledge sharing were found to be very reliable. This is indicated by the internal consistent (Cronbach's Alpha=0.768)

accounting for total variation of 59.84% that represents the approaches used for knowledge sharing.

One of the open-ended questions of the survey questionnaire in section B (see Question 10) further asked how knowledge was created, acquired and captured by the organizations. According to the SECI Model, knowledge creation involves capturing, acquiring and gaining skills and competencies. Knowledge acquired can be shared collectively through interaction between staff via an integrated system such as a repository, as well as through a knowledge management system (KMS) (Nonaka and Takeuchi, 1995). Findings from the respondents in university libraries surveyed showed that they acquired new knowledge through various ways, shown in Fig 5.1.
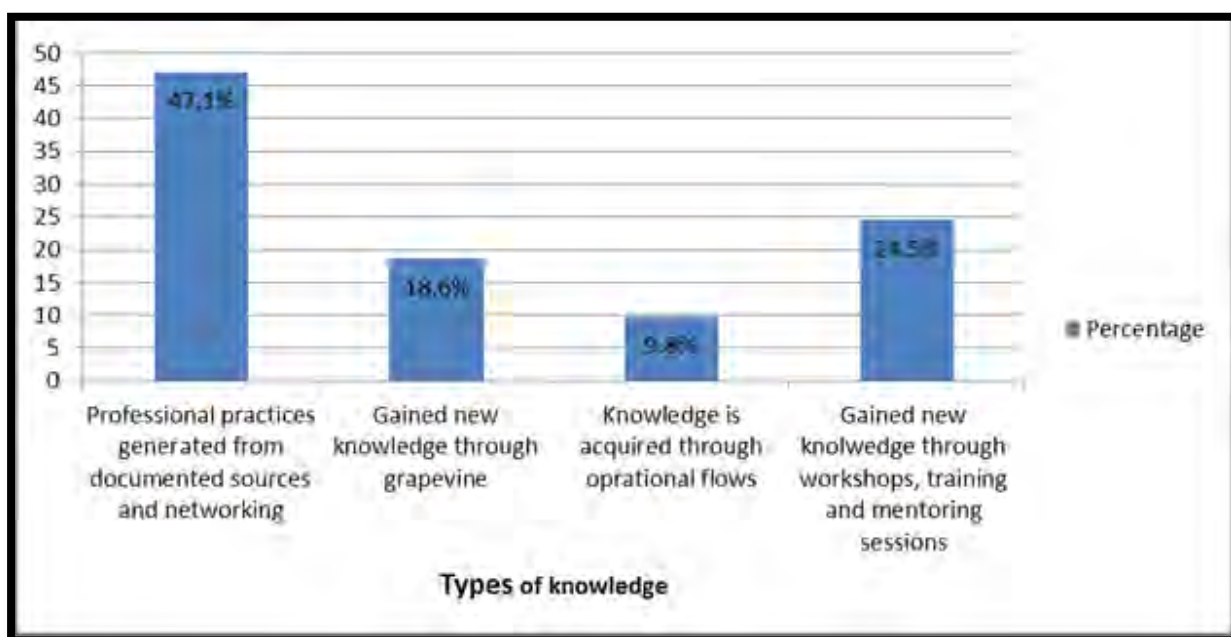
Figure 5.1: Knowledge Creation and Acquisition (N=102)
Source: Field Data (2014)

From the responses shown in Fig 5.1, a majority 48 (47.1%) indicated that they acquired new knowledge through professional practices, 19(18.6%) said they acquired new knowledge on how to do things through the grapevine while 10(9.8%) indicated that they acquired knowledge

through sharing tacit knowledge gained through operational practices. Indeed, 25(24.5%) mentioned that new knowledge is gained through conferences and workshops, training and mentoring sessions. Mentorship allows experienced staff or managers to share and transfer skills and experiences to their juniors or less experienced colleagues (Nonaka and Takeuchi, 1995).

Senior management staff were interviewed on how knowledge is captured and acquired in their libraries (see question 3 of the interview schedule). The participants reported that staff were encouraged to attend training workshops to acquire new knowledge in order to keep abreast of new trends and practices. At one of the universities surveyed, the findings revealed that the library had developed a tool to capture and share knowledge and there was a committee which updated other staff on what is happening. The findings indicated that library staff also posits their views on SharePoint. A similar tool to capture the tacit knowledge of reference librarians was developed and is being used at Rutgers University (Jantz, 2001). Findings from the other three universities in the survey revealed that although library staff were encouraged to attend training workshops and conferences, the knowledge acquired was not shared or captured anywhere for future reference**.**

5.3.1 Promoting and Maintaining Good Working Relationships

Promoting and maintaining good working relationships constitutes one of the cornerstones of achieving knowledge sharing in university libraries. During the interview sessions, all senior management staff were asked how they maintained good working relationships. Participants' responses varied, depending on the context of their job and positions held. The interviewees reported that it was difficult to promote and maintain relationships because of cultural differences. It was reported that this was only possible if the director and top management provided leadership. The interviewees thought that management involvement and support would encourage library staff to share knowledge.

5.3.2 Awareness of Vision and Goals of the Library

This question was informed by the Knowledge Sharing Capability Model, which states clearly that awareness of vision and goals stimulates a sense of involvement and contribution among employees and it leads to the generation of a clear organizational purpose that assists in goal achievement (Kim and Lee, 2006). From the interviews conducted, most of the senior management staff reported that although the vision and goals were put on university websites not all staff had a clear understanding of what they meant. Another senior manager commented:

> *".....Not all staff members know the goals and mission statement. It is not a priority to share knowledge, for example many library staff does not know what it means by African scholarship".*

The responses given indicated the vision and goals in university libraries were not clearly communicated to all staff, even though they were visibly displayed. Top management has the responsibility to guide and to make sure that the vision and goals are clearly known (Zhang, Dawes and Sarkis, 2005; Kim and Lee, 2005; Nonaka and Takeuchi, 1995). With reference to knowledge sharing, the Knowledge Sharing Capability Model avers that a clear understanding of organizational vision and goals exert a positive effect on employee knowledge sharing capabilities. This view is not supported by the results obtained from interviews with senior management.

5.4 Knowledge Sharing Strategies in University Libraries

The second research question sought to identify the strategies available for knowledge sharing in university libraries in KZN province. Specific research questions in the survey questionnaire and interview schedule cover:

- Preferred channels of communication
- Channels used for knowledge sharing
- KM Policy

110

- Resources available to support knowledge sharing
- Role of knowledge sharing in library operations and management
- Ways to encourage knowledge sharing

5.4.1 Knowledge Sharing as Measured by Preferred Channels of Communication

The specific research questions are addressed in question 11 in section C of the survey questionnaire (see Appendix 2). Statements discussing preferred channels for knowledge sharing are depicted in Table 5.6.

Table 5.6: Preferred Channels of Communication

		Preferred Channels statements								Latent Factor		
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Percentage Positive	Mean	SD	Coefficient ie	(Cronbach's Alpha)	% of Total Variation
11.1(N=98)	Frequency	15	26	31	20	6	26.5%			0.308		
	%	15.3%	26.5%	31.6%	20.4%	6.1%		2.76	1.131			
11.2(N=100)	Frequency	25	24	32	16	3	19.0%			0.310		
	%	25.0%	24.0%	32.0%	16.0%	3.0%		2.48	1.123		0.705	53.06%
11.3(N=101)	Frequency	27	14	24	24	12	35.7%			0.391		
	%	26.7%	13.9%	23.8%	23.8%	11.9%		2.80	1.123			
11.4(N=100)	Frequency	28	20	32	14	6	20.0%			0.357		
	%	28.0%	20.0%	32.0%	14.0%	6.0%		2.5	1.21			

11.1: I prefer using social networks such as Face book, Twitter, wikis and blog in my library.

11.2: I use videoconferencing to share knowledge with my co-workers

11.3: I use intranet and knowledge repositories to share knowledge with my co-workers

11.4: I prefer to share knowledge through storytelling

Source: Field data (2014)

The KSC Model (Kim and Lee, 2006) maintains that when clearly disginated channels of informal communication exist in organizations, employees would most likely share knowledge using such channels. The findings were that library staff in the university libraries did not

perceive the usefulness of informal channels as knowledge sharing strategies. The mean scores of all the statements of the preferred channels of knowledge sharing are very close to 2, less than 3, the required norm (MacGregor, 1998). The mean value of those who were positive said that they prefer sharing knowledge using intranet and knowledge repositories with co-workers was 2.80 (highest), accounting for (35.7%), which is less than half. In addition, 26.5% showed interest in sharing knowledge using social networks such as Facebook, Twitter, wikis and library blog, while 20.0% felt comfortable sharing knowledge through storytelling with co-workers. Only 19.0% of the respondents showed an interest in sharing knowledge using video-conferencing with co-workers. The items used to measure the preferred channels of communication were found to be highly reliable. The Cronbach's Alpha coefficient of 0.705 accounted for the total variability of 53.06% of all the four items tabulated in Table 5.6 that represent preferred channels for knowledge sharing.

In line with the KSC Model (Kim and Lee, 2006), storytelling, as an informal channel of communication, gives an opportunity for employees to interact and share their work-related experiences and know how to generate new ideas. It enables employees to learn through other people's experiences. Storytelling as an informal way of sharing knowledge with co-workers was viewed negatively among library staff. It is believed that library staff may possibly think that stories may not be relevant to the work-place. Several problems related to informal channels of communication, such as oral delivery and capturing of stories, have been identified in the literature. A significant drawback of the stories related by individuals is that most of the stories are not work-related and they are told from the individual's point of view (Wijetunge, 2012).

In university libraries video conferencing is utilised to support groups or people working together in different places, such that members of the group can share knowledge within a given context. Although video conferences allow people who are geographically dispersed to share knowledge, library staff did not show much interest in using video conferences as channels of communication for the purpose of knowledge sharing. This might be attributed to lack of confidence due to technical problems encountered in using such tools for knowledge

sharing purposes. Evidence from the literature suggests that the challenges involved in sharing knowledge using tools such as video conferences across globally distributed universities are very complex, due to technical problems such as breakdowns (Hassandoust and Kazerouni, 2011).

5.4.2 Channels used for Knowledge Sharing

Respondents were asked to state tools used for knowledge sharing in their libraries. The specific research questions are addressed in question 12 in section C of the survey questionnaire (see Appendix 2). The responses are shown in Table 5.7.

Table 5.7: Channels used for Knowledge Sharing (101)

Responses	Responded	Did not respond
Departmental meetings	39 38.6%	62 61.4%
Library blog	31 30.7%	70 69.3%
Communities of practice	47 46.5%	54 53.5%
Coffee room discussions	42 41.6%	59 58.4%
Mobile phones	18 17.8%	83 82.2%

*Multiple responses

Source: Field Data (2014)

Many organisations use networking technologies such as video-conferencing, discussion forums, blogs and wikis as collaborative tools that enable knowledge sharing, transfer and retention in the organisation. Of those who responded, 47(46.5%) of the respondents indicated that they shared knowledge using Communities of Practice (Cops). Communities of Practice

(Cops) as an informal channel of communication, allow individuals with a common interest and a common goal to exchange and share knowledge. About 39(38.6%) revealed that they used departmental meetings to share knowledge, while 31(30.7%) indicated that they used library blogs. Lastly, 42(41.6%) indicated that they used coffee rooms discussions to share knowledge. The responses suggested that although the majority agreed that they shared knowledge through communities of practice, most of the staff in university libraries were not familiar with the use of such tools for knowledge sharing purposes, as indicated by the low percentages of those who responded shown in Table 5.7. Library staff did not perceive the use of such tools, probably due to lack of familiarity and understanding on using such tools for knowledge sharing of work-related activities. Makori (2011) disclosed that few libraries in African countries have incorporated the use of tools such as library blogs, wikis and social networks as strategies for knowledge sharing. This would explain why question 12 which probed this area did not get responses for such items listed.

5.4.3 T-Tests for Channels for Knowledge Sharing

The results of the five tables are discussed in Tables 5.8-5.12 contain t-tests results for channels of knowledge sharing. The results from the two groups of respondents were compared using independent samples of t-tests. Before the t-tests are carried out it is important to test the assumption of equal variances between the groups, using Levene's test. If Levene's test turns out significant, then the degrees of freedom for the t-test must be calculated and the corresponding t-test adjusted accordingly. The channels used for knowledge sharing in table 5.7 were further tested on channels of communication in table 5.6. Attitude and perception in table 5.14 were used to determine extent they influenced knowledge sharing. As reflected in the tables, (channels of communication, attitude and perception) were used as dependent variables to show the extent to which the channels in table 5.7 were used for knowledge sharing purposes.

T-Tests for Knowledge Sharing in Departmental Meetings

A simple t-test for departmental meetings as spaces for knowledge sharing did not yield a significant difference. All the factors proposed to be affecting knowledge sharing during departmental meetings (workshops and seminars) were not supported, as shown in Table 5.8.

Table 5.8: Knowledge Sharing Departmental Meetings

Group Statistics					Levene's Test for Equality of Variances		t-test for Equality of Means		
Dependent variable	**I Share Knowledge During seminars /workshops**	N	Mean	Std. Dev	F	p-value	T	Df	p-value
Knowledge Sharing	Yes	49	3.68	1.44	0.439	0.509	1.46	96	0.148
	No	49	3.28	1.32					
Preferred Channels of KS	Yes	47	3.96	1.37	3.435	0.067	2.82	94	0.006
	No	49	3.28	0.99					
Attitudes and Perceptions of Staff (KS)	Yes	50	5.11	1.32	0.037	0.848	2.20	98	0.030
	No	50	4.51	1.37					

p-value ≤0.05

The survey findings showed that departmental meetings in the university libraries surveyed were not used for knowledge sharing purposes. All the variables proposed to be affecting knowledge sharing were not significant, as shown by the p value of 0.148 for knowledge sharing, preferred channels of knowledge sharing p value of 0.006 and attitudes and perception of staff p value of 0.030. If the p-value sig. (two-tailed) is less than 5% (<0.05), it means that there is a significant relationship or effect between variables being compared. If the p-value is greater than 0.05 this means there is no significant relationship between variables.

T-Tests for Library Blogs

T-tests results for library blogs have a strongly significant relationship as a preferred channel for knowledge sharing, as shown by p value of 0.000 in Table 5.9.

Table 5.9: Library Blog

Group Statistics					Levene's Test for Equality of Variances		t-test for Equality of Means		
Dependent variable	Library blog	N	Mean	Std. Dev	F	p-value	T	df	p-value
Knowledge Sharing	Yes	33	3.34	1.63	5.368	**0.023***	-0.47	52	0.638
	No	66	3.49	1.28					
Preferred Channels of Knowledge Sharing	Yes	35	4.21	1.01	2.998	0.087	3.81	95.00	**0.000****
	No	62	3.28	1.22					
Attitudes and Perceptions of Staff (KS)	Yes	35	4.92	1.17	5.248	**0.024***	0.62	83	0.538
	No	66	4.75	1.46					

p-value ≤0.05

Those who indicated that they used library blogs have lower scores (mean=3.34) for knowledge sharing than those who said they did not (mean=3.49). The difference in mean is significant (t=-3.81, df=95.00, p-value=0.000). Even though the library staff indicated that they were interested in using the library blog as a tool for knowledge sharing purposes, their attitude and perception towards the use of the library blog was not significant as shown by the p-value of 0.538. The average ranking of knowledge sharing and the attitude and perception for using library blog is not significant, as shown by the p values obtained which are not in the range of the acceptance level (p-value ≤0.05). Therefore the use of a library blog as a tool for knowledge sharing in university libraries in KZN is not supported.

T-tests Communities of Practice

The empirical results presented in Table 5.10 show that variables that are proposed to be affecting the use of communities of practice as channels of communication and tools for knowledge sharing are not supported.

116

Table 5.10: Communities of Practice

Group Statistics					Levene's Test for Equality of Variances		t-test for Equality of Means		
Dependent variable	**Communities of practice**	N	Mean	Std. Dev	F	p-value	T	df	p-value
Knowledge Sharing	Yes	45	3.08	1.33	0.087	0.768	-2.36	97	0.020
	No	54	3.73	1.40					
Preferred Channels of Knowledge Sharing	Yes	46	3.74	1.37	1.413	0.237	0.91	95.00	0.363
	No	51	3.51	1.10					
Attitudes and Perceptions of Staff (KS)	Yes	47	4.59	1.36	0.188	0.665	-1.53	99	0.129
	No	54	5.00	1.35					

p-value ≤0.05

The survey indicated that communities of practice are not supported by library staff, as shown by the p value of 0.020 for knowledge sharing index; p value of 0.363 for preferred channels of knowledge sharing and a p value of 0.129 of attitudes and perception of knowledge sharing, respectively. The average ranking of these factors is not supported (p-value ≤0.05), as shown in Table 5.10.

T-Tests Coffee Room Discussions

The t-tests results for coffee room discussions as spaces for knowledge sharing are not supported, as shown by the p value of 0.023 for knowledge sharing index, p value of 0.909 for preferred channels of knowledge sharing, as shown in Table 5.11.

Table 5.11: Coffee Room Discussions

Group Statistics					Levene's Test for Equality of Variances		t-test for Equality of Means		
Dependent variable	**Coffee Room discussions used**	N	Mean	Std. Deviation	F	p-value	T	df	p-value
Knowledge Sharing	Yes	41	3.24	1.41	0.054	0.817	-1.20	97	0.233
	No	58	3.58	1.38					
Preferred Channels of Knowledge Sharing	Yes	39	3.60	1.32	2.050	0.156	-0.11	95.00	0.909
	No	58	3.63	1.18					
Attitudes and Perceptions of Staff (KS)	Yes	42	4.60	1.40	0.421	0.518	-1.32	99	0.190
	No	59	4.96	1.33					

p-value ≤0.05

Table 5.11 shows that respondents had a negative attitude and perception towards using coffee room discussions as spaces for knowledge sharing, shown by the p value of 0.190. Those who indicated that they used coffee room discussions as spaces for knowledge sharing had lower scores (mean=3.24) than those who did not (mean=3.58). The proposed variables to measure coffee room' discussions were not significant, as shown by the p values obtained which are not in the range of the acceptance level.

Generally, library staff in the universities surveyed did not value the use coffee room' discussions and departmental meetings as spaces for knowledge sharing. Lim (1992) found that, although many universities around the world are introducing social gathering-places such as coffee shops, discussion rooms and computer labs.as knowledge sharing facilities, these gatherings were not meant to exchange and share work-related experiences of the staff. Similarly, the results showed that such approaches did not work in university libraries in KwaZulu-Natal, since library staff did not consider these social spaces as meant for sharing knowledge of work-related experiences. Library staff viewed such gatherings as a way of improving social relationships.

T-Tests Mobile Phones

The t-tests in Table 5.12 indicate that mobile phones as tools for knowledge sharing were not significant as shown by the p values obtained, which were not in the range of the acceptance level.

Table 5.12: Mobile Phones

Group Statistics					Levene's Test for Equality of Variances		t-test for Equality of Means		
Dependent variable	**Mobile Phones as tools used**	N	Mean	Std. Dev	F	p-value	T	df	p-value
Knowledge Sharing	Yes	17	3.46	1.57	0.859	0.356	0.08	97	0.937
	No	82	3.43	1.37					
Preferred Channels of Knowledge Sharing	Yes	17	3.92	1.62	6.095	**0.015***	0.90	19.45	0.377
	No	80	3.55	1.13					
Attitudes and Perceptions of Staff (KS)	Yes	18	4.81	1.50	0.369	0.545	0.00	99	0.996
	No	83	4.81	1.34					

(p-value ≤0.05)

The average ranking of the proposed variables for using mobile phones was not supported (p-value ≤0.05). Those who indicated that they used mobile phones had significantly lower scores (mean=3.46) for the knowledge sharing index. Mobile phones as tools for knowledge sharing were not significant, as shown by the p-value 0.377. Library staff members showed a negative attitude and perception towards the use of mobile phones as tools for knowledge sharing, as shown by the p-value 0.996 in Table 5.12.

5.4.4 Encouraging Knowledge Sharing

Table 5.13 provides the summary of the statements giving respondents' views about ways they think will encourage knowledge sharing. The specific research questions are addressed in question 13 in section C of the survey questionnaire (see Appendix 2).

Table 5.13: Encouraging Knowledge Sharing

		Ways for encouraging KS								Latent Factor		
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Percentage Positive	Mean	SD	Coefficient	(Cronbach's Alpha)	% of Total Variation
13.1(N=101)	Frequency	2	7	14	33	45	76.8%	4.11	1.019	0.264		
	%	2.0%	6.9%	13.9%	32.7%	44.1%						
13.2(N=101)	Frequency	3	5	27	28	38	65.3%	3.92	1.055	0.267		
	%	3.0%	5.0%	26.7%	27.7%	37.6%						
13.3(N=100)	Frequency	6	3	22	31	38	69.0%	3.92	1.125	0.281	0.769	51.97%
	%	6.0%	3.0%	22.0%	31.0%	38.0%						
13.4(N=102)	Frequency	8	3	23	29	39	66.6%	3.86	1.194	0.291		
	%	7.8%	2.9%	22.5%	28.4%	38.2%						
13.5(N=102)	Frequency	7	4	13	33	45	76.5%	4.03	1.164	0.282		
	%	6.9%	3.9%	12.7%	32.4%	44.1%						

13.1: Knowledge sharing can become a culture in the organization if top management regularly displays and reinforces the theme that knowledge is the lifeblood of an organization'

13.2: Non-monetary rewards shall be more effective in encouraging KS

13.3: KS can be encouraged if it is linked with the performance appraisal of the staff

13.4: KS can be encouraged if there is a policy which promotes job rotation among employees

13.5: KS can be encouraged through staff development and providing adequate resources

Source: Field Data (2014)

According to the SECI Model of Knowledge Creation by Nonaka and Takeuchi (1995), loss of knowledge in organizations, especially university libraries, can be reduced if appropriate strategies such as performance evaluation systems, staff training and development or job rotation polices are implemented. Responses were sought from participants concerning their opinions on ways which they think encourage knowledge sharing. The mean scores of all the ways they thought encourages knowledge sharing were very close to 4. Very strong support was observed for promoting knowledge sharing by the top managers of the university libraries.

Knowledge sharing can become a culture in the organization if top management regularly displays and reinforces the theme that 'knowledge is the lifeblood of an organization'. This thinking has the highest mean of 4.11 and the highest percentage of respondents who were positive about the support of top management for knowledge sharing. This result suggests that staff would be more interested in knowledge sharing if they know that top management supported knowledge sharing. In addition, 76.5% of the respondents felt that KS can be encouraged through staff development and providing adequate resources while 69.0% emphasized linking knowledge sharing with performance appraisal of staff. Respondents thought that if a performance evaluation is introduced to recognise efforts and contributions to knowledge sharing, this could increase the motivation to share knowledge. The respondents felt that recognizing employee's contribution sends a strong signal to the employees that the organization values their knowledge.

Two thirds (66.6%) of respondents had a strong feeling that knowledge sharing can be encouraged if there is a policy that supports job rotation among library staff; 65.3% stressed the use of non-monetary rewards as a way of encouraging knowledge sharing. The findings show that respondents were very positive that if top management recognise and support knowledge sharing, staff would be motivated to share knowledge. In relation to the KSC Model (Kim and Lee, 2006), top management needs to support and encourage employees to share knowledge. Employees would be motivated to share knowledge if they knew that their contribution to knowledge sharing was being recognised. Internal consistency of the questionnaire items measuring ways to encourage knowledge sharing, as estimated by Cronbach's Alpha coefficient, was found to be very high (Cronbach's Alpha=0.769). The total variability of the five items that represent ways to improve knowledge sharing was consistent, accounting for 51.9% (see Table 5.13).

5.4.5. Policy on Knowledge Management Practices

Appropriate strategies and policies assist organizations to effectively achieve organizational goals and objectives. A policy is a deliberate plan of action to guide in decision-making

(Zhang, Dawes and Sarkis, 2005). Respondents were asked if there is a policy on knowledge management (KM) (see Question 13a) in one of the open-ended questions of the survey questionnaire. The results are depicted in Fig 5.2.
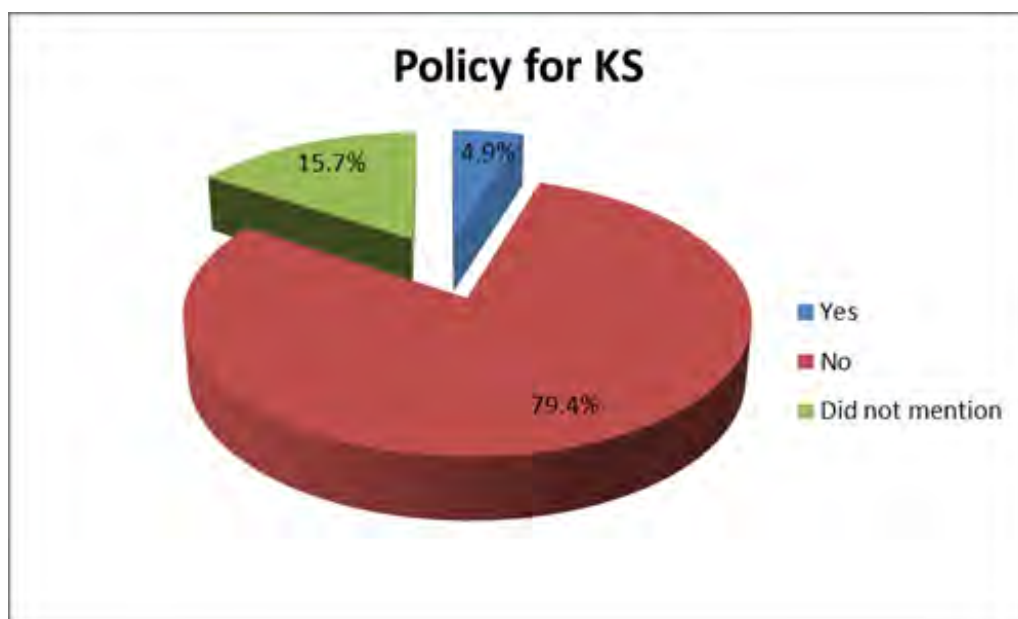
Figure 5.2: Policy on Knowledge Management Practices (N=102)

Of those who responded, 81(79.4%) said 'No', to there being a knowledge management policy and only 5(4.9%) said 'Yes', there is a policy about KM and 16(15.7%) did not respond, as shown in Fig 5.3. Respondents who answered 'Yes' were further asked to elaborate on what the policy says about knowledge sharing. Only 3(2.9%) said that there is a policy which discuses about the use of SharePoint as a knowledge sharing tool.

Interviews held with senior management staff at one of the universities revealed that there is a policy which considers the use of SharePoint as a tool for knowledge sharing. Responses from the survey questionnaire and interview from the other three universities indicated that their libraries did not have a policy on knowledge management. Respondents also revealed that they were not aware if their libraries were practising KM. Documents reviewed (Appendix 5) on university websites showed that university libraries in KZN did not have a policy on knowledge management, but progress had been made at one of the universities in developing

one. The findings indicated that they had established a SharePoint tool for knowledge sharing and there was a policy which discusses the use of SharePoint. According to the SECI Model of Knowledge Creation (Nonaka and Takeuchi, 1995) knowledge in an organization can be captured, stored and shared via an integrated system. An integrated system such as a SharePoint is an important tool in library operations, as it allows staff to contribute their experiences regularly and share knowledge (Voelpel and Han, 2005).

5.4.6 Role of Knowledge Sharing in Library Operational and Management Functions

In question 4 of the interview schedule (see Appendix 3) senior management staff were asked what they envisaged as the role of knowledge sharing in library operations and management. Responses were that all the senior management staff were very positive that, by sharing knowledge, staff acquired new knowledge, which enabled them to function effectively. Library directors gave their views as follows:

"..... Sometimes staff members are reluctant to admit that they have a problem until someone else admits. Knowledge sharing strategies facilitate trust between staff and also provide a sense of satisfaction by contributing to the team. Knowledge sharing enhanced spread of good ideas and better communication".

".....Knowledge sharing strategies promotes knowledge growth through empowerment and development in the job, thus taking the library forward. Staff will grow in understanding personality and trends of current practices".

The findings revealed that senior management staff were very positive that knowledge sharing creates value in the organization, by leading to the creation of new knowledge gained through interaction. The senior management staff had the view that knowledge sharing improves library operations and when employees leave the organization they leave the knowledge within the organization.

5.4.7 Resources Available to Support Knowledge Sharing

Based on the SECI Model, knowledge sharing involves establishing an integrated effective knowledge sharing system where knowledge owned by individuals and groups should be accessible. Having an integrated system such as a knowledge repository or database allows employees to contribute their expertise electronically to the organization in a way that can be accessed by other employees (Connelly and Kelloway, 2003 and Nonaka and Takeuchi, 1995).

Question 17 of the interview schedule (see Appendix 3) sought the views of senior management about the infrastructure/resources available for knowledge sharing. The majority of the participants did not have resources available for knowledge sharing. One library director commented that:

> *".....We have no repositories for knowledge sharing but we have institutional repositories (IR) to keep theses, research articles and journals".*

The findings revealed that the university libraries surveyed in KwaZulu-Natal did not have ICT infrastructure that support knowledge sharing among library staff, although they did have open access repositories for academic research. University libraries lacked the infrastructure that promoted effective knowledge sharing within the organisation (Mayekiso, 2013).

5.4.8 Capacity Building Strategies in Place

A capacity building strategy guides and supports institutional development, by facilitating knowledge sharing and the transfer of skills among employees. One of the library directors in an interview said:

> *".....We have mentoring sessions on every Wednesday where someone with a particular skill provides training, for example on how to use the latest version of the email package".*

124

Mentoring programmes enabled staff to gain new skills and assisted them in building their confidence for knowledge sharing. The study indicated that at one of the university libraries surveyed there was a mentoring programme for library staff to share and acquire new skills and experiences.

5.5 Attitudes and Perceptions of Staff Towards Knowledge Sharing

The third research question was discussed as a subsidiary question in Chapter Three (see section 3.4). It sought to address the attitude and perception of library staff towards knowledge sharing. The broader objective was to assess the extent to which knowledge was shared in university libraries. Specific research questions covered the following aspects:

- Knowledge sharing as measured by attitudes and perceptions
- Perceived use of information technologies in sharing knowledge
- Skills and expertise for knowledge sharing.

5.5.1 Knowledge Sharing as Measured by Attitudes and Perceptions

Statements measuring attitudes and perceptions of library staff towards knowledge sharing are presented in section D, question 14 of the survey questionnaire (see Appendix 2). The summary of the statements are presented in Table 5.14.

Table 5.14: Attitudes and Perception of Staff towards KS

		Attitudes and Perceptions of staff statements								Latent Factor		
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Percentage Positive	Mean	SD	Coefficient	(Cronbach's Alpha)	% of Total Variation
14.1(N=102)	Frequency	24	39	22	6	11	16.7%	2.42	1.222	0.125		
	%	23.5%	38.2%	21.6%	5.9%	10.8%						
14.2(N=102)	Frequency	11	6	25	25	35	68.6%	3.66	1.301	0.401		
	%	10.8%	5.9%	24.5%	34.3%	34.3%						
14.3(N=102)	Frequency	16	7	28	22	29	50.0%	3.4	1.381	0.402	0.611	42.24%
	%	15.7%	6.9%	27.5%	21.6%	28.4%						
14.4(N=102)	Frequency	28	38	22	10	4	13.7%	2.25	1.087	0.080		
	%	27.5%	37.3%	21.6%	9.8%	3.9%						
14.5(N=102)	Frequency	17	10	17	28	30	56.9%	3.43	1.432	0.360		
	%	16.7%	9.8%	16.7%	27.5%	29.4%						

14.1: To me sharing knowledge with my co-worker is harmful

14.2: To me sharing knowledge with my co-workers is good

14.3: To me sharing knowledge with my co-workers is worthless

14.4: To me sharing knowledge with my co-workers is wise

14.5:To me, sharing knowledge with my co-workers is pleasant

Source: Field data (2014)

The mean scores of all the attitudes and perceptions of staff towards knowledge sharing statements are very close to the neutral score of 3. Those who thought sharing knowledge is good have the highest mean of 3.66 and the highest percentage (68.6%). From the responses given, 56.9% thought that sharing knowledge with co-workers is pleasant and 50.0% viewed knowledge sharing with co-workers as wise. However, 16.7% thought knowledge sharing with co-workers is harmful and 13.7% had a feeling that sharing knowledge with co-workers is worthless. Library staff in university libraries surveyed had a strong feeling that sharing knowledge could help them keep close ties with each other and increase their chances of unity.

Given that 39 (38.2%) of the respondents disagreed that knowledge sharing is harmful and another 24(23.5%) strongly disagreed that knowledge sharing with co-workers is worthless, the findings suggest respondents had strong feelings that knowledge sharing with co-workers is good. However, findings from the interviews with senior management on question 10 section D

revealed that it is not easy to change the attitude and perception of staff towards knowledge sharing. Senior management thought knowledge sharing in the university libraries must be driven by the management to influence staff to change their behaviour. This finding is supported by De Long (2008), who noted that it is not easy to change someone's behaviour and that can only be driven by implementing knowledge sharing strategies that are formal or informal that lead to a long-term culture change in an organization.

The items used to measure attitudes and perceptions towards knowledge sharing were reliable as shown by the questionnaire items in Table 5.14 and measured by the Cronbach's Alpha coefficient (Cronbach's Alpha=0.611) accounting for the total variation of 42.24%. This suggests that attitudes and perceptions are generally reliable measures of knowledge sharing, though the Cronbach's Alpha is not up to 0.7. According to Choudhuri (2012) the Cronbach Alpha values for up to 0.7 is the minimum accepted reliable and consistency measure. However, Cronbach Alpha values that meet the acceptable value of 0.61 are still considered reliable (Sekaran, 2000).

5.5.2 Perceived use of Information Technologies in Sharing Knowledge

One of the open-ended questions in the survey questionnaire (Appendix 2, question 15) required respondents to indicate how library staff perceived the use of information technology for knowledge sharing. The results in Fig 5.3 show perceived use of IT for knowledge sharing.
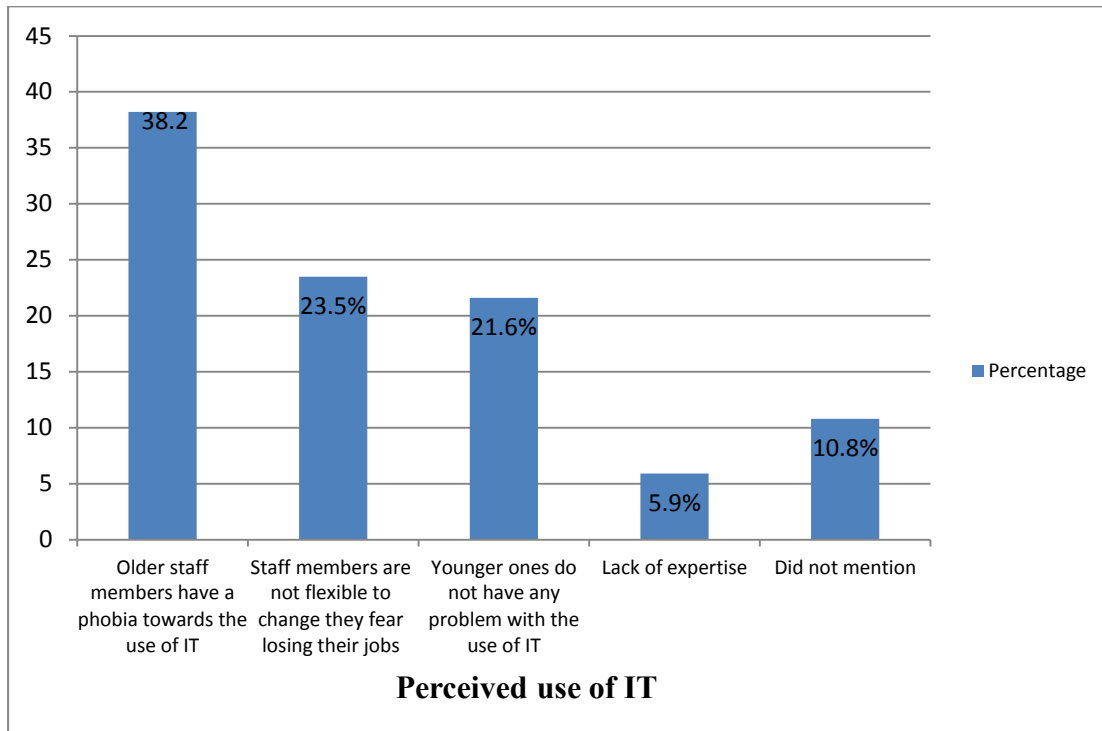
Figure 5.3: Perceived uses of Information Technologies for KS (N=102)
Source: Field data (2014)

The Knowledge Sharing Capability Model (Kim and Lee, 2006) on employee perceptions of the use of information technology (IT) asserts that the determinants of information technology on employees' intentions, or rejection of technology, affects employees' intentions to use, which might affect their attitude and perceptions of its usefulness. The researcher wanted to discover how library staff in university libraries in KwaZulu-Natal perceived the use of information technology as a knowledge sharing tool. From the responses given, 39(38.2%) indicated that older staff members had a phobia towards the use of information technology to share knowledge, 24(23.5%) indicated that staff members were resistance to change, while 22(21.6%) indicated that the youthful staff did not have any problem with the use of information technology, as they adapted to new changes very easily. The other 6(5.9%) indicated lack of skills in using information technology as a major problem, while 11(10.8%) did not respond. The findings indicated that, although technology plays a role in knowledge sharing, it does not guarantee knowledge sharing among library staff, especially the older staff.

5.5.3 Skills and Expertise for Knowledge Sharing

Statements discussing skills and expertise of library staff members towards knowledge sharing are presented in section D of the survey questionnaire (Appendix 2) (see question 16). Results showed that library staff did not share skills and expertise with one another, as reflected in Table 5.15, even though the mean score of all the statements are very close to 3, the required norm.

Table 5.15 Skills and Expertise for Knowledge sharing

		Skills and expertise for KS								Latent Factor		
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Percentage Positive	Mean	SD	Coefficient	Reliability (Cronbach's Alpha)	% of Total Variation
16.1: (N=102)	Frequency	32	18	12	20	11	33.3 %	2.57	1.448	0.275		
	%	34.4 %	19.4 %	12.9 %	21.5 %	11.8 %						
16.2: (N=99)	Frequency	25	15	16	28	15	43.5 %	2.93	1.437	0.287		
	%	25.3%	15.2 %	16.2 %	28.3 %	15.2 %					0.900	77.25%
16.3: (N=100)	Frequency	21	13	26	26	14	40.0 %	2.99	1.345	0.281		
	%	21.0 %	13.0 %	26.0 %	26.0 %	14.0 %						
16.4: (N=100)	Frequency	19	13	28	27	13	40.0 %	3.02	1.303	0.295		
	%	19.0 %	13.0 %	28.0 %	27.0 %	13.0 %						

16.1: I share classification and cataloguing skills about library materials with colleagues
16.2: I share knowledge and expertise on using online databases with my colleagues
16.3: My colleagues share with me new working skills they learn
16.4: My colleagues share new skills in library practices with me

Source: Field data (2014)

Those who said they shared knowledge and expertise using online databases with colleagues had the highest percentage (43.5%), with a mean score of 2.93. Forty percent 40.0% said that they shared new skills in library practices with colleagues, while another 40.0% indicated that they shared new working skills with colleagues. Only 33.3% revealed that they share classification and cataloguing skills with colleagues. The majority 32(34.4%) strongly

disagreed that they shared classification and cataloguing skills about library materials with colleagues, while 28(28.0%) were neutral concerning sharing new skills in library practices with colleagues. Overall, library staff in university libraries in KwaZulu-Natal seemed to be unwilling to share their skills with colleagues, reflected in Table 5.15. The findings also showed that university libraries in KwaZulu-Natal did not have knowledge sharing strategies in place to adequately address the need for employees to share their knowledge, skills and experiences. Items measuring skills and expertise were found to be very reliable and consistent measures of knowledge sharing, reflected by the internal consistency measured by the Cronbach's Alpha coefficient (Cronbach's Alpha=0.900). This highly reliable index (Cronbach's Alpha=0.900) accounted for the total variability of 77.25% in the four items that represent general knowledge sharing of skills, as presented in Table 5.15.

5.6 Factors Affecting Knowledge Sharing Among Library Staff

The fourth research question sought to understand the factors that affected knowledge sharing among library staff. The broader objective was to assess the extent to which knowledge sharing takes place in the university libraries surveyed. The research questions are addressed in the survey questionnaire (Appendix 2), interview schedule (Appendix 3) and observation checklist (Appendix 4). The findings are presented in the subsections 5.6.1 - 5.6.6 that cover aspects of:

- Organizational knowledge sharing
- Cultural aspects affecting knowledge sharing
- Challenges affecting knowledge sharing
- Organizational structure
- Factors influencing knowledge

5.6.1 Organizational Knowledge Sharing

The findings on organisational knowledge sharing from question 17 Section E of the survey questionnaire are presented in Table 5.16.

Table 5.16: Organizational Knowledge Sharing

		Organizational Knowledge Sharing statements								Latent Factor		
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Percentage Positive	Mean	SD	Coefficient	(Cronbach s Alpha)	% of Total Variation
17.1 (N=102)	Frequency	22	25	17	25	13	37.3%	2.82	1.36	0.231		
	%	21.6%	24.5%	16.7%	24.5%	12.7%						
17..2 (N=102)	Frequency	20	24	24	19	15	33.3%	2.85	1.34	0.228		
	%	19.6%	23.5%	23.5%	18.6%	14.7%						
17.3. (N=101)	Frequency	20	15	29	14	23	36.6%	3.05	1.42	0.233	0.929	78.42%
	%	19.8%	14.9%	28.7%	13.9%	22.8%						
17.4 (N=102)	Frequency	18	8	32	22	22	43.1%	3.22	1.35	0.236		
	%	17.6%	7.8%	31.4%	21.6%	21.6%						
17.5 (N=101)	Frequency	22	6	18	27	28	54.5%	3.33	1.49	0.199		
	%	21.8%	5.9%	17.8%	26.7%	27.7%						
17.1: There is knowledge sharing culture in my organization												
17.2: My colleagues share their working experience and knowledge in my library												
17.3: I communicate/share knowledge with my colleagues in teams or groups												
17.4: I share knowledge within the group if I know that the knowledge is helpful to members of the group												
17.5: I am willing to share knowledge with my colleagues												

Source: Field data (2014)

According to the KSC Model (Kim and Lee, 2006), a culture that promotes knowledge sharing in an organisation is vital because it allows for the creation of new knowledge gained from shared and existing knowledge. The survey findings show that, although a culture of knowledge sharing existed, the respondents were not very positive about their organisational culture as far as knowledge sharing is concerned. The results show that mean scores of all knowledge sharing statements are very close to the neutral score of 3. Individual willingness to share knowledge with colleagues was found the highest, with a mean of 3.33. The highest percentage of people who were positive that they share knowledge with colleagues was 54.5%. From the responses given, 43.1%, with a mean score of 3.22, noted they share knowledge if

they know such knowledge is helpful to members of the group. Only 37.3% were positive that there is a knowledge sharing culture in their organization, while 36.6% were confident that they communicate/share knowledge within teams or groups. One third (33.3%) believed that they share experiences of their work with colleagues.

The findings suggested that the level of knowledge sharing is generally low among library staff, as less than half of the respondents agreed or strongly agreed that they freely shared knowledge with other staff in the organisation. The results revealed that respondents were not even sure if knowledge sharing existed in the organization. This would imply that they did not practise knowledge sharing, despite the fact that they shared knowledge within groups or teams. The findings revealed lack of contact and interactions among knowledge sources and recipients. This may suggest that the respondents often did not work together, as the majority 32(31.4%) of respondents were neutral that they shared knowledge within the group if they knew that the knowledge was helpful to members of the groups. The latent factor or index (Cronbach's Alpha coefficient) that represents knowledge sharing in general was developed by combining the five items presented in Table 5.16. A value of Cronbach's Alpha of 0.929 accounted for 78.42% of the total variability in the five items that represent general knowledge sharing. This suggests very reliable and consistent measures of knowledge sharing, as reflected in Table 5.16**.**

5.6.2 Cultural Aspects Affecting Knowledge Sharing

The responses from library directors and other senior management staff corroborated the responses of other library staff, as presented in Table 5.16. All the eight participants interviewed agreed that age differences, race/ethnicity, values, beliefs and attitudes are major issues affecting knowledge sharing in university libraries. One senior member of staff summarised all the views of the senior management staff:

> *".....People with different cultural backgrounds view knowledge sharing differently. It is difficult to share knowledge or experiences with someone from a different race or*

ethnic group, for example when you are talking to a white person you have to look him or her straight in the eye that's a sign of respect but in other cultures you are not allowed to look your elders straight in the eye as this shows disrespect".

".....when you are a very junior staff it is very difficult to approach or share work related issues with top management".

The findings of the study revealed that different levels of staff in university libraries in KZN viewed knowledge sharing differently, for example the age difference, level of experience and position held affected knowledge sharing among library staff. Senior management were not prepared to share knowledge or exchange experiences with junior staff. This might be because they underestimated junior staff because they felt junior staff could not contribute meaningfully as they are inexperienced. It was noted that cultural backgrounds influenced knowledge sharing among library staff in universities. As a result, staff become reluctant to share knowledge when they find it difficult to get their message across. The findings showed that culture plays a role in the success of knowledge sharing as it defines relationships among individuals within organizations (Terra and Godorn, 2002).

5.6.3 Challenges Affecting Knowledge Sharing

In order to understand the challenges affecting knowledge sharing, senior management staff were asked to give their views on what they thought were the challenges affecting knowledge sharing among staff. The rest of the participants reported that staff viewed knowledge sharing as a strategy to retrench people. One senior manager commented that:

".....Before university mergers the library was dominated by the white people who were working as student assistants on the circulation and reserve section but soon after the mergers other racial groups started to be employed as well and all the white students left the library because they were not prepared to work with other racial groups".

The findings revealed that knowledge sharing in university libraries surveyed in KZN was affected by the integration of different cultures, which came as a result of merging of the universities. In an environment of mergers knowledge sharing becomes difficulty because employees view knowledge sharing with a different perception (Empson, 2001). This might probably be attributed to the fact that employees are not sure about their job security and the motive behind sharing, as suggested by Empson (2001), who feels that in the context of mergers employees resist knowledge sharing because of fear of exploitation and contamination and, as a result, knowledge sharing is hampered.

5.6.4 Organizational Structure

A statement addressing the organizational structure is presented in section E of the survey questionnaire (see Appendix 2 question 18 statement). In order to understand whether or not the organizational structure of the university libraries surveyed influenced knowledge sharing among library staff, respondents were asked to select from strongly disagree to strongly agree and indicate whether the structure of their organization was able to enhance knowledge sharing. The results are depicted in Table 5.17.

Table 5.17: Organizational Structure

Organizational Structure									
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Percentage Positive	Mean	SD
(N=101) Structure of the organization is rigid	Frequency	10	7	31	22	31	52.5%	3.56	1.268
	%	9.9%	6.9%	30.7%	21.8%	30.7%			

Source: Field data (2014)

All the respondents were very positive that their organizational structure is very rigid and did not facilitate knowledge sharing, as shown in Table 5.17, with a mean of 3.56 which is above the neutral score of 3 and percentage of respondents agreeing or strongly agreeing, at 52.5%.

134

There were 31(30.7%) respondents who were neutral, implying that a sizeable percentage of the respondents were not sure about the flexibility of their organisational structure to facilitate knowledge sharing, compared to 7(6.9%) who disagreed and 10(9.9%) strongly disagreed that the structure of their organization facilitated knowledge sharing. The findings were that the organizational structure of the university libraries surveyed was not flexible for knowledge sharing among staff.

Interviews conducted with all the senior management staff about the flexibility of their organisational structure to facilitate knowledge sharing established that the library mirrors the university structure, which is very formalised and hierarchical and therefore not suited for knowledge sharing. However, two senior management staff from two different universities reported that their organizational structure is neither hierarchical nor flat, as they would want it to be. From the observations (see observation check list in Appendix 4) conducted on the organisational structures of the universities under study, the researcher felt that rules, procedures and regulations served as barriers to knowledge creation. The researcher observed that a lot of protocols were followed before a decision was made. The management/leadership styles were seen as autocratic, that one cannot make a decision without the knowledge of the line manager. In more hierarchical organizations, top management restrict the free flow of information by restricting access to critical information to junior staff members (Kim and Lee, 2006). The KSC Model states clearly that organizational structures that are too centralised and formalised restrict access to information and, as a result, knowledge sharing is hampered because only top management has the power and ability to make decisions (Kim and Lee, 2006).

Correlation between Knowledge Sharing and other Constructs of KS

The Pearson correlation analysis was carried out to understand the relationships between knowledge sharing and other constructs of knowledge sharing as discussed in sections 5.4.1, 5.5.1, 5.5.2, 5.5.3 and 5.6.4 respectively. If the p-value sig. (2-tailed) is less than 5% (<0.05) it means that there is a significant relationship or effect between variables being compared. If the

p-value is greater than 0.05, this means there is no significant relationship between variables as indicated in table 5.18.

Table 5.18: Correlation between and KS other Constructs

Pearson Correlations		Knowledge Sharing Index	Preferred Channels of Knowledge Sharing	Attitudes and Perceptions of Staff (KS)
Preferred Channels of Knowledge Sharing	Correlation	0.251*		
	p-value	0.014		
	N	96		
Skills and Expertise	Correlation	0.165	0.369**	0.442**
	p-value	0.119	0.000	0.000
	N	90	90	92
structure of the organization is rigid	Correlation	0.076	0.060	0.135
	p-value	0.457	0.562	0.178
	N	99	97	101

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

In general, staff members did not value the use of ICTs (social networks, knowledge repositories and video conferencing) as channels of communication for the purpose of knowledge sharing of work-related activities (see Table 5.18). The Pearson correlation analysis shows that there is no significant relationship between preferred channels of KS and knowledge sharing, as shown by the correlation p-value sig. (0.251 to 0.014) on KS index. The respondents showed a positive attitude that they have the skills and expertise to use the preferred channels of communication, as shown by the p-value sig. (0.442 to 0.000). The results, however, showed the unwillingness of staff to share their skills and expertise, as shown by the p-value sig. (0.165 to 0.119) on skills and expertise.

The results from Pearson correlation analysis also show that there is no significant relationship between organizational structure and knowledge sharing, as indicated by the correlation p-value sig. (2-tailed 0.076 to 0.457), as shown in table 5.18. The organizational structures of the

university libraries in KwaZulu-Natal were found not to support knowledge sharing among staff.

5.6.5 Cultural Barriers to KS

Question 19 in section E of the survey questionnaire addressed cultural barriers to knowledge sharing among library staff. This variable was adapted from the Knowledge Sharing Capability Model (Kim and Lee, 2006) to discover if there are any barriers affecting knowledge sharing in the university libraries surveyed. The model asserts that, within organizations, there are cultural barriers which affect knowledge sharing, for example if people have different cultural backgrounds knowledge sharing is hampered. Respondents were asked to select as many cultural barriers as possible which they think affected knowledge sharing in their organization as shown (see Table 5.19).

Table 5.19: Cultural Barriers to KS (N=102)

Responses	Responded	Did not respond
Functional Silo	51 50.0%	51 50.0%
Lack of time	45 44.1%	57 55.9%
Not willing to share knowledge	56 54.9%	46 45.1%
Lack of trust	38 37.3%	64 62.7%
Knowledge sharing not a part of daily work	59 57.8%	43 42.2%
Lack of training	46 45.1%	56 54.9%
Gender differences	43 42.2%	59 57.8%
Differences in education	59 57.8%	43 42.2%
Beliefs, Norms and values	48 47.1%	54 52.9%

*Multiple responses

Source: Field Data (2014)

Of those who responded, a majority 59(57.8%) viewed educational differences as a barrier to knowledge sharing. In most instances educational level has an impact on individual willingness to share knowledge. The sharing of people's experiences is likely to be reduced if employees have different levels of education. Hence an individual with an educational background different from the rest of a team is less likely to participate in knowledge sharing (Keyes, 2008).

The thinking that knowledge sharing is not part of a respondent's daily work was viewed by 59(57.8%). Fort five (44.1%) of the respondents thought that lack of time was a barrier to knowledge sharing. Respondents thought that, because knowledge sharing is not included in their duties, sharing knowledge was not part of their work. The results suggested that some of the respondents resist sharing knowledge and that this might be attributed to lack of time, and lack of education (Lindsey, 2006, cited in Variant-Anna and Puspitasari, 2013). Variant-Anna and Puspitasari (2013) noted that time constraints and lack of education are often some of the reasons that deter people from sharing knowledge and deter some employees from having the confidence to speak in a forum. The results support similar findings where lack of time and lack of education were some of the main barriers that affected knowledge sharing in universities in Malaysia and public sectors (Ling, 2009; Jain, 2007 and Sandhu, Jain and Ahmad, 2011).

Functional silos in an organization often hinder individuals from sharing knowledge of work processes and this results in knowledge hoarding. The results showed that about half 51(50%) of the respondents thought that a functional silo is a barrier which affects knowledge sharing in their libraries and the other half 51(50%) did not respond, probably because they were unaware whether silos existed in their organizations or not. The survey indicated that 38(37.3%) of the respondents revealed lack of trust as an individual barrier affecting knowledge sharing. The majority 64(62.7%) did not respond, meaning that they were not aware about the level of trust in their organizations. However, interviews with senior management revealed that staff were not comfortable to share their knowledge because they did not trust each other. One senior manager said:

".....The main cause of lack of trust in my organization is the differences in personalities and relationships between colleagues. If you don't trust someone you can't share anything with that person because there is no guarantee of protection".

The participant thought that it is not secure to share knowledge unless rules to protect knowledge sharing exist in the organization. The survey also indicated that about 43(42.3%) viewed gender differences as a barrier affecting knowledge sharing, while 59(57.8%) did not respond. Nevertheless, from the t-test results in Table 5.22, it was revealed that there is a significant difference between men and women in their effort to share knowledge.

5.6.6 T-Tests for Cultural Barriers to Knowledge Sharing

The cultural barriers discussed in Table 5.19 were further tested using Levene's tests. The t-tests results are discussed in Tables 5.20-5.24 in Section 5.6.6. As reflected in the tables, the attributes (channels of communication and attitude and perception) were also used as dependent variables to show the extent to which the cultural barriers discussed in Table 5.19 affected knowledge sharing among library staff in university libraries. There are two groups to be compared; those who believe there are cultural barriers which affect knowledge sharing in their organization and those who believe such barriers do not exist. The two groups are compared using independent samples of t-tests as discussed in Section 5.4.3.

T-Tests for Functional Silo as a Barrier to Knowledge Sharing

The results in Table 5.20 show that those respondents who perceived a functional silo to be a barrier have significantly lower scores of knowledge sharing than those who said it is not a barrier.

Table 5.20: Functional Silo as a Barrier to KS

Group Statistics					Levene's Test for Equality of Variances		t-test for Equality of Means		
Dependent variable	Functional Silo is Barrier	N	Mean	Std. Dev	F	p-value	T	Df	p-value
Knowledge Sharing	Yes	50	2.99	1.26	0.642	0.425	-3.44	98	0.001**
	No	50	3.90	1.39					
Preferred Channels of Knowledge Sharing	Yes	49	3.19	1.24	4.985	**0.028***	-3.65	**93.85**	0.000**
	No	49	4.04	1.06					
Attitudes and Perceptions of Staff (KS)	Yes	51	4.33	1.33	0.951	0.332	-3.87	100	0.000**
	No	51	5.30	1.22					

ρ-value ≤ 0.05

The mean score of the general knowledge sharing index for those who perceived functional silos in their organisations (mean=2.99) as a barrier to knowledge sharing is lower than the mean score of those who do not (mean=3.90) and this difference in mean is significant (t=-3.44, df=98, p-value=0.001). All the factors attributed to a functional silo as hampering knowledge sharing are significant, as shown by p values which are in the range of acceptance level. The difference in mean is supported (ρ-value ≤ 0.05), as shown in the results in Table 5.20. Half of the respondents 51(50%) presented in table 5.19. said a functional silo was not a barrier affecting knowledge sharing. The t-test results confirmed that functional silo is a barrier affecting knowledge sharing among staff in university libraries surveyed in KZN.

T-tests Lack of Trust as Barrier to KS

T-test results confirmed that lack of trust was a barrier affecting knowledge sharing in university libraries, as shown in results in Table 5.21.

140

Table 5.21: Lack of Trust as a Barrier to KS

Group Statistics					Levene's Test for Equality of Variances		t-test for Equality of Means		
Dependent variable	Lack of Trust is a barrier	N	Mean	Std. Dev	F	p-value	T	df	p-value
Knowledge Sharing I	Yes	38	3.11	1.34	0.154	0.696	-1.93	98	0.05
	No	62	3.66	1.39					
Preferred Channels of Knowledge Sharing	Yes	37	3.38	1.14	0.109	0.742	-1.47	96.00	0.146
	No	61	3.76	1.26					
Attitudes and Perceptions of Staff (KS)	Yes	38	4.72	1.50	1.604	0.208	-0.55	100	0.587
	No	64	4.87	1.28					

ρ-value ≤ 0.05

Respondents who viewed lack of trust as a barrier to knowledge sharing had significantly lower scores (mean=3.11) to knowledge sharing than those who thought it is not a barrier to knowledge sharing (mean=3.66) and the difference in mean is significant (t=-1.93, df=98, p-value=0.05). The t-tests and interviews revealed that lack of trust was a barrier affecting knowledge sharing, even though majority 64(62.7%) from the survey questionnaire did not see it as a barrier to knowledge sharing, as shown in Table 5.19. The findings of the present study did not support the assumption that a high level of trust among employees positively influences employee knowledge sharing as suggested by the Knowledge Sharing Capability Model (Kim and Lee, 2006). However, in most instances, trust has been demonstrated to be an important predictor of knowledge sharing (Paliszkiewicz, 2011). Cabrera and Cabrera (2009) stressed that implementing knowledge sharing strategies such as designing work around teams, stimulates mutual trust and encourages staff members to share and exchange ideas.

T-tests Gender Differences

The empirical results show that gender differences affected the attitude and perceptions of staff towards knowledge sharing. The results are given in Table 5.22.

Table 5.22: Gender Differences

Group Statistics					Levene's Test for Equality of Variances		t-test for Equality of Means		
Dependent variable	Gender differences is are a barrier	N	Mean	Std. Dev	F	p-value	T	df	p-value
Knowledge Sharing	Yes	41	2.88	1.20	0.865	0.355	-3.62	98	0.000
	No	59	3.85	1.39					
Preferred Channels of Knowledge Sharing	Yes	42	3.51	1.30	1.083	0.301	-0.75	96.00	0.456
	No	56	3.69	1.17					
Attitudes and Perceptions of Staff (KS)	Yes	43	4.33	1.37	0.925	0.338	-3.22	100	0.002
	No	59	5.17	1.25					

ρ-value ≤ 0.05

Gender differences are shown by p-value of 0.000 on knowledge sharing index and a p-value of 0.002 on attitudes and perceptions of staff. Those respondents who thought gender differences are a barrier have significantly lower scores (mean=2.88) on knowledge sharing index than those who thought it is not a barrier (mean=3.85). The difference in mean is significant (-3.62, df 98, 0.000), meaning that gender differences affected the attitude and perceptions of staff towards knowledge sharing. A preferred channel of knowledge sharing is not supported as a factor affecting gender differences as shown by a p-value of 0.456. Therefore, the attitude and perception of staff towards knowledge sharing is possibly affected by gender differences. The findings revealed that there was a significant difference between gender and attitudes of staff towards knowledge sharing. The empirical findings supported the study by Miller and Karakowsky (2005), who established that there was a significant difference between men and women in their perception to seeking and sharing knowledge. Miller and Karakowsky (2005) noted that women were more willing to share tacit knowledge and they benefitted more in knowledge sharing with others than men. However, previous studies in terms of relationships have shown that there is no significant impact of gender and on knowledge sharing behaviour.

T-tests Differences in Education

The empirical results in Table 5.23 showed that differences in education as a barrier to knowledge sharing is affected by the attitude and perception of staff towards knowledge sharing.

Table 5.23: Differences in Education

Group Statistics					Levene's Test for Equality of Variances		t-test for Equality of Means		
Dependent variable	**Differences in education is a barrier**	N	Mean	Std. Dev	F	p-value	T	df	p-value
Knowledge Sharing	Yes	58	3.10	1.30	0.228	0.634	-3.02	98	0.003
	No	42	3.92	1.40					
Preferred Channels of Knowledge Sharing	Yes	59	3.54	1.17	0.147	0.702	-0.74	96.00	0.460
	No	39	3.73	1.31					
Attitudes and Perceptions of Staff (KS)	Yes	59	4.56	1.35	0.282	0.596	-2.32	100	0.002
	No	43	5.17	1.30					

ρ-value ≤ 0.05

Those who indicated that differences in education is a barrier to knowledge sharing score (mean=3.10) had a lower knowledge sharing index than those who said it is not a barrier (mean=3.92), as reflected in Table 5.23. The t-tests result revealed that the attitude and perception of staff towards knowledge sharing is probably affected by differences in education as well. The difference in mean is significant (t-3.32, 100df, 0.002). Alhammad, Al-Faori and Abu-Husan (2009) opine that levels of education do not affect knowledge sharing if mutual trust is built among employees. Knowledge sharing in terms of educational differences among staff in university libraries surveyed may possibly be caused by lack of trust among staff.

T-tests Beliefs, Norms and Values

Beliefs, norms and values are not significant variables supported by the knowledge sharing index and preferred channels of knowledge sharing, as indicated by the p-value of 0.035 on knowledge sharing and p-value of 0.847 on preferred channels of knowledge sharing, as shown in Table 5.24.

Table 5.24: Beliefs, Norms and Values

Group Statistics					Levene's Test for Equality of Variances		t-test for Equality of Means		
Dependent variable	Beliefs Norms and values are barriers	N	Mean	Std. Dev	F	p-value	T	df	p-value
Knowledge Sharing	Yes	47	3.13	1.38	0.061	0.805	-2.13	97	0.035
	No	52	3.72	1.37					
Preferred Channels of Knowledge Sharing	Yes	45	3.61	1.29	0.785	0.378	-0.19	95.00	0.847
	No	52	3.66	1.15					
Attitudes and Perceptions of Staff (KS)	Yes	48	4.40	1.40	2.573	0.112	-3.14	99	0.002
	No	53	5.22	1.20					

ρ-value ≤ 0.05

The results showed that attitude and perceptions of staff significantly affected their beliefs, norms and values towards knowledge sharing, as shown by the p-value of 0.002 obtained which is within the range of acceptance level depicted by results in Table 5.24. The empirical findings showed that the attitude and perception of library staff affected their motive to share knowledge. Sometimes individuals are not comfortable to share knowledge with colleagues who have different personalities from theirs.

5.6.7 Factors Influencing Knowledge Sharing

The question was addressed in the survey questionnaire in section E. In the interview schedule (Appendix 3), the question is addressed through research questions 14 and 15. Statements addressing factors influencing knowledge sharing are presented in question 19 of the survey

questionnaire (Appendix 2, section E) and also replicated in the interview schedule (see Appendix 3). Generally, respondents had mixed feelings about the factors that influenced knowledge sharing in their organizations. The mean scores of all the factors influencing KS are very close to the neutral score of 3 shown in Table 5.25.

Table 5.25: Factors Influencing Knowledge Sharing

		Factors which influencing KS								Latent Factor		
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Percentage Positive	Mean	SD	Coefficient	Reliability (Cronbach's Alpha)	% of Total Variation
19.1(N=102)	Frequency	9	13	23	38	19	55.9%			0.130		
	%	8.8%	12.7%	37.3%	37.3%	18.6%		3.44	1.191			
19.2(N=102)	Frequency	7	10	23	37	25	60.8%			0.164		
	%	6.9%	9.8%	22.5%	36.3%	24.5%		3.62	1.161			
19.3(N=102)	Frequency	7	7	29	31	28	57.9%			0.192		
		6.9%	6.9%	28.4%	30.4%	27.5%		3.65	1.157			
19.4(N=102)	Frequency	5	18	41	22	16	37.3%	3.25	1.078			
	%	4.9%	17.6%	40.2%	21.6%	15.7%				0.217		
19.5(N=100)	Frequency	2	14	32	34	18	52.0%	3.52	1.010	0.218		
	%	2.0%	14.0%	32.0%	34.0%	18.0%					0.773	34.39%
19.6 (N=102)	Frequency	5	13	36	34	14	47.0%	3.38	1.034	0.193		
	%	4.9%	12.7%	35.3%	33.3%	13.7%						
19.7(N=102)	Frequency	14	18	32	14	24	37.2%	3.16	1.340			
	%	13.7%	17.6%	31.4%	13.7%	23.5%				0.131		
19.8(N=102)	Frequency	10	25	38	18	11	28.4%	2.95	1.120	0.135		
	%	9.8%	24.5%	37.3%	17.6%	10.8%						
19.9(N=102)	Frequency	11	29	35	12	15	26.5%	2,91	1.195	0.161		
	%	10.8%	28.4%	34.3%	11.8%	14.7%						
19.10(N=102)	Frequency	11	28	39	12	12	23.6%	2.86	1.135	0.130		
	%	10.8%	27.5%	38.2%	11.8%	11.8%						

19.1: Inadequate or lack of opportunity for education and training

19.2: Lack of rewards and recognition systems that would motivate staff to share knowledge

19.3: Lack of formal and informal activities to cultivate culture of knowledge sharing in my library

19.4: There is general lack of mentoring sessions among colleagues in my library

19.5: There is lack of interaction between those who need knowledge and those who can provide knowledge

19.6: There is no system to identify the colleagues with whom I need to share my knowledge

19.7: Lack of resources

19.8: Physical work environment and layout of work areas restrict effective knowledge sharing in my workplace

19.9: Staff in my library do not share knowledge because of the fear of it being misused for taking unjust credit

19.10:Staff in my library do not share knowledge because of different cultural backgrounds

Source: Field data 2014

Lack of rewards and recognition systems that would motivate staff to share knowledge has the highest mean of 3.62 and the highest percentage of those who were positive (60.8%). Again, 57.9% felt that lack of formal and informal activities to cultivate a culture of knowledge sharing affects knowledge sharing in their library; 55.9% were very positive that inadequate or lack of opportunity for education and training negatively affected knowledge sharing in their library. Again, 52.0% viewed knowledge sharing as affected by lack of interaction between those who need knowledge and those who can provide knowledge.

The empirical findings revealed that lack of interaction with co-workers affects knowledge sharing. Many of the respondents were neutral on the factors influencing knowledge sharing suggesting that they were either agreeing or disagreeing with the statements provided. The results in Table 5.25 indicated that 39 (38.2%) were neutral that staff members do not share knowledge because of different cultural backgrounds. Thirty-eight (37.3%) either agreed or disagreed that the physical work environment and layout of work areas restrict effective knowledge sharing in their workplace. Whereas 36(35.3%) were not sure if there is a system to identify the colleagues with whom they needed to share knowledge. The other 35(34.3%) were neutral about knowledge sharing because of the fear that their knowledge would be misused for taking unjust credit. Overall, the results statistically show that all the 10 items in Table 5.25 used to measure factors influencing KS are valid and measure what they were supposed to measure. The instrument is reliable (with high consistencies of Cronbach Alpha coefficient 0.773, accounting for 34.39% of the total variability). Although the total variability seemed to be very low, the items used to measure factors influencing knowledge sharing were very reliable.

The results generally show that respondents were agreeing to the statements on the factors influencing knowledge sharing in university libraries. A majority 35(34.3%) of the respondents felt that sharing knowledge would benefit others at their own expense. The results indicated that university libraries did not have any strategies in place that motivated employees to share knowledge. This concurred with the views reported from interviews with the senior

management staff (see question 14). Below are some of the views of senior management staff and library directors:

> *".....We recognise their (staff) contributions formally in our meetings, no rewarding system yet".*

> *".....One of our staff members fought with human resources until they recognised and promoted her for the hard work she had done for the library".*

The findings showed that library staff in university libraries felt that they were not recognised or credited for their contribution to knowledge sharing. The KSC Model (Kim and Lee, 2006) suggested that the high levels of performance-based pay system and rewards motivated employee knowledge sharing behaviour. The respondents from the survey questionnaire (Appendix 2) felt that the infrastructure in university libraries does not support knowledge sharing as indicated by 36(35.3%) respondents who said there is no system to identify the colleagues with whom they needed to share knowledge. A question was asked on the support given by top management in promoting knowledge sharing. One library director summarised this:

> *".....Managers are not practising what they are preaching. They attend meetings so often and neglect to share with colleagues about what transpired".*

The findings revealed that there is a lack of proper management support in University Libraries in Kwazulu-Natal with regard to knowledge sharing. This view supports the thinking that top management staff in university libraries were not supportive to their co-workers as they were not willing to share knowledge with their junior staff. The present study reveal that senior management viewed knowledge as a source of power to keep their positions or they did not have time to share knowledge. These empirical findings concur with a study by Finestone and Snyman (2005), who established that, in most companies in South Africa, managers used different strategies in their leadership, because they viewed knowledge as an important source

of power in keeping their positions. Nevertheless, management has the capacity to influence staff by guiding and creating an atmosphere which encourages knowledge sharing, if only there are strategies such as performance management system in place.

5.6.8 Contributions of Knowledge Sharing Towards Staff Development

Statements addressing contributions of staff development to knowledge sharing are presented in section E of question 21 of the survey questionnaire. The responses in Table 5.26 show that respondents were positive that knowledge sharing contributes to staff development.

Table 5.26: Contribution of KS to Staff Development

| | | Contribution of KS towards staff development | | | | | | | | Latent Factor | | |
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Percentage Positive	Mean	SD	Coefficient	Reliability (Cronbach's Alpha)	% of Total Variation
21:1 (N=99)	Frequency	5	11	21	43	19	62.6%			0.238		
	%	5.9%	11.1%	21.2%	43.4%	19.2%		3.61	1.077			
21.2:(N=99)	Frequency	9	10	25	38	17	55.6%	3.44	1.163	0.231		
	%	9.1%	10.1%	25.3%	38.4%	17.2%						
21:3 (N=99)	Frequency	5	6	23	37	28	65.7%			0.253	0.896	71.00%
	%	5.1%	6.1%	23.5%	37.4%	28.3%		3.78	1.084			
21:4 (N=99)	Frequency	5	5	20	37	32	69.7%			0.241		
	%	5.1%	5.1%	20.2%	37.4%	32.3%		3.87	1.085			
21:5(N=97)	Frequency	8	6	22	32	29	62.9%			0.223		
	%	8.2%	6.2%	22.7%	33.0%	29.9%		3.7	1.2			
21.2: KS emphasise awareness of the goals and mission of the library												
21.3: Knowledge sharing improves quality of staff												
21.4: Knowledge sharing keeps staff up-to-date with current trends												
21.5: Knowledge sharing retains individual knowledge through codification of tacit knowledge												

Source: Field Data (2014)

The mean scores of all knowledge sharing statements are very close to the neutral score of 3. Knowledge sharing keeping staff up-to-date with current trends has the highest mean of 3.87% and the highest percentage (69.7%) of people who were positive about the statement. Sixty-five (65.7%) stressed that knowledge sharing improves quality of staff, 62.9% noted knowledge

sharing retains individual knowledge for the organisation through codification of tacit knowledge, while 62.6% had the view that knowledge sharing supports staff development. Moreover, 55.6% were of the view that knowledge sharing creates staff awareness of the goals and mission of the library. The survey findings indicated that the respondents were well aware of the benefits of KS, as demonstrated by results in Table 5.26.

Library staff believed that knowledge sharing improves their performance by gaining new knowledge and experiences from external sources. Respondents were very positive that if there are strategies to encourage knowledge sharing, as indicated in Table 5.26, this might contribute to the development of their organization. For example, staff had the strong view that knowledge sharing helps the retention of individual knowledge through codification of tacit knowledge. Supported by the respondents' positive responses it is believed that staff development can be a powerful knowledge sharing strategy among library staff in University Libraries in KwaZulu-Natal. Knowledge sharing is measured by five items (see Table 5.26). The latent factor index showing Cronbach's Alpha scale measuring the 5 items was found to be highly reliable, as shown by Cronbach Alpha of 0.896 accounting for the total variation of 71.00%. This means that these variables are very reliable as measures of contribution of knowledge sharing towards staff development.

5.6.9 Implications of Staffing and Budgets on Knowledge Sharing

One of the interview questions required library directors to give their views on the influence of staffing and budgets on knowledge sharing (see question 15. Library directors reported that if knowledge is shared among staff there is a reduction in workload and services are not compromised. One library director commented that:

> *".....libraries survive on dwindling budgets, staff viewed knowledge sharing as a way of retrenching and exploitation of staff, especially in merging universities and as such they hold back their knowledge."*

In most cases, university libraries suffer from shrinkage of budgets and skilled human resources because staff are looking for better prospects. Knowledge sharing can be seen as a strategy to downsize the number of staff or restructuring to reduce budgets. As a result, staff resist sharing knowledge (Jain, 2012). This view is supported by Keong and Al-Hawamdeh (2002), who reason that knowledge is viewed as a valuable resource. Making knowledge public may be seen as giving away power, especially during times of restructuring. A further interview session was conducted with another library director who commented:

> *".....If you share knowledge especially when you are about to retire you cannot be superannuated".*

The findings revealed that age, retirement and positions held affect knowledge sharing among library staff in universities, because staff were looking forward to retaining their positions after retirement. This kind of thinking has a negative effect on knowledge sharing behaviour among library staff, because they think that if they share knowledge they are giving away their power prior to retirement. The researcher reviewed documents (see document review Appendix 5) on university websites and found that, in some of the universities there were policies which talk about superannuation, where employees are given an extended period of working after retirement depending on their productivity. Hence knowledge lost through restructuring or retirement requires recreation through implementing knowledge sharing strategies. In view of the aforementioned, Wamundila and Ngulube (2011); Durst and Wilhelm (2012) agreed that implementing appropriate knowledge sharing strategies would avoid knowledge loss through retrenchment and retirement.

Question 16 in the interview schedule asked library directors and senior management what they think were the possible effects of losing staff or experts. Senior management views are summarised:

> *".....Because of high staff turnover, it is a challenge, because knowledge is not documented and there are no repositories to refer to what has been done. It would have*

been ideal for someone to get in and be mentored so that there is smooth transition of power and transfer of skills". .

".....Most of the posts in the library were frozen for a period of three years and we depend on hiring specialists (systems librarian)".

It was reported that the recruitment process is cumbersome and protracted and this affects service delivery. The senior management staff were of the opinion that high staff turnover was affecting library operations and recruiting was not an easy task. The findings of the study established that university libraries had frozen posts for a longer period due to budgetary constraints. These findings revealed that University Libraries in KwaZulu-Natal were facing a challenge of high staff turnover. If an employee left the organization he or she would most likely not be replaced. The findings showed that university libraries in KZN province were also losing experts due to the brain drain. Gold and Arvind-Malhotra (2001) noted that the highest percentage of the organization's knowledge is stored in employees' heads and not shared. When employees retire or change jobs they take with them valuable experiences and skills.

5.6.10 Communication Between and Within Departments

In a working environment, open communication is a fundamental tool to encourage knowledge sharing among employees. It forms part of a strategy through which employees freely exchange and share experiences and ideas. Office layout and design makes communication transparent. The layout of space for staff to meet informally is important to encourage exchange of ideas and knowledge sharing (Soliman and Spooner, 2000:340).

One of the items on the observation check list was to observe whether or not the office layout in university libraries allowed for open communication among departments. The researcher observed that there was no open communication between library departments of all the universities surveyed in KZN. The offices were not designed in such a way that employees could communicate openly. Staff made phone calls if they wanted to engage with other staff in

the organisation and sometimes those who worked in the offices upstairs were walked down to meet other staff who worked in the offices downstairs.

5.6.11 Ways to Improve Knowledge Sharing

In the open-ended questions of the survey questionnaire (see question 22), respondents were asked to give their opinions on what they think must be done to improve knowledge sharing in their libraries. The results given are indicated in Fig 5.3
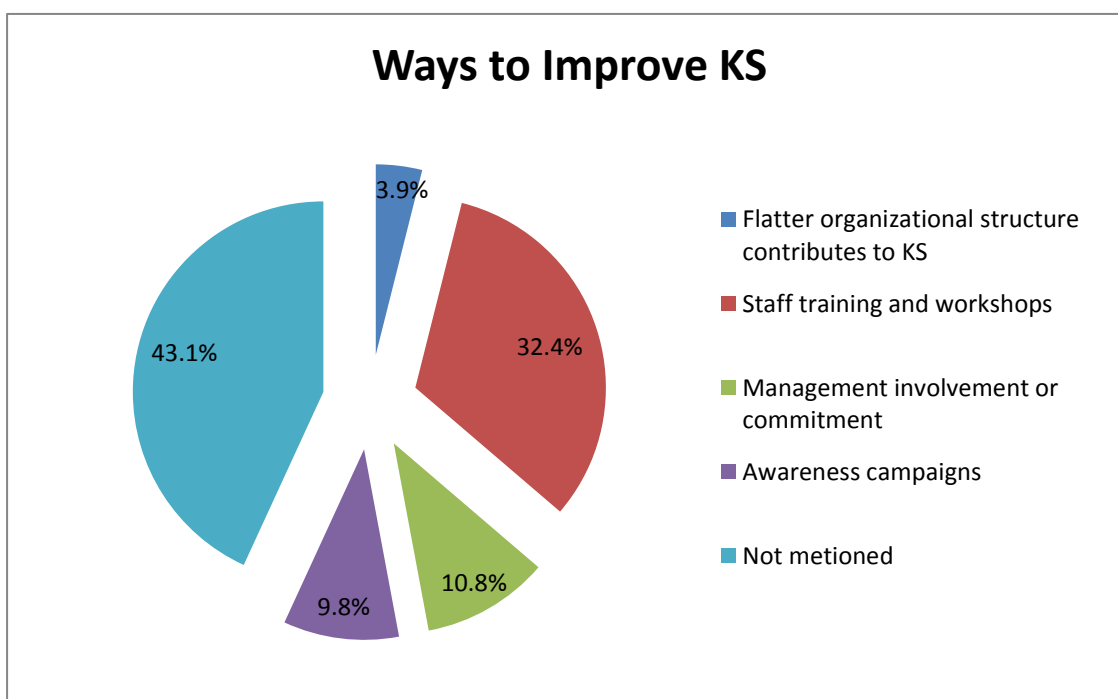
Figure 5.4: Views on Ways of Improving Knowledge Sharing (N=102)

From the responses obtained 4(3.9%) indicated that library staff needed flatter organizational structures which allow for free flow of communication, 11(10.8%) stressed that management involvement or commitment improves knowledge sharing among staff,. 33(32.4%) specified that staff training and workshops improve knowledge sharing among staff members and the

other 10(9.8%) emphasized regular meetings and better communication, while 44(43.1%) did not respond. In question 22 of the questionnaire a respondent expressed this sentiment:

".....In view of the organization (library) being the forerunner of the information arena it is imperative that knowledge sharing is part of the key performance areas (KPAs)".

The participant thought that knowledge sharing should be considered one of the core functions of libraries and should be included in the library's policies. In question 23 of the questionnaire respondents were asked to give any other comments concerning knowledge sharing among library staff. One respondent commented:

".....This study is important in the field of librarianship especially when the world is rapidly progressing to the information age, knowledge sharing is particularly important in creating sustainable libraries".

These findings revealed that library staff thought that they needed to divorce themselves from the view that they are gatekeepers of information and become gate openers of knowledge through knowledge sharing and having policies which encourage knowledge sharing. The views from the interviews with senior management staff on the same question (see question 16) were collectively summarised as follows:

- The library should implement a succession plan to retain knowledge within the organization
- Adequate budgets should be provided for training and conferences
- Need to address cultural issues (understand the benefit and value of KS both at individual level and organizational level)
- Implement a performance management system to encourage knowledge sharing
- Staff needs to acquire competencies and skills such as mentoring skills, networking skills and facilitation skills to improve their knowledge sharing.

Senior management and other library staff felt that knowledge sharing can only be accomplished if there are strategies/mechanisms put in place to motivate staff to share

knowledge. They also thought that acquiring skills through staff development would improve their knowledge sharing. Senior management staff felt that if university libraries can make succession planning a priority, knowledge can be retained within the organization, either through codification of tacit knowledge or planning for an average number of skilled employees to cover retirements, deaths and any new positions which may be created in future organization plans. The findings concur with Topper's (2011) study on succession planning in libraries in the U.S.A, which found that many libraries were making succession planning a priority of human resource management strategy to retain individuals' knowledge through codification and sharing of tacit knowledge.

5.12 Summary of Findings

Chapter Five dealt with the data analysis and presentation of findings from the survey questionnaire, interviews, observations and document reviews. The data analysis and presentation of findings were presented based on the themes and research questions, as discussed in section 5.1. Most of the survey questionnaire items used to measure knowledge sharing in university libraries in KwaZulu-Natal were found to be highly reliable, as measured by the Cronbach's Alpha scale. Quantitative data were analysed using descriptive statics, Pearson correlation analysis and t-tests, to discover the relationship among variables. Data from interviews, observations and document review were analysed using thematic analysis. Although demographic profiling was not part of the study it was necessary to understand the demographic profile of respondents with reference to knowledge sharing among library staff in the universities surveyed. According to the KSC Model these variables act as controlling variables that influence knowledge sharing behaviour among employees. Generally, working experience, age, positions held and educational differences were found to be significantly affected knowledge sharing among staff in the University Libraries in KwaZulu-Nata Province.

The findings revealed that, although the vision and goals were visible, not all the staff knew what they meant. Visions and goals of the university libraries in KwaZulu-Natal were not clearly communicated to all members of staff. Out of four the universities surveyed three did not have a policy on knowledge management. The findings showed that progress had been

made at a university, where a policy on how to use a SharePoint was developed. Respondents indicated that the level of knowledge sharing was generally low among employees in university libraries. They felt that library staff did not share knowledge because of the reasons indicated in Table 5.16. The study revealed that, although library staff in University Libraries in KwaZulu-Natal are increasingly using channels of communication such as social networks, they were not used specifically to share knowledge of work-related issues. The t-test results showed that social networking technologies were not used as knowledge sharing channels. The findings were that knowledge sharing among library staff can only be driven if there are strategies/mechanisms put in place to motivate staff to share knowledge.

It was found that staff, especially older staff, had a negative attitude towards the use of ICTs for knowledge sharing purposes. The empirical findings from both the interviews and survey questionnaire revealed that there were no reward systems or strategies in place to recognise those who have contributed knowledge. The organizational culture and organizational structure of the university libraries surveyed did not support knowledge sharing among library staff members. The interviews showed that lack of trust among library staff negatively affected knowledge sharing. It was revealed that cultural backgrounds, to some extent, were influencing knowledge sharing among library staff, especially racial differences. Integration of different cultures through mergers of universities brought about different expectations and uncertainty among library staff and knowledge sharing was seen as a way of exploiting staff or downsizing the number of staff.

The results from the Pearson correlation analysis indicated that there is no significant relationship between organizational structure and knowledge sharing (see section 5.6.4). The questionnaire and observation revealed that organizational structure was too rigid to facilitate knowledge sharing. The empirical findings of the study were that the management or leadership styles in university libraries surveyed were not supporting knowledge sharing. Chapter Six discusses and interprets the results.

CHAPTER SIX

DISCUSSION OF FINDINGS

6.1 Introduction

In doctoral research, the chapter concerning the discussion of findings provides a deeper understanding of the data gathered in relation to the supporting theory, the research problem, the research questions and what has emerged from the findings (Barker, 1988; Depoy and Gitlin, 1998). The discussion of findings is considered the essence of research and the analytical process in which the researcher develops an understanding of the data obtained (Leedy and Ormrod, 2005). The study sought to address the overarching question: what is the extent of knowledge sharing in University Libraries in KwaZulu-Natal (KZN)? The universities that were surveyed include the Durban University of Technology (DUT), the University of KwaZulu-Natal (UKZN), the Mangosuthu University of Technology (MUT) and the University of Zululand (UNIZULU).

The following research questions were addressed:

(1) What is the extent of knowledge sharing in University Libraries in KwaZulu-Natal Province?

(2) What strategies are available for knowledge sharing among library staff in a university?

(3) What is the attitude and perception of library staff towards knowledge sharing?

(4) What factors affect knowledge sharing among library staff?

The study was underpinned by the Knowledge Sharing Capability Model (KSC) (Kim and Lee, 2006) and the SECI Model of Knowledge creation (Nonaka and Takeuchi, 1995). Data were collected through a survey questionnaire, an interview schedule, observations, document analysis and a literature review. The framework used in organizing this chapter is the research questions and broader issues concerning the research problem, which included: knowledge sharing, knowledge sharing strategies, attitude and perception, organizational culture, organizational structure and factors influencing knowledge sharing.

156

Descriptive statistics, including frequency distribution, percentage, mean and standard deviations, were used to analyse quantitative data. Pearson correlation analysis was used to present correlations among variables. The Cronbach's Alpha scale was used to measure the internal consistent and reliability of items on knowledge sharing among library staff in the institutions surveyed. From the quantitative data, attitudes and perception of library staff towards knowledge sharing and their preferred channels of communication were assessed using the Levene's t-test. Qualitative data were analysed thematically and presented using thematic categorisation derived from content analysis of the data.

6.2 Demographic Profile

Demographic profiling was not part of the study objectives, but it was important to discuss the profiles of library staff since they are known to affect knowledge sharing (Kim and Lee, 2006). It revealed that demographic profiles such as positions held, age and experience were affecting knowledge sharing among library staff in universities. The interviews indicated that, although senior management believed knowledge sharing reduced the workload, they also felt that it was a form of exploitation to give away their accumulated knowledge gained over the years (see section 5.6.9). Staff viewed knowledge sharing as a way of giving away their experiences, skills and knowledge. Senior management had the perception that if they shared knowledge prior to retirement they could not be superannuated because they would have given away their skills and experience that justified the retention of their positions. Findings from the documents reviewed on university websites indicated that universities surveyed had policies on phased retirement (superannuation), which gave employees an extended period of working after retirement, based on exceptional skills and productivity.

Consistent with the findings, extant literature indicates that in situations where the retirement of staff is identified as a driver for knowledge loss, knowledge sharing is viewed as a threat to job security (Davenport and Prusak, 1998; Keong and Al-Hawamdeh, 2002; Rubenstein and Geisler, 2003 and Hall, 2012). The survey findings suggest that working experience and age affected knowledge sharing among staff. Staff that had stayed with the organization up to the

age of retirement were inclined to hoard their knowledge, to keep their positions. The findings further revealed that lack of knowledge sharing strategies was making it difficult to access tacit knowledge in university libraries in KZN.

6.3 Knowledge Sharing in University Libraries

The purpose of the study was to investigate knowledge sharing strategies available in university libraries in the KZN province of South Africa. The first research question sought to understand the extent to which knowledge was shared in University Libraries in KZN. Findings from both the interviews and survey questionnaire (see section 5.3.3) revealed that university libraries were involved actively in acquiring and generating knowledge. Knowledge sharing in university libraries took place through staff training and development, attending conferences, seminars and brainstorming etc. Knowledge sharing in this regard ensures staff gains new insights into current trends and practices (Variant-Anna and Puspitasari, 2013). Staff training and development are essential strategies for knowledge sharing to improve organisational performance and acquisition of skills (Rowold, 2007; Vermeulen, 2002 and Shepherd, 2010). According to SECI Model (Nonaka and Takeuchi, 1995), knowledge generated and acquired using different approaches such as attending workshops, seminars and conferences can be shared collectively via an integrated system such as a repository, as well as through a knowledge management system (KMS) (Nonaka and Takeuchi, 1995). Information obtained both from the survey and interviews showed that the highest percentage, 48(47.1%) of the respondents (Fig 5.1) agreed that they acquired new knowledge through seminars, workshops, attending conferences and networking. However, the majority of respondents from the survey questionnaire and the interview seemed not to agree that knowledge that was acquired was subsequently shared among staff.

Forty-four (44.4%) of the respondents (Table 5.5) either agreed or disagreed that knowledge acquired was subsequently shared. Fewer than half of the respondents, 37(37.4%), as shown in Table 5.5, with an average mean score of 3.23, were positive that the knowledge generated and acquired within their organization was shared amongst staff. Supported by the findings of

Probst, Raub and Romhadt (2000), it was established that knowledge acquired was not shared and most university libraries were finding it difficult to retain knowledge, since many experts frequently left to take jobs elsewhere. As a result, valuable knowledge, especially of a tacit nature was often lost because such knowledge was held in people's heads but not shared. However, findings from the interviews revealed that, at one of the universities surveyed, staff posted their views on a SharePoint tool and there was an innovation committee which continuously scanned the horizon and updated staff on what was happening. These findings showed that library staff were able to gain operational knowledge through exposure and contribution of knowledge to a SharePoint tool. Given these results, one could argue that progress had been made at one of the University Libraries in KwaZulu-Natal, where staff shared knowledge amongst themselves using the SharePoint tool. Around the world, university libraries in Western countries are reportedly implementing knowledge management programmes and knowledge management systems such as SharePoint tools to improve knowledge sharing among academic staff (Dankert and Dempsey, 2002 and Jantz, 2001).

The KSC Model (Kim and Lee, 2006) posits that a clear understanding of the goals and vision of the organization leads to the generation of a clear organizational purpose that assists in goal achievement and knowledge sharing. A shared vision stimulates a sense of involvement and contribution and makes it possible for staff to understand and be aware of the future of their organization (Giesecke and McNeil, 2004 and Kanter, Stein and Jock, 1992). The findings confirmed that there was lack of awareness about goals and visions of the university libraries among employees, because such visions and missions were not clearly communicated and shared.

Senior management staff revealed that, although the visions and goals were posted on university websites not all staff had a clear understanding of what they meant. With regard to knowledge sharing, the results revealed that top management were not encouraging knowledge sharing within the organizations. There were no strategies in place that could allow knowledge sharing to take place among staff in university libraries. According to KSC Model (Kim and Lee, 2006), top management has the power to influence KS among employees through

recognition and support for those who have contributed knowledge to the organization. It is evident from the empirical findings that top management develop or implement appropriate strategies to overcome obstacles that impede knowledge sharing among staff in university libraries.

6.4 Strategies Available for Knowledge Sharing

The second research question sought to address the strategies available to promote knowledge sharing in university libraries. According to Nonaka and Takeuchi (1995) SECI Model, well-established IT infrastructure such as knowledge management systems (databases and repositories) enable staff to share tacit knowledge and to have ready access to the organization's codified knowledge. In order to understand the strategies available to promote knowledge sharing among staff it was necessary to understand the different forms and channels used for communication in university libraries (see sections 5.4.1-5.4.2).

6.4.1 Social Networks

The Knowledge Sharing Capability Model (Kim and Lee, 2006) stipulates that when clearly designated channels of communication exist in organizations, individuals tend to rely more on informal relationships for knowledge sharing purposes. Social networks as strategies for knowledge sharing are some of the most common tools of Web 2.0 technologies that support informal relationships through collaboration, knowledge sharing, interaction and communication among users from different places (Balubaid, 2013). Internet, particularly Web 2.0, has dramatically changed the ways people locate and share knowledge in an organization. Web 2.0 technologies engage library staff and users in a two way communication, thus enhancing knowledge sharing. For instance, through Web 2.0 the library can deliver services to users via the university website, instead of users physically visiting the library (Casey and Savastinuk, 2006). Previous studies have shown that the most widely used Web 2.0 tools in university libraries are community of practice social networking sites (e.g. Facebook and Twitter), blogs and Really Simple Syndication (RSS) feeds. Telephones and teleconferencing

are reported to be the second most used technologies for sharing tacit knowledge among users, within and outside the library (Nazim, Mukherjee and Hindu, 2012 and Kim and Abbas, 2010).

Facebook, for example, allows the creation of groups discussing library activities through wall posting of such activities, while Twitter allows libraries and librarians to disseminate and share knowledge with users (Munigala, 2014). Generally, social networks offer a greater opportunity for library staff to gather and share knowledge through interaction with one another (O'Dell, 2010). Munigala (2014), in a study of Twitter usage by librarians and libraries in India, showed that librarians were making attempts to leverage Twitter to share knowledge with colleagues, both outside and inside the organizations. The findings in the current study revealed that, although channels of communication existed in university libraries surveyed, they were not used to exchange ideas and experiences that were work related. The findings further revealed that these social networks were not used for the purpose of sharing work related knowledge. Twenty-six of the respondents (26.6%), as shown in Table 5.6, were positive that they used social networks, with thirty-one (31.6%) either agreeing or disagreeing that they used social networks for the purpose of knowledge sharing.

The findings seem to agree with previous studies conducted in university libraries in Africa in countries such as South Africa, Botswana and Kenya, among others which found that, although staff displayed a high level of awareness of the use of Facebook and Twitter, their usage in sharing library work related activities was very low (Ram, Anbu and Kataria 2011; Jain, 1998; Jacobson, 2011; and Makori, 2011). The use of social networks for the purpose of knowledge sharing of work related activities in University Libraries in KwaZulu-Natal were not evident from the results. The findings revealed that social networks were however frequently used for social activities. Reiterating the same point Stafford and Mearns (2009) opined that in most organizations employees abuse the use of social networks for social purposes, rather than for organizational knowledge sharing.

Social networks are often built into communities of practice to facilitate communication and leverage knowledge flows through the exchange of ideas and experiences (Cabrera and Cabrera, 2005). McDermott and O'Dell (2001) believe that Cops is one of the mediums through which knowledge is shared in university libraries. Keong and Al-Hawamdeh (2002) assert that Cops exists as formal or informal groupings of people who voluntarily share similar interests and goals. Cops enable organizations to tap into knowledge that is generated and held collectively. The findings established that only 47(46.5%) of the respondents (see Table 5.7) agreed that they used Cops for knowledge sharing. Comparatively Buckley and Giannakopoulos (2011) in their study on sharing knowledge among academics in universities found that academics were unwilling to share knowledge using Cops because they felt that such process was very complex.

6.4.2 Video Conferencing

Only 19(19.0%) of the respondents used videoconferencing for knowledge sharing (see Table 5.6) and indicated that they used this medium to share knowledge with co-workers. Another 32(32.0%) were neutral, implying that they either agreed or disagreed with the statement that they used videoconferencing for sharing knowledge. Videoconferencing allows people who are geographically dispersed to share knowledge at the same time. Videoconferencing interactions such as gestures can be evaluated through unspoken feedback, such as facial expressions (Gibson and Cohen, 2003). In using videoconferencing, participants need some training to be able to operate the system. The system requires a huge investment which, in most cases, is beyond the reach of many university libraries (Gibson and Cohen, 2003; Nazim Mukherjee and Hindu 2012). Evidence from the study confirmed that videoconferencing as a knowledge sharing tool was utilised in university libraries surveyed to a limited extent. The reason for low use of videoconferencing in university libraries in KZN was attributed to budget shortfalls, since video conferencing requires a huge investment. The lack of training and skills to operate the system was also cited as another reason library staff did not show much interest in using videoconferencing as a channel for knowledge sharing. Lack of confidence might also be

attributed to lack of interest among library staff in using videoconferencing as a channel to share knowledge due to lack of skills in using such tools (Hassandoust and Kazerouni, 2011).

6.4.3 Storytelling

A study conducted by Kim and Lee (2006), found that, even when clearly designated channels of communication existed, individuals tended to rely more on informal relationships for communication, such as storytelling. Storytelling as an informal channel for knowledge sharing among staff is useful in preserving the organizational knowledge and revealing how things work within the library. The main idea behind storytelling is to share feedback from the team and encourage team-building (Keong and Al-Hawamdeh, 2002:50). Wijetunge (2012) stressed that stories are powerful channels of informal communication that could be used to share tacit knowledge by enabling staff to learn from other staff's experiences. Bhardwaj and Monin (2006) established that tacit knowledge shared via stories shaped the knowledge base in knowledge-intensive companies by sharing and retaining tacit knowledge of retiring workers.

The KSC Model (Kim and Lee, 2006) confirmed that informal channels of communication such as storytelling give employees an opportunity to interact and share experiences of work related activities. The current study revealed that staff in university libraries surveyed reported not using storytelling as an informal channel to share and exchange ideas and feedback. Twenty respondents (20.0%) (see results in Table 5.6) indicated that they were comfortable sharing knowledge through storytelling with co-workers. The findings contradict those of Wijetunge (2012) on the application of organisational stories as a management tool to share tacit knowledge within the library setting. Wijetunge revealed that stories were used to share the experience and knowledge of other librarians about the issues of which they had no experience.

Khalid and Mahmood's (2008) study of understanding the perception of employees in public sectors on the usage of stories to share tacit knowledge in Malaysia revealed that stories were mainly used in sharing work-related experiences in the organization. However, research seems

163

to show inconsistent results on storytelling as an informal channel for knowledge sharing. For example, Azudin, Ismail and Taherali (2009) revealed that less experienced, younger workers reported engaging in more informal knowledge sharing, while more experienced, older workers were less likely to engage in informal knowledge sharing activities because of the view that stories shared informally were less embedded in work- related activities. The findings revealed a lack of understanding and unfamiliarity with the concept of storytelling as a knowledge sharing tool among library staff in universities in KZN. The findings seemed to suggest that storytelling as an informal channel for knowledge sharing was lacking in university libraries.

6.4.4 Coffee Room Discussions and Departmental Meetings

Besides storytelling, coffee room discussions and departmental meetings can be used as informal spaces for interaction that provide a stimulating environment which leads to the creation and exchange of innovative ideas through interaction. The observations revealed that, although coffee room discussions and departmental meetings existed in university libraries, they were not used to share work-related knowledge, but staff viewed them as avenues for improving their relationships with colleagues. The findings agreed with Lee's (2007) suggestion that many university libraries are putting in place knowledge sharing facilities such as coffee shops, computer labs and Web 2.0 technologies, to give employees an opportunity to exchange and share ideas to improve relationships. Further analysis of the t-test results revealed that coffee room discussions and departmental meetings as spaces for knowledge sharing were not significant as shown in Table 5.8 and 5.11.

6.4.5 Strategies for KS

Besides the channels of communication, the strategies that are commonly used to enhance KS focus mainly on capacity building. Such strategies must be formalised. A library that does not have formal knowledge sharing strategies in place fails to influence its staff's intellectual capital for new innovation and creativity (Holsapple, 2003; Nonaka and Takeuchi, 1995). The SECI Model of Knowledge Creation (Nonaka and Takeuchi, 1995) asserts that strategies such

as a performance evaluation, mentorship programmes, staff development, job rotation and enabling IT infrastructure help in retaining existing knowledge in an organization. The findings of the current study revealed that staff in the university libraries surveyed were positive that if top management encouraged and supported knowledge sharing, staff would be inclined to share knowledge. This thinking was shared by the majority 78(76.8%) of the respondents, with the highest mean score being 4.11 (see Table 5.13). Haque and Anwar (2012a) confirmed that management support enhances trust among staff in creating and sharing knowledge by motivating staff to share knowledge.

Part of the literature revealed that top management support influences knowledge sharing using various strategies such as inspiring, mentoring, setting examples, creating mutual trust, respecting, listening, learning and training (Nonaka and Takeuchi, 1995; Holsapple, 2003; Li Chang, Mirmirani and Ilacqua, 2009). Top management support affects the level and quality of knowledge sharing through influencing employee commitment to share their knowledge (Wang and Noe, 2010). The findings of the current study are consistent with those of Yang (2007) in Taiwan, who found that coaching leadership/management styles were positively associated with KS among academics.

6.4.6 Mentorship Strategy

Mentorship as a strategy for knowledge sharing gives an opportunity for the mentor to share and transfer knowledge by demonstrating how an activity can be performed to enhance long-term learning experiences (Darwin and Palmer, 2009). It was therefore necessary to find out if university libraries in KZN had mentorship programmes that would enhance knowledge sharing. The survey showed that 38(37.3%) of the respondents with a mean score of 3.25 (Table 5.25) felt that their organizations did not provide mentoring sessions for staff. The majority 41(40.2%) were neutral, meaning that they were not sure whether mentorship programmes existed in their libraries or not. Nevertheless, findings from the interviews at one of the university libraries confirmed that they had mentorship programmes as a capacity building strategy for transferring skills. This finding corroborated Level and Mach (2005), who

in a study of peer mentoring among academics in the United States of America (U.S.A), established that top-down peer mentoring support contributed towards knowledge sharing through skills development and transfer.

Level and Mach (2005) confirmed that academic staff at all levels were mentored through a series of experiences that would prepare them to undertake new responsibilities. The results of the survey interviews were consistent with SECI Model, which asserts that mentoring as a knowledge sharing strategy provides the opportunity to externalize knowledge by turning tacit knowledge into explicit knowledge that can be collected and shared via an integrated knowledge management system (Nonaka and Takeuchi, 1995). According to Nonaka and Takeuchi (1995), an integrated knowledge management system enables staff to share knowledge collectively. The system preserves knowledge/expertise that might otherwise be lost when a key member of staff retires or leaves the organisation. It was evident from the findings that library staff did not appreciate the importance of knowledge sharing among colleagues and with outside the organizations. Acquisition of knowledge from external sources gives employees an opportunity to benefit from the expertise of others to solve their problems. The findings revealed a lack of commitment to sharing knowledge in some of university libraries surveyed.

Out of the four universities surveyed, three did not have a system for staff to identify colleagues with whom they could share knowledge. Forty-eight (47.0%), with an average rating of 3.38 (see results in Table 5.25), were quite confident that their organizations had no system in place which encouraged knowledge sharing. These finding were consistent with those similar studies reviewed in the literature that many organizations did not have knowledge management systems that enhance knowledge sharing (Shepherd, 2010; Harle, 2009 and Jain, 1998). The SECI Model (Nonaka and Takeuchi, 1995) states that knowledge owned by individuals or groups of people should be shared through establishing an integrated and effective system as an enabling strategy for knowledge sharing. Given these results, it is clear that University Libraries in KZN Province did not have knowledge repositories/databases to document/codify explicit knowledge for future references. The results showed that University

166

Libraries in KZN were losing operational knowledge of experienced staff when they retired or left the organization.

Wamundila and Ngulube (2011) revealed that knowledge repositories to document explicit knowledge of academics did not exist at the University of Zambia. Similarly, Dewah (2011) study found that most organisations did not codify explicit knowledge of outgoing staff. Codification/documentation of explicit knowledge for relevant operational knowledge in university libraries allows for knowledge retention that could be shared with new staff during their induction period (Wamundila and Ngulube, 2011). Several studies revealed that sharing of explicit/codified knowledge through an integrated system enhances skills transfer and knowledge retention within organizations (Kankanhalli and Tan 2005; Ko, Kirsch and King, 2005; Dewah, 2011; Bartol and Srivastava, 2002 and Akramet et al., 2011). Research has also shown that many university libraries are losing knowledge assets, since the large portion of knowledge was tacit and deeply rooted within individuals' mind, and was not captured or documented (Jain, 2007).

Fifty-two (52.0%) of the respondents, with an average mean score of 3.52, believed that there was lack of interaction between those who needed knowledge and those who could provide such knowledge. The interviews revealed that lack of interaction made it difficult to retain individual knowledge, especially from the experts when they left the organisations. Nonaka (1994) found that lack of expertise due to lack of interaction, and high staff turnover, have created new challenges for the retention of knowledge and training of new staff in many universities around the world. Lack of knowledge repositories and enabling strategies that encourage knowledge sharing were cited as being responsible for knowledge loss in University Libraries in KZN Province.

The present study revealed that a majority 62(60.8%) of the respondents with an average mean score of 3.62 (see Table 5.25) were positive that there was a lack of rewards and recognition systems that would motivate staff to share knowledge in their organizations. Similar results were established from the interviews, as most of the respondents reported that they formally

recognised staff in meetings, university notices and promotion, through career development but did not have a reward system in place. The interviews showed that there was no written document for rewarding people. Staff who had achieved success or contributed their knowledge were recognized by having their work published on university websites and announced at meetings. Their reward was prompted by their career growth. These findings are consistent with those of Amayah and Nelson (2010), which indicated that there was a lack of a formal reward system for knowledge contribution/sharing in many organizations, except for recognition of a job well done. Library staff perceived lack of recognition systems as impediments for them to actively contribute and participate in knowledge sharing.

6.4.7 Performance Appraisal/Evaluation Strategy

Seventy-eight (76.5%) of the respondents (see Table 5.13) were very positive that KS could be encouraged if staff were capacitated and provided with adequate resources, including ICT infrastructure and human capital. Sixty-nine (69.0%) emphasized linking knowledge sharing with performance appraisal/evaluation of staff as an enabling strategy to encourage staff to share tacit knowledge. The values of the average mean scores were 4.03 and 3.92 respectively, as depicted in Table 5.13. These values were more than the required norms of 3, meaning that library staff were confident that putting in place a performance management system (that includes appraisal and evaluation) would encourage staff to share knowledge.

Performance appraisal/evaluation in the context of the present study includes rewards for developing new skills to enhance knowledge sharing through teamwork and continuous personal development for supporting organizational goals (Giesecke and McNeil, 2004). The interviews revealed that skills acquisition through teamwork would motivate staff to improve knowledge sharing behaviour. The survey findings indicated that when knowledge sharing was recognised and rewarded in university libraries, staff were more likely to support knowledge sharing. The empirical findings of the study suggest that performance evaluation in university libraries surveyed was considered a key strategy for knowledge sharing among staff. Library staff believed that linking knowledge sharing with performance appraisal/evaluation could be

an important strategy to encourage staff to share tacit knowledge. It was evident that staff needed to be recognized and rewarded in ways that make them feel it was worth their time to co-operate and share knowledge. Table 5.15 showed that fewer than half of the respondents believed they shared work experiences as a team or with colleagues. The survey revealed a lack of knowledge sharing strategies that would encourage library staff to interact and share knowledge. The findings suggested a need for top management/leaders to implement enabling knowledge sharing strategies, including establishing formal and informal performance rewarding system.

6.4.8 Policy Framework

Sixty-eight of the respondents (66.6%) with an average mean score of 3.86, were very positive that knowledge sharing can be encouraged through an appropriate policy framework that supports job rotation. The policies may include methods to acquire, create, organize, share and transfer tacit knowledge. A job rotation policy as a strategy for staff development improves professional skills acquired through knowledge sharing (Jarvi and Uusitalo, 2004). These findings are similar to those of Olorunsola (2000) and Adomi (2006) at university libraries in Nigeria, who found that a job rotation policy gave workers opportunities to share knowledge and develop diverse skills. A job rotation policy helps in transferring and sharing relevant operational knowledge through the provision of skills needed for new positions (Wamundila and Ngulube, 2011 and Adomi, 2006).

According to the SECI Model of Knowledge Creation (Nonaka and Takeuchi, 1995), putting in place policies which involve moving people around (job rotation) broadens their experiences and encourages open communication that enhances knowledge sharing at all levels. The creation and sharing of knowledge is likely to happen if there are policies and procedures that enable it (Jain, 2007; Nonaka and Takeuchi, 1995 and Wen, 2005). The results established that the University Libraries surveyed in KZN did not have KM policies indicated by 81(79.4%) of respondents (see Fig 5.2). Many of the library staff were not sure if they were practising knowledge management (KM), since this aspect was not outlined in the key performance areas

(KPAs) of the library's core functions. Badu (2009), in a study of academic libraries in Ghana, found that they did not have knowledge management policies. Wamundila and Ngulube's (2011) study on enhancing knowledge retention in higher education at the University of Zambia also confirmed that KM policies were lacking. The findings are consistent with similar studies which established that in many university libraries in South Africa, knowledge management was not practised and KM policies did not exist (Maponya, 2004; Trivedi, 2007 and Wamundila and Ngulube, 2011). Lack of policies was reported to be responsible for limited knowledge sharing practices among library staff in the University Libraries surveyed. Existing documented processes, policies, work manuals and procedures were not explicit concerning what needed to be done to promote knowledge sharing. Clearly documented KM processes, policies, work manuals and procedures promote knowledge sharing (Chigada, 2014). The SECI Model of Knowledge Creation (Nonaka and Takeuchi, 1995) emphasises the implementation of a policy framework which include processes and procedures that guide staff on what needed to be done. Findings from the interviews and documents reviewed from the websites in the current study indicated that progress had been made at one of the universities, where a policy concerning the use of the SharePoint tool for knowledge sharing was developed.

Overall, staff in the university libraries surveyed were very positive that if there were enabling strategies linked to knowledge sharing this could contribute to their motivation towards sharing knowledge (see results in Table 5.26). The majority of respondents 69(69.7%), with an average score of 3.87, had a strong belief that knowledge sharing keeps staff up-to-date with current trends. Findings from the interviews revealed that respondents believed the presence of knowledge sharing strategies promoted knowledge growth. The present study revealed that, largely, all staff were very positive that knowledge sharing created value in an organization, leading to the creation of new knowledge as a result of interaction between senior and junior staff. Bernard (2012) stressed that in many organizations including university libraries, knowledge sharing increases an organization's value against its competitors. The present study revealed that increased communication and collaboration through interaction helps in acquisition and retention of organizational knowledge and intellectual intelligence. By

170

increasing interaction among staff, individual knowledge was retained through increased interpersonal ties, shared norms and trust concerning each other's operations (Clarke, 2004; Cabrera and Cabrera, 2005).

6.5 Attitudes and Perceptions of Staff

The third research question (see section 3.4 of Chapter Three) sought to understand the attitude and perception of library staff towards knowledge sharing. The major objective was to assess the extent to which knowledge is shared in Public University Libraries in KwaZulu-Natal Province. The empirical results of the study revealed that attitudes and perceptions of library staff significantly affected their beliefs, norms and values towards knowledge sharing, as revealed by the p-value of 0.002 shown in Table 5.24. The staff seemed generally uncomfortable to share knowledge with different personalities. The views expressed by senior management were that changing someone's attitude, beliefs and norms was difficult without clearly defined policies.

Rahman (2011) stressed that university libraries can successfully establish an environment for knowledge sharing through undertaking a process of cultural change. This requires top management to create an environment that encourages and supports knowledge sharing through enabling strategies such as mentoring, performance evaluation systems, job rotation policies, human resources development and IT infrastructures (KMS systems). Strategies that are formal or informal are likely to engender long term-culture change that encourages knowledge sharing in university libraries (De Long, 2008). With changing work practices that include community of practice, retention of knowledge by organizations, a culture of knowledge sharing is needed for them to remain competitive in an organization. University libraries are increasingly challenged to change their norms and values to motivate employees to share knowledge (Mushi, 2009). The current study revealed that library staff showed a positive attitude towards knowledge sharing, provided there are enabling strategies that support knowledge sharing, as indicated by 60(68.6%) of those who responded with the highest mean score of 3.66 (see Table 5.14).

6.5.1 IT Applications

The Knowledge Sharing Capability Model states that the intentions to use information technologies (IT) are determined by the employees' attitudes and perceptions to its usefulness and perceived ease of use. Technology is a key enabler in implementing knowledge sharing. IT ensures that capturing, storing, transferring and disseminating knowledge within an organization is carried out efficiently and effectively (Syed-Ikhsan and Rowland, 2004:102). Effective knowledge sharing depends on employees' attitudes towards using IT within the organization. The use of information technologies (IT) influences KS through capturing and distributing both tacit and explicit knowledge (Freeman, 1999). Balubaid (2013) found that, within university library settings, the development of ICTs has led to the growth of new applications such as groupware, online databases and intranet, which allow organizations to enhance knowledge sharing. For example, the World Wide Web (WWW) is one of the most effective and convenient ways by which university libraries find and distribute knowledge through sharing of resources, experiences and learning from external sources.

The findings established that older staff had phobias towards ICTs, as indicated by the majority 39(38.2%) (see Fig 5.3). These findings support those from other studies, that older staff are far less likely to use information technologies than younger ones, in knowledge sharing (Eastman and Iyer, 2004; Earney and Martins, 2009). Liebowitz and Chen (2001) found that young people easily adapted to changes in the working environment especially on the use of information technologies compared to their older counterparts. The KSC Model states that the individual attitude towards the use of technology is determined by the perceived ease of use and perceived usefulness of the system. The greater the ease of use of the system the greater are the chances that staff will use the system. The perceived usefulness of the system increases opportunities for staff participation in knowledge sharing. The findings revealed that although there was an increased participation in using ICTs they were not used to share knowledge of work-related activities, as only a few 22(21.6%) responded that they used ICTs for knowledge sharing purposes (see Fig 5.3). Older staff presented a negative attitude towards using ICTs as knowledge sharing tools and that might be caused by lack of skills as well. Six (5.9%) of the respondents (Fig 5.2) indicated that they did not have the skills to use information technology.

Makori (2011) found that even though many libraries in Africa have adopted the use of ICTs, their use for the purpose of knowledge sharing of work-related activities was still very low. Generally, libraries in Africa have not yet embraced the use of ICTs as knowledge sharing tools among staff, due to lack of skills and lack of understanding of using such tools to share knowledge of work-related activities.

Apart from this, librarians' experiences and expertise have been found helpful in providing adequate foundation in knowledge sharing. For example, knowledge about classification schemes and controlled vocabularies are helpful in organising resources, since the experience of cataloguing and classification provides an excellent foundation for metadata creation (Nazim, Mukherjee and Hindu, 2012). The findings showed that 31(33.3%) respondents revealed that they shared classification and cataloguing skills about library materials with colleagues. Overall, the survey findings revealed that library staff in university libraries surveyed were unwilling to share their skills and expertise, as reflected by 40(40.0%) of the respondents with a mean score of 2.99 (see results in Table 5.15), who indicated that they shared new skills they learned with colleagues.

Analyses of data revealed mean score values for the five items for sharing skills and expertise ranging from 2.57 to 3.02 (see results in Table 5.15), indicating unwillingness of staff to share their knowledge. The Pearson correlation analysis results showed that there was no significant relationship between preferred channels of communication and knowledge sharing. The correlation p-value was sig. (0.251 to 0.014), (see results in Table 5.18). This result may possibly be attributed to the unwillingness of staff to share knowledge using these designated channels. The lack of skills and expertise to use information and communication technologies could be responsible for the negative attitude of staff towards knowledge sharing, as indicated in Fig 5.2. These findings seem to concur with those of Roknuzzaman and Umemoto (2009), which revealed low willingness of staff to share their expertise and skills and high difficulties in managing tacit knowledge in libraries

6.6 Factors Affecting Knowledge Sharing Among Library Staff

The fourth research question sought to examine the factors that affected knowledge sharing among staff in the university libraries surveyed. The main objective of the study was to assess the extent to which knowledge is shared in university libraries. The Knowledge Sharing Capability (KSC) Model specifies that knowledge sharing among employees is influenced by the organizational culture, organizational structure and information technology (Kim and Lee, 2006).

6.6.1 Organizational Culture

As proposed by the KSC Model (Kim and Lee, 2006), all organizations, no matter how big or how small, have a culture that influences the work relationships among staff of the organization. Such organisation culture comprises shared values, beliefs and practices of the people in the organization (Al-Alawi, Al-Marzooqi and Mohammed, 2007; McDermott and O'Dell, 2001). Culture poses challenges in knowledge sharing, because of different people's persuasions (Zhang, 2006). There is therefore a need to understand people's cultures and how they influence their perceptions, so that knowledge sharing can be institutionalised among library staff in the university libraries surveyed.

Fifty-five (54.5%) of respondents, with a mean score of 3.33, were positive that a knowledge sharing culture existed in their organization because they shared knowledge with colleagues. Less than half of the respondents were optimistic that they shared knowledge within their organization. The findings revealed that only 34(33.3%), as shown in Table 5.16 believed that they shared work experiences with colleagues and 32(31.4%) either agreed or disagreed that they shared knowledge with their colleagues. According to Materska (2004), knowledge sharing is an important practice within an organization, which allows the sharing of knowledge within a group, the basis of which results in teamwork. The Knolwedge Sharing Capability Model (Kim and Lee, 2006) regarded knowledge sharing as an important practice in an organization influenced by cultural factors such as motivation to share, management support and trust and teamwork spirit. A culture of knowledge sharing through team-work was non-

existent between staff in the university libraries that were surveyed in KwaZulu-Natal (KZN). Only 38(37.3%), with a mean score of 2.82 agreed that there was a knowledge sharing culture in their organization. Generally, a culture of knowledge sharing hardly existed in the university libraries as shown by 32(31.4%) of those who were neutral that they shared knowledge. The present study seems to corroborate that of Jain (2007) on knowledge sharing culture in university libraries in East and Southern Africa, which revealed, a lack of knowledge sharing culture. Jantz (2001) observed that, often, knowledge possessed by people was not shared. The Knowledge Sharing Capability Model (Kim and lee, 2006) stipulates that knowledge sharing can only take place if the organization culture supports it. This means that existing culture was instrumental to knowledge sharing among staff in any organisations including university libraries in KwaZulu-Natal.

The findings gleaned from the interviews established that it was difficulty for staff to share knowledge or experiences with someone from a different culture or ethnic group. The findings revealed that when sharing knowledge with another person in a different ethnic group, such as white, people are expected to have direct eye contact, to show respect. Similarly, Zhang (2006) found that in Western countries with high number of white people, direct eye contact when sharing knowledge or during conservations reflects a sign of attention, concern and respect. Research has also shown that the influence of the ethnic group affects the intention to share knowledge in multicultural organisations, because of the nature of the cultures involved (King, Kruger and Pretorius, 2007; Du, Ai and Ren, 2007). However, in African cultures, direct eye contact could mean disrespect. Zhang's (2006) study found that people from East Asian countries usually avoid making direct eye contact, as it is a sign of disrespect. The findings in the current study on how culture influences knowledge sharing seem to corroborate Zhang's (2006) findings in a study on communication in academic libraries in East Asian countries, which suggested that cultural differences were responsible for the lack of knowledge sharing culture in university libraries.

The findings of the current study indicated that the integration of different cultures through mergers of universities that happened in South Africa in mid-1990s brought uncertainty among

employees. As a result, staff viewed knowledge sharing as a strategy to retrench people from their jobs. According to Empson (2001), mergers were viewed as a way by which organizations could gain access to new sources of knowledge. In fact, mergers in universities provided the opportunity to gain access to pre-existing knowledge (Empson, 2001). The findings revealed that the challenge for libraries in KZN of merging universities was how to convert the opportunity for knowledge sharing into reality. The integration of different cultures in university mergers in KwaZulu-Natal created a highly stressful environment of uncertainty, fear and distrust and as a result, library staff became wary of sharing knowledge because of fear of loss of status and changes to their established work norms. The findings gathered through the survey questionnaire concurred with the studies of Stewart (2007) and Heo and Yoo (2002), which found that knowledge sharing, especially in the context of university mergers in South Africa, posed serious problems because knowledge sharing often takes place along cultural demographic groups. In such an environment, knowledge sharing is hampered, since culture seems to define the relationships between individuals. Therefore, knowledge sharing among staff in university libraries in KwaZulu-Natal brought uncertainties because staff felt insecure about their job status and the motive behind knowledge sharing was not clear to them.

6.6.2 Organizational Structure

Organizational structure reflects the way jobs are planned within the organization and how people are supposed to perform their work based on the rules, procedures and regulations of the organization (Syed-Ikhsan and Rowland, 2004). In the present study the organizational structure was discussed in terms of how it influenced knowledge sharing among library staff. The findings from the data gathered through the survey questionnaire, interviews and observations established that the organizational structures of the surveyed university libraries in KwaZulu-Natal were not flexible enough to enhance knowledge sharing among their library staff. Library staff felt that their organizational structures were very rigid, as reflected by the majority of respondents 53(52.5%), with the highest mean score of 3.56, as shown in Table 5.17. Many of the respondents 31(30.7%) were neutral, implying that they either agreed or

disagreed that the flexibility of their organizational structures influenced knowledge sharing. Findings gathered through observations confirmed that the organizational structures in the university libraries surveyed mirrored that of their parent university structures, which were very formalised and hierarchical and did not facilitate any knowledge sharing. It was revealed that rules and procedures governed what needed to be done and no one could make a decision without approval from the line manager.

At the organizational level, the KSC Model clearly indicates that organizational structures that are too hierarchical impact negatively on knowledge sharing among employees (Kim and Lee, 2006). Similarly, organisational structures that are too formalised tend to empower top management rather than other staff to create knowledge (Nonaka, 1994; Kim and Lee, 2006). Highly centralised management structures reduce the initiatives to share knowledge across departments/units, thus reducing interest in knowledge sharing activities with other units in the organization (Tsai, 2002). Consequently, organizations that decentralise their processes tend to have enhanced knowledge sharing (Syed-Ikhsan and Rowland, 2004). The KSC Model stipulates that organisational structures that are flexible enhance the smooth flow of knowledge across departments, while a centralized structure restricts access to information and as a result knowledge sharing is hampered. Therefore a combination of formal and, non-hierarchical structures is suited to improving knowledge creation and sharing in an organization.

The results of the present study supported the views of other studies (A-Alawi, Al-Marzooqi and Mohammed 2007; Fullwood, Rowley and Delbrige, 2013) that organisational structures that were too formalised and centralised, with lines of responsibility, affected the perceptions of staff to share knowledge because of the high level of autonomy. Knowledge sharing in the university libraries surveyed tended to be constrained during times of organizational change/restructuring, because staff were not certain about the motive behind sharing. The results from the Pearson correlation analysis revealed that there was no significant relationship between organizational structure, and knowledge sharing as reflected by the correlation p-value sig. (2-tailed 0.076 to 0.457) in Table 5.18. A similar study, by Syed-Ikhsan and Rowland (2004) in Malaysia, found that there was no significant relationship between knowledge

177

transfer/sharing and organizational structure within organizations in the public sector. The results showed that organizations that were hierarchical had restrictions in accessing knowledge and communication between departments was difficult.

6.6.3 Factors Influencing Knowledge Sharing

The KSC Model (Kim and Lee, 2006) states that factors influencing knowledge sharing are linked to the organizational structure, organizational culture, leadership/management styles; lack of awareness and vision about KM. Primarily, the culture of the organisation needs to be addressed if KS is to benefit workers. Each organisation has its individual culture and must put in place initiatives and strategies that encourage a culture of knowledge sharing (Carrillo, Anumba and Kamara*, 2000).

According to Chowdhury (2006), one of the most challenging factors that affect knowledge sharing and its wider adoption in many organizations is that workers do not trust each other, to the extent that knowledge sharing cannot happen freely and efficiently. Workers have been found to lack confidence to share and exchange expertise as suggested by Agrawal*, Muhammed and Thatte (2008), because individuals do not know for certain how the knowledge will be used. The KSC Model (Kim and Lee, 2006) proclaims that a high level of trust is positively associated with employee knowledge sharing in those organizations where a culture of knowledge sharing exists. A culture of trust allows staff to contribute their own knowledge, skills and experiences, so that others can gain new knowledge to enrich their tacit knowledge. This, in effect, assists in improving staff's intellectual capital and capacity for solving problems (Terra and Gordon, 2002). The findings of the present study revealed that a number of cultural barriers influenced library staff's attitudes and perceptions towards knowledge sharing, both at individual and organization level.

According to the KSC Model (Kim and Lee, 2006), a high level of trust enhances effective communication through empowering members of the organization to freely share personal knowledge. The findings from both the interviews and the survey questionnaires revealed that

lack of trust was a barrier to knowledge sharing among staff in university libraries in KZN. However, the majority of the respondents 64(62.7%) (see Table 5.19) did not respond to this item, probably because they were not sure about the level in trust of knowledge sharing in their organization. Findings from the interviews showed that library staff were not comfortable in sharing their knowledge, because of differences in personality and untrustworthy relationships between colleagues. These findings support Riege's (2005) views that many people are unlikely to share their knowledge without having an assurance that such knowledge will not be misused.

Further analysis of the findings from the t-test results revealed that the difference in mean is significant (t=-1.93, df=98, p-value=0.05) as shown in Table 5.21, suggesting that lack of trust was a barrier affecting knowledge sharing among library staff. The findings, however, contradict those of Chang et al. (2012) on social capital and knowledge sharing on patient safety in Taiwan, which revealed that trust among professional registered nurses (NRs) with regard to knowledge sharing was significant and positive. In view of the above, lack of trust was found to be a barrier, among other factors affecting library staff's perceptions towards knowledge sharing.

The results of the current study further revealed that educational differences affected the attitude and perception of staff towards knowledge sharing as indicated by 59(57.8%) of the respondents (see Table 5.19). Alhammad, Al-Faori and Abu-Husan (2009) revealed that, as long as mutual trust exists between employees, educational level does not play a role in knowledge sharing. The findings from this study revealed that staff in university libraries surveyed had a negative attitude towards knowledge sharing with those who had lower levels of education. This result could be attributed to the belief that those with lower levels of education did not have meaningful knowledge to share. The study further showed that University Libraries in KZN did not have strategies in place to improve knowledge sharing among all staff, regardless of their level of education.

Apart from educational level, the findings of the present study revealed that 59(57.8%) did not share knowledge because it was not part of their daily work and 41(44.1%) of the respondents indicated that they did not have time to share knowledge, as shown in Table 5.19. Besides, sharing knowledge of work-related activities demands additional effort. This effort can be minimised by work practices that are too demanding. In university libraries, staff are always working with tight deadlines. Anything that distracts from the main business is seen as of diminished importance (Carrillo, Anumba and Kamara, 2000). The findings clearly indicated that staff in university libraries surveyed did not share knowledge, probably because of lack of time, and that knowledge sharing was not outlined in the key performance areas (KPAs), as part of their daily duties. Previous studies have indicated that, in many organisations, including university, libraries knowledge sharing was affected by several factors such as lack of time and level of education, since it was not part of their daily tasks and was not included in their duties (Ling et al., 2009 and Sandhu, Jain, and Ahmad 2011).

The current findings showed that gender differences affected library staff in their efforts to seek knowledge. Further analysis of the findings of the t-tests as shown (see Table 5.22) seemed to suggest knowledge sharing was probably attributed to gender differences. There was a significant relationship between gender and attitudes of staff towards knowledge sharing, as shown by a p-value of 0.000 on knowledge sharing and a p-value of 0.002 on attitudes and perceptions of staff towards knowledge sharing. The analysis of the findings showed the difference in mean to be significant (-3.62, df 98, 0.000). The present study therefore revealed that gender differences was a barrier affecting knowledge sharing behaviour of staff in the University Libraries surveyed in KZN Province.

Connelly and Kelloway (2003) similarly revealed that there was a positive relationship between gender and attitude of staff towards knowledge sharing. Connelly and Kelloway's (2003) study revealed that a positive relationship was likely to take place where there existed friendship parties with similar work-related activities. The more similar an individual's work was related to the rest of the members of his or her project group, the more frequently the individual communicated or shared knowledge with the other members of the group. Women

were believed to share whatever new knowledge they had gained more, or better, than their male counterparts. For example, the study of Azudin, Ismail and Taherali, (2009) on knowledge sharing among workers in Malaysia revealed that female employees met, talked and shared knowledge about their work more, than their male employees. The authors found that gender influenced the communication styles in an organization. The findings of the present study support the views of Ooi (2009); Ismail and Yusof (2009), that there were differences in personalities between men and women in sharing knowledge. The studies revealed that women were more willing to share tacit knowledge and they benefitted more than men in sharing whatever knowledge they had acquired. These findings contradict previous studies that suggested gender factor, did not have a significant impact on knowledge sharing. In most instances women and men who reported a negative social interaction were much more likely to have a low positive attitude towards knowledge sharing behaviour (Pangil and Mohd Nasurdin, 2009; Sveiby, 2007).

In many organizations, functional silos are often created with the aim of knowledge hoarding, to ensure that those who have the knowledge can keep their positions and remain in charge of specialised knowledge (Du Plessis, 2006). The findings of the present study were that university libraries in KwaZulu-Natal were operating in silos, according to 51(50%) respondents (see Table 5.19). The findings from the t-tests confirmed that functional silos were a barrier to knowledge sharing. The difference in mean was significant (t=-3.44, df=98, p-value=0.001), as shown by the results in Table 5.20. The survey indicated that management support for knowledge sharing in university libraries in KZN was limited. Junior staff members were not comfortable to share knowledge with senior management/older staff. Junior staff were not free to share or exchange their knowledge, as they were considered as inexperienced. The findings agreed with Alhammad, Al-Faori and Abu-Husan (2009), who revealed that senior management felt more empowered to suggest new ideas for job development than their junior counterparts. Variant-Anna and Puspitasari (2013), found that senior management did not share knowledge because they viewed knowledge as source of power.

The literature revealed that good office design, with open spaces, accessible networks and available infrastructure, created a working environment that encouraged interaction and knowledge sharing among employees (Jones, 2005; Davenport and Prusak, 1998). Informal interaction, between staff is considered highly effective because much of the knowledge shared is tacit in nature. Knowledge sharing, therefore, appeared largely dependent on individuals knowing who to ask, and which questions to ask (Ragsdell, 2009). The layout of the offices in the university libraries surveyed was not designed in such a way that allowed informal interaction for knowledge sharing purposes. Although only 28.4% of the respondents, with a mean score of 2.92 (see Table 5.25), were positive that the physical layout of work areas restricted knowledge sharing, the majority 38(37.3%) were neutral, meaning that they either agreed or disagreed with this statement. The observations established that there was no transparent communication between work units/sections. Staff relied on phone calls if they wanted to engage with each other in different units of the organisations. The observations also revealed that, despite some physical barriers to communication, due to layout of the offices staff, in the upper offices of library, were willing to come down to help with specific issues when required. Contrary to these findings, Cabrera and Cabrera (2005), in their study of social dilemmas in fostering KS in organizations in the U.S.A, found that the layout of work areas gave employees an opportunity of working together and sharing ideas. In organizations with open work areas there were more informal contacts and interactions between colleagues that enhanced collaboration and knowledge sharing within departments/sections (Blakstad, Morten, Bygdås, 2009). The findings showed that the physical layout of work areas in the university libraries in KZN did not encourage staff members to meet informally and share ideas, and experiences. From the viewpoint of describing the physical layout of offices, there was no open communication that existed between departments, sections or units.

The findings of the present study revealed that the university libraries surveyed in KZN were under-staffed and most of the vacancies were frozen, due to budgetary constraints. The results of this study are consistent with those of Stoffle et al. (2003) and Mutula (2004) studies on challenges facing academic libraries. These authors found that, in most cases, libraries were operating with limited budgets, posts were frozen and they were under pressure from their

institutions to reduce staff, while increasing services and access. Library staff further viewed knowledge sharing as a way of retrenchment or downsizing.

6.7 Ways to Improve Knowledge Sharing Strategies in University Libraries

Library staff had a strong belief that flat organisational structures allowed knowledge to pass freely at every level, thus encouraging knowledge sharing. Library staff believed that flat structures enhanced effective communication, eliminating any delays in decision-making by managers and thereby allowing work to proceed smoothly. Youndt and Snell (2004) suggested that a flat organizational structure reduces bureaucracy giving employees at every level an opportunity to participate in the decision making process. A flat organizational structure also makes it possible for policies to be communicated and implemented easily.

The findings of the present revealed that senior management had a strong belief that University Libraries in KZN needed to make succession planning a priority, to retain individuals' knowledge. This thinking is in line with the findings by Durst and Wilhelm (2012), who confirmed that most companies were engaging in activities related to succession planning to retain knowledge and to tackle the danger of knowledge attrition. The results in the current study showed that senior management viewed succession planning as a strategy that would help organisations to retain tacit knowledge through codification. University libraries must therefore plan for the right number of skilled employees to cover retirements, promotions and any new positions which may be created in future organizational plans (Sambrook, 2005). Management leading with KS from the top formally create an environment that promotes KS among all staff.

6.8 Summary of the Discussion of Findings

The findings of the current study were interpreted and discussed in line with the Knowledge Sharing Capability (KSC) Model (Kim and Lee 2006) and the SECI Model of Knowledge Creation (Nonaka and Takeuchi, 1995). The interpretation and discussion of findings was

based on the themes related to the research problem and literature review and was guided by the main research questions outlined in Chapter One (see section 1.5).

The results largely indicated that knowledge that was generated and acquired was not subsequently shared among staff in University Libraries in KZN. The results showed that staff were demotivated to share knowledge because their contribution towards knowledge sharing within the organization was not recognised. The study revealed that a SharePoint tool to share knowledge was developed at one of the universities surveyed, meaning that progress had been made in terms of knowledge sharing. These findings meant that library staff were able to gain operational knowledge through exposure and contribution of knowledge to a SharePoint tool. The findings revealed that staff who had stayed with the organization up to the age of retirement were inclined to hoard their knowledge to keep their positions. Library staff, especially senior management, viewed knowledge sharing as a way of extracting from them their knowledge and subsequently retrenching them. The results confirmed that there was lack of awareness about goals and visions of the university libraries among employees, because such visions and missions were not clearly communicated and shared.

It was evident that, although university libraries in KwaZulu-Natal provided formal and informal channels of communication, such as social networking tools (blogs, Facebook and Twitter etc.), they were not used to share knowledge of work-related activities. Social networks offer a greater opportunity for individuals to share knowledge with one another. It was found that the communication channels were used to improve relationships among library staff, both inside and outside the organization. Storytelling as an informal channel of communication gives employees opportunity to interact and share experiences of work-related activities. Findings were that staff in the university libraries surveyed reported not using storytelling as an informal channel to share and exchange ideas.

It was discovered that there were no enabling strategies to motivate staff to share knowledge. Although libraries had IT infrastructure such as computers, online data bases and institutional repositories (IT), they were not being used to promote knowledge sharing of work-related

activities among staff. The findings further revealed that there was a lack of integrated knowledge sharing systems in the universities in KZN. Library staff were positive that implementing enabling knowledge sharing strategies would motivate staff to share knowledge. Library staff believed that if top management give strong support and implemented appropriate policies and procedures knowledge sharing would be encouraged.

Library staff seemed generally uncomfortable about sharing knowledge with different personalities. The attitude and perception of staff significantly affected their beliefs, norms and values. Although information technologies were largely used in university libraries, they were not utilised for the purpose of knowledge sharing even though there was an increased participation in using ICTs. Staff, especially older staff, had a negative attitude to using information technologies.

Several factors affected knowledge sharing in the universities surveyed. The findings of the present study showed that a culture of knowledge sharing among library staff in the universities in KZN was limited. The findings showed that university mergers that happened in the mid-1990s in South Africa were partially responsible for the poor culture of knowledge sharing among staff in university libraries. Organizational structures of the universities were largely hierarchical and, as a result, knowledge sharing was hampered. Pearson correlations showed that there was no significant relationship between organizational structure and knowledge sharing. Lack of trust, educational differences, functional silos and lack of management support were some of the factors influencing knowledge sharing among library staff in the library universities surveyed. A summary of findings mapped to the theoretical models and the research questions are shown in Table 6.1.

Table 6.1: Summary of Findings Mapped to the Theoretical Models and the Research Questions

Theoretical Model(s)	Key Variables Addressed	Research Questions	Summary of Findings
KSC/SECI Model	(1)Knowledge sharing (2) Tacit/explicit knowledge sharing	(1)What is the extent of knowledge sharing in university libraries in KZN province?	(1)Knowledge acquired was not subsequently shared among staff. (2) A SharePoint tool was developed as a KS tool at one of the universities (3) Lack of knowledge sharing between senior managers and junior staff (4) Lack of awareness about goals and visions
SECI Model	(1) Knowledge sharing strategies: staff training and development, performance evaluation/appraisal system, mentoring, job rotation and ICT infrastructure	(2)What strategies are available for knowledge sharing among library staff in the university?	(5) Communication channels that existed were not used to share knowledge (6) Lack of knowledge sharing strategies (7) Inadequate resources, (8) Lack of rewards, and lack of integrated systems (9) Lack of KM policies (10) Staff were very positive on the implementation enabling strategies
KSC Model	(1) Attitude and perception	(3) What is the attitude and perception of library staff towards knowledge sharing?	(11) Beliefs, norms and values influenced KS (12) Staff did not perceive the use of ICTs to share knowledge of work-related activities
KSC	(1) Organizational culture	(4) What factors affect	(13) Lack of knowledge

	(2) Organizational structure (3) Factors influencing knowledge sharing	knowledge sharing among university libraries?	sharing culture (14) Inflexible structures (15) Mistrust (16) Lack of top management support (17) Gender differences was an impediment to knowledge sharing (18) Staff turnover, (19) Budgets constraints, and (20) Office layout was not conducive to KS

Source: Field data (2014)

Chapter Seven provides a more detailed summary of the findings, conclusions and recommendation**s.**

CHAPTER SEVEN

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

The purpose of this study was to investigate knowledge sharing strategies in certain University Libraries in KwaZulu-Natal Province, South Africa. The study sought to address the following research questions: (1) What is the extent of knowledge sharing in University Libraries in KwaZulu-Natal Province? (2) What strategies are available for knowledge sharing among library staff in a university? (3) What is the attitude and perception of library staff towards knowledge sharing? (4) What factors affect knowledge sharing among library staff?

The study was guided by the post-positivism paradigm in which quantitative and qualitative approaches were used with the survey design. The Knowledge Sharing Capability (KSC) Model (Kim and Lee, 2006), complemented by the Socialization, Externalization, Combination and Internalization (SECI) Model of Knowledge Creation (Nonaka and Takeuchi, 1995) were used as theoretical spotlights to illuminate the extent to which knowledge is shared among library staff in University Libraries in KwaZulu-Natal Province. The population of the study consisted of all staff who were in possession of a Library and Information Science (LIS) degree or diploma, working in University Libraries in KZN Data were collected using a survey questionnaire, interview schedule, document analysis and observations. Quantitative data were analysed using *SPSS* to generate frequencies, descriptive and inferential statistics, while qualitative data were analysed and presented, using thematic analysis. The validity and reliability of the instruments were achieved using triangulation, adapting items in data collection tools from previous studies and pre-testing of the questionnaire. Cronbach's Alpha scale was used to measure and determine the reliability of the survey data collection instrument. The ethical aspects of research were achieved by complying with the UKZN research ethics protocol. Permission was sought and granted from participating universities.

7.2 Summary of the Thesis

This thesis consists of seven chapters. Chapter One provides the background to the research problem and an introduction to the subjects of knowledge management and knowledge sharing, global context of knowledge management, University Libraries in KwaZulu-Natal (KZN) Province, the statement of the problem, research objectives and research questions, delimitations of the study and significance of the study. A brief outline of methods and theory are provided.

The second chapter presents the theoretical framework, where various theoretical models of knowledge management are discussed. They include: the Knowledge Sharing Capability (KSC) Model (Kim and Lee, 2006), the SECI Model of Knowledge Creation (Nonaka and Takeuchi, 1995), Social Exchange Theory (SET) model (Thibault and Kelly, 1952), the Technology Acceptance Model (TAM) (Davies, 1989) and the Voluntary, Information and Knowledge Sharing Model (VIKS) (Lee, Foo, Chaudry and Hawamdeh, 2004). The KSC Model, complemented by the SECI Model were used as the theoretical foundations to underpin the study.

Chapter Three provides a review of related literature and also on broader issues concerning knowledge management, in general, and knowledge sharing, in particular, from global, regional and local points of view. The gaps in the literature were identified and an attempt made to address them. The literature reviewed in this chapter is organised according to themes based on the research questions, theoretical models and broader issues involving the research problem.

In Chapter Four the research methodology is discussed, focusing on the research paradigm, research methods, research design, study population, sampling procedure, data collection procedures, data analysis, validity, reliability and research ethics.

Chapter Five presents findings obtained from the survey questionnaire, interviews, document reviews and observations.

Chapter Six provides the discussion and interpretation of findings based on literature and theoretical models.

Finally, Chapter Seven presents the overall summary of the findings, conclusions and recommendations of the study. Chapter Seven also discusses the originality of the study and its implications to research, theory policy and, practice. The chapter concludes by mapping out future research directions and it highlights the overall summary of the study.

7.3 Summary of Findings

Summaries of key findings are presented in this section, using research questions as the organising framework.

7.3.1 Extent of Knowledge Sharing in University Libraries in KZN Province

Although demographic profile was not part of the research objectives the survey findings revealed that knowledge sharing among library staff in universities in KZN was affected by demographic profiles such as age, positions held and experience. The KSC model asserts that demographic profiles act as controlling variables that affect employees' personality towards knowledge sharing behaviour (Kim and Lee, 2006). The findings indicated that library staff who were approaching retirement age were not keen to share their experiences and skills because they believed their experiences gave them a competitive advantage after retirement making it possible for them to be retained in their jobs. Based on this finding, resistance to share experiences and skills can be attributed to the lack of awareness among staff and top management support concerning the importance the knowledge sharing. The findings indicated lack of awareness of the visons and goals and that they were not clearly communicated and shared between staff and senior management. Findings both from the interviews and survey questionnaire (see section 5.3) revealed that although university libraries were involved actively in acquiring and generating knowledge the knowledge was not subsequently shared. The findings revealed that progress had been made at one of the universities in KZN, where a

190

SharePoint tool to capture and share knowledge was developed. Knowledge management tools such as a SharePoint could allow knowledge to be shared collectively (Dankert and Dempsey, 2002; Jantz, 2001 and Nonaka and Takeuchi, 2005).

7.3.2 Strategies Available for Knowledge Sharing in University Libraries

The study sought to discover the strategies available for knowledge sharing in university libraries in KZN province. The Knowledge Sharing Capability Model (Kim and Lee, 2006) posits that employees are more likely to learn and share knowledge of their work-related experiences when clearly designated channels of communication exist within an organization. The findings indicated that, although informal channels of communication such as online social networks, storytelling and community of practice existed in university libraries, they were not used to exchange ideas and experiences that were work related.

The use of online social networks (OSNs) such as Twitter, e-mail, Facebook, library blogs and wikis were helpful in communicating social activities and enabling social relationships among staff, both inside and outside the organisation. For example, only 26(26.5%) of the respondents in Table 5.6 were positive that they used social networks for the purpose of knowledge sharing. Storytelling as an informal channel of communication gives staff an opportunity to interact and share knowledge on how things work. The main idea behind storytelling is to share ideas and encourage team building (Keong and Al-Hawamdeh, 2002). Storytelling as an informal way of knowledge sharing with co-workers was viewed negatively among library staff. Library staff were not using social spaces such as coffee room discussion and departmental meetings for knowledge sharing of work-related activities.

Nonaka and Takeuchi (1995) reason that university libraries need to implement strategies that encourage interaction and knowledge sharing among staff by establishing of formal structures for staff training and development. There is a need to put in place relevant policies, mentoring programmes, ICT infrastructures and job rotation policies to promote knowledge sharing. The findings revealed inadequate resources, lack of rewards, and lack of interaction between those

who needed knowledge, to be impediments to knowledge sharing. Library staff perceived a rewarding/recognition system and team building as the most basic and important aspects in KS. This was shown by the declaration of more than 62(60.8%) in Table 5.25 of the respondents indicating a lack of rewards and recognition systems which would motivate staff to share knowledge. Except for one university library, the rest did not have integrated knowledge systems such as repositories, databases and knowledge management systems that would provide a platform for interaction and knowledge sharing. An integrated knowledge management system (KMS) is an important tool to help retain an individual's tacit knowledge through interaction (Nonaka and Takeuchi, 1995).

Library staff were very positive that, if enabling strategies were implemented, staff would be encouraged to share knowledge. Seventy-eight (76.8%) of the respondents (see Table 5.13) strongly believed that top management support would encourage staff to share knowledge. Generally, staff showed strong support for any strategies that would improve knowledge sharing in their organizations. For example, library staff believed that if a performance management system was implemented, staff would be motivated to share knowledge because their contribution to knowledge would be seen and recognised. Wamundila and Ngulube (2011) explain that knowledge can be retained in an organisation through various strategies that may involve education, training, establishing communities of practice and professional networks, documenting the processes and using advanced technology to capture work processes.

The survey findings indicated that library staff strongly believed that the provision of adequate resources and staff development enhanced knowledge sharing among staff. In particular, staff development was expected to address weaknesses in job performance and building confidence among staff so that they can share knowledge. The findings were that, except for one university in KZN province the rest did not have a policy on knowledge management.

7.3.3 Attitude and Perception of Library Staff Towards Knowledge Sharing

The findings on the attitudes and perceptions of library staff towards knowledge sharing revealed that beliefs, norms and values influenced how library staff shared knowledge. The t-test results indicated a significant p-value of 0.002 (see Table 5.24). This demonstrated the need to illuminate the issue of culture and how it affected knowledge sharing among library staff. The findings showed that staff, especially older staff, did not perceive the use of information and communication technologies as knowledge sharing tools. The research revealed lack of skills and expertise to use information and communication technologies as being responsible for the negative attitude of staff towards knowledge sharing, as shown in Fig 5.2. This result indicated the need to train staff on IT applications for knowledge sharing purposes. IT applications and social networks are central to knowledge sharing activities and assist organizations to get work done and to manage the knowledge assets of the organization (Kim and Lee, 2006).

7.3.4 Factors Affecting Knowledge Sharing

The study revealed that knowledge sharing among library staff was affected by several factors, such as lack of a knowledge sharing culture, inflexible structures, mistrust, lack of top management support, staff turnover, budget constraints and office layout. The findings showed that cultural backgrounds impeded knowledge sharing among library staff, as the majority were not ready to change their previously established work norms and values as a result of the university mergers. The integration of different cultures created uncertainties and tensions among staff and knowledge sharing was hampered. Overall, the findings revealed that there was a lack of a knowledge sharing culture, as library staff did not agree that a culture of knowledge sharing existed in their organizations and 32(31.4%) (see Table 5.16) were neutral that they shared knowledge with colleagues. Kim and Lee (2006) stated that an ideal knowledge sharing culture, characterised by trust, openness and teamwork would enhance knowledge sharing.

The organizational structures of the university libraries surveyed were reported as inflexible and, as a result, there was no sharing of knowledge among different units of the organisations. The findings indicated that the library structures mirrored the hierarchical structures of their respective universities, thus hampering effective knowledge sharing. The findings revealed that cultural barriers were responsible for poor knowledge sharing among library staff of the universities surveyed. The KSC Model asserts that cultural barriers within organisations impede knowledge sharing. The major cultural barrier that was found to affect knowledge sharing among library staff was lack of trust.

The results revealed that top management was not actively involved in sharing their knowledge. The KSC Model observes that top management involvement in knowledge sharing nurtures trust between employees and consequently promotes a knowledge sharing culture in the organisation. Connelly and Kelloway (2003) emphasise the fact that top management support and commitment is one of the key elements that is needed to enhance the knowledge sharing culture in an organisation. In general, there was little intra-organizational knowledge sharing between senior and junior staff in university libraries in KZN, in part due to lack of top management support. There was a tendency among staff to hoard knowledge. Staff had a perception of knowledge as a competitive asset to be guarded rather than shared. The results were that university libraries in KZN were under-staffed due to budgetary constraints. Staff viewed knowledge sharing as a way of retrenchment or downsizing. Office layout in the university libraries surveyed was not conducive to knowledge sharing. Open spaces are usually suited for encouraging knowledge sharing, as they provide an opportunity for staff to work together and share ideas (Jones, 2005).

7.4 Conclusions

This section provides conclusions based on the major findings of the study. The conclusions were drawn from the research questions presented in Chapter One.

The general conclusion that can be drawn from the study is that knowledge generated was not subsequently shared among staff. The staff who were nearing retirement age considered their experiences and skills as the only way to guarantee continued stay in their positions. They considered sharing their experiences and knowledge as a form of exploiting their expertise. They believed their experiences gave them a competitive advantage over the other staff.

Lack of appropriate strategies, absence of knowledge sharing culture and policies were the major factors impeding KS among staff in University Libraries. It was apparent from the findings that, although communication channels existed in the university libraries surveyed, such channels were not used for knowledge sharing about work-related matters. It is expected that putting in place strategies such as performance evaluation system, resources, policies and accessible infrastructure would motivate staff to share their experiences and knowledge.

The survey findings suggest that lack of knowledge sharing culture was hindered by cultural factors such as personal values, beliefs and norms. The integration of different cultures through mergers of universities brought about different expectations and uncertainty among library staff that further limited knowledge sharing among staff.

The study found that lack of appropriate organizational strategies, including motivational rewards were also responsible for low level of knowledge sharing among staff in University Libraries surveyed in KZN. Top management could encourage their employees to share knowledge by acting as role models.

7.4.1 Overall Conclusions

The aim of the present study was to investigate knowledge sharing strategies available in University Libraries in KwaZulu-Natal Province. The study found that enabling knowledge sharing strategies were not in place to promote knowledge sharing. This was exacerbated by lack of awareness of vision and goals, lack of top management support, lack of a knowledge sharing culture, lack of policies, poor ICT infrastructure, mistrust among staff, cultural

differences and fear of retrenchment. Knowledge sharing among staff can be improved by implementing knowledge sharing strategies that can motivate staff to contribute and share their tacit knowledge.

7.5 Recommendations

In view of the above, the study made specific recommendations on how knowledge sharing in University Libraries in KwaZulu-Natal Province could be improved.

7.5.1 Clear Articulation and Awareness of University Vision and Goals

The key findings revealed a lack of awareness to the vision and goals and that knowledge that was acquired was not subsequently shared. It is therefore recommended that top management should clearly communicate the vision and goals of the organization to staff. This would create an environment of shared values and trust that could assist in promoting knowledge sharing within the organisation. A shared vision also makes it possible for staff in university libraries to understand the culture its leaders want to create. The vision and goals of the organisation create a rallying point for all parts and employees in the organization.

7.5.2 Establishment of Communication Channels

It is recommended that top library managers should encourage staff to share knowledge through formal and informal networking in the workplace. This form of interaction would encourage knowledge sharing and skills transfer among library staff. The use of information and communication technologies such as the intranet, internet, blogs, wikis, Facebook, Twitter and Web 2.0 technologies can allow interaction and collaboration among staff and thus enhance knowledge sharing.

7.5.3 Formulation of Knowledge Sharing Strategies

It is suggested that top library management should consider putting in place performance reward system, and strengthen mentorship programmes to promote knowledge sharing. The strategies that encourage knowledge sharing such as performance evaluation, should include rewards, new skills development and team work as measures aimed at promoting knowledge sharing within the organization. Implementing enabling strategies such as performance evaluation systems, mentorship programmes, job rotation policy, ICT infrastructure and human resources development is fundamental in developing new skills and generating new ideas that will affect the organization's long-term performance and competitiveness. Since knowledge sharing is the responsibility of everyone in the library is suggested that all staff in university libraries should engage in tacit knowledge sharing, so that others gain knowledge of things of which they have no experience Rewards should be part of the measures included in the organization's policy, to encourage staff to participate in knowledge sharing.

It is also recommended that university libraries should consider putting in place knowledge management policies that encourage knowledge sharing. The absence of KM policies encourages knowledge loss, especially of retiring staff or those departing for other reasons. Policies aimed at preserving organisational intellectual assets are widely considered to enhance knowledge sharing in university libraries.

7.5.4 Promoting a Culture of Knowledge Sharing

Libraries should successfully establish an environment for knowledge sharing through undertaking a process of cultural change. It is therefore recommended that university library management should strive to create an environment that encourages a culture of knowledge sharing through mentoring, performance evaluation systems, job rotation policies and human resources development. Flat structures that encourage interdepartmental activities and communication in university libraries are recommended. The SECI and KSC Models concur that knowledge sharing can be enhanced by organisational structures that support ease of information flow, with fewer boundaries between divisions. The thrust of knowledge sharing

strategies should focus on addressing these concerns, through multipronged approaches such as mentorship programmes, reward- based performance management systems, open spaces and provision of budget to promote knowledge sharing.

7.6 Implications for the Study

The results of the study have implications for research, theory, practice and policy on knowledge on knowledge management in university libraries in South Africa in particular.

7.6.1 Implications for Research

The results of the study have implications for research. Better knowledge management and KS practices would enable the university libraries to acquire and sustain a competitive edge in knowledge production and management. The findings of the study may be of use to university libraries, KM scholars, educators, researchers and students undertaking studies in KM.

7.6.2 Implications for Theory

The study makes a couple of theoretical implications. There is limited research on knowledge sharing in university libraries in developing country contexts such as South Africa. Empirical studies which have been done on knowledge sharing were mainly focused on private sectors and public sector organisations than the universities or the educational sector. This study contributes to the body of knowledge management generally and specifically for knowledge sharing in the higher education LIS sector. The outcome of this study relating to staff training and development, performance evaluation, use of open space, job rotation and mentoring programmes may be used to extend the KSC Model and its use in university libraries. The evidence from the study provides a strong basis for understanding the strategies that could be used by university libraries to promote knowledge sharing among staff.

7.6.3 Implications for Policy

The findings from this study have implications for policy. The findings are useful for informing a policy framework for knowledge sharing in university libraries in South Africa. There is a need to put in place policies that encourage mentorship, human resources development, job rotation policies and the use of ICT to promote knowledge sharing in university libraries. For example, knowledge management policies that document work processes, such as cataloguing and classification manuals, procedures and reports, would assist staff to create, share and use knowledge as part of their daily work. The outcome of this study provides a foundation for creating awareness among policy-makers and practitioners about policy and practical needs of knowledge sharing to enhance competitiveness.

7.6.4 Implications for Practice

The results of this study have implications for staff and management of university libraries. Firstly, the study has identified strategies for enhancing knowledge sharing in university libraries in South Africa such as knowledge sharing culture, building trust, management support, creating awareness about knowledge sharing, removal of bureaucratic structures that inhibit the free flow of knowledge within the organisations. Secondly, the study informs practitioners about the internalization of explicit knowledge into tacit knowledge, as proposed in the SECI Model from a developing country's perspective, because the model of Nonaka and Takeuchi, (1995) has largely been developed and tested in transitional economies in Asia.

7.7 Areas of Further Research

Though the KSC Model was effective in modelling such variables as organisational culture, organizational structure, trust, management support and informal channels of communication, it was weak in dealing with the strategies that enhance knowledge sharing in university libraries. The need for subsequent studies has been highlighted on knowledge sharing to extend

the KSC Model to be more accommodative of the diversity of KS variables, to make it more robust in university environments in the context of developing countries.

7.8 Summary of the Study

The purpose of the study was to investigate knowledge sharing strategies available in University Libraries in KwaZulu-Natal Province. The study focused on the extent to which knowledge was shared among library staff. Findings of the study revealed that KS was not effectively shared among library staff in university libraries surveyed. This was exacerbated by lack of awareness by library staff of vision, goals, policies of the organisation and how these promoted knowledge sharing. In addition lack of knowledge sharing culture, limited top management support, lack of KS strategies and poor ICT infrastructure were hampering knowledge sharing in the libraries surveyed.

Methodologically, use of post positivism paradigm that allowed the application of quantitative and qualitative approaches and triangulation of multiple data collection methods in the same study enabled the study to unravel factors of both qualitative and quantitative nature that are instrumental for promoting knowledge sharing in university libraries in South Africa. The use of KSC and SECI theoretical models to underpin the study were found suitable for investigating knowledge sharing practices in a developing country context such as South Africa. The KSC Model was particularly useful in addressing the issue of the integration of different cultures in the workplace while the SECI Model helped understand how knowledge was created and captured, and used in University Libraries in KwaZulu-Natal Province. The findings of this study seems to suggest that knowledge sharing in particular and KM in general can best be studied using a combination of methodologies and research paradigms because of the cross disciplinary nature of the subject.

REFERENCES

Al-Alawi, A.I., Al-Marzooqi, N. Y. and Mohammed, Y. F. (2007). Organizational culture and knowledge sharing: a critical success factors. *Journal of knowledge management,* 11(2):22-42.

Abdullah R., Selamat., M. H., Jaafar, A., Abdullah, S. and Sura, S. (2008). An empirical study of knowledge management system implementation in public higher learning institution. *International Journal of Computer Science and Network Security,* 8(1):281-290.

Adler, P. S. (1995). Comment on I. Nonaka. Managing innovation as an organizational knowledge creation process. In: Allouche, J. and Pogorel, G. (Eds). *Technology management and corporate strategies: a tricontinental perspective.* Amsterdam: Elsevier. Pp.110-124.

Adomi, E. E. (2006). Job rotation in Nigerian university libraries. *Library Review,* 55(1):66-74.

Agrawal, V., Muhammed, S. and Thatte, A. (2008). Enabling knowledge sharing through intrinsic motivation and perceived IT support. *Review of Business Information Systems-Third Quarter,* 12(3):21-36.

Akramet, K., Siddiqui, S. H., Nawaz, M.A., Ghauri, T. A. and Cheema, A. K. M. (2011). Role of knowledge management to bring innovation: An Integrated Approach. [Online] Available at: http://www.eurojournals.com (Accessed 22 June 2013).

Alasuntari, P., Bickman, L. and Brannen, J. (2008). *The Sage handbook of social research methods.* London: Sage.

201

Alavi, M., and Leidner, D. E. (2001). Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS Quarterly*, 25(1):107-136.

Al-Hawamdeh, S. (2003). *Knowledge management: cultivating knowledge professionals.* Oxford: Chandos Publishing.

Al-Hawamdeh, S. (2002). *Information and knowledge society.* Singapore: McGraw-Hill Education.

Alhammad, F., Al-Faori, S., and Abu-Husan, L. S. (2009). Knowledge sharing in the Jordanian universities. *Journal of Knowledge Management Practice,* 10(3):1-9.

Amayah, A. T. and Nelson, F. F. (2010). Knowledge sharing-types of knowledge shared and rewards. *Presented at the Midwest Research-to Practice Conference in Adult, Continuing, and Community Education*. Michigan State University, September 26-28.

Andreeva, T. and Ikhilchik, I. (2011). Applicability of the SECI Model of Knowledge Creation in Russian Cultural Context: Theoretical Analysis. *Knowledge and Process Management*, *18*(1):56-66.

Argote, L. (1999). *Organizational learning: creating, retaining and transferring Knowledge*. Boston: Kluwer Academic.

Atwood, C.G. 2009. *Knowledge management basics*. The American Society for training and development, Alexandra: ASTD Press.

Azudin, N., Ismail, M. N. and Taherali, T. (2009). Knowledge sharing among workers:

a study on their contribution through informal communication in Cyberjaya, Malaysia. *Knowledge Management and E-Learning: An International Journal,* 1(2):139-162.

Babbie, E. (1990). *Survey research meth*ods. 2nd ed. Belmont, CA: Wadsworth.

Babbie, E. and Mouton, J. (2001). *The practice of social research.* Cape Town: Oxford University Press.

Badu, E. E. (2009). Performance measurement in academic libraries in Ghana. *Ghana Library Journal*, 21(1-2):40-57.

Bakker, M., Leenders, R. T.A., Gabbay, S. M., Kratzer, J. and Van Engelen, J. (2006). Is trust really social capital? knowledge sharing in product development projects. *The Learning Organization*, 13 (6):594-605.

Balubaid, M. A. (2013). Using Web 2.0 Technology to Enhance Knowledge Sharing in an Academic Department. [Online] Available at: www.sciencedirect.com (Accessed 23 August 2014).

Barker, T. L. (1988). *Doing social research.* New York: McGraw-Hill.

Bartol, K. M. and Srivastava, A. (2002). Encouraging knowledge sharing: The role of organizational reward systems. *Journal of Leadership and Organizational Studies,* 9(1):64-769.

Basu, B. and Sengupta, K. (2007). Accessing success factors of knowledge management initiatives of academic institutions – a case of an Indian business school. *The Electronic Journal of Knowledge Management*, 5(3):273-282

Bell, J. (1999). *Doing your research project 3rd ed*. Maidenhead: Open University Press.

Bennett, J. (2003). *Evaluation methods in researc*h. United Kingdom: London.

Bergeron, B. (2003). *Essentials of knowledge manage*men*t*. Hoboken, NJ:
John Wiley and Sons.

Bernard, G. (2012). Creating a knowledge sharing culture environment in Pakistan.
[Online] Available at:
http://leftsideoftherightbrain.blogspot.com/2012/08/creating-knowledge-sharingenvir
(Accessed 201410/27.

Bhardwaj, M., and Monin, J. (2006). Tacit to explicit: an interplay shaping organisation
knowledge. *Journal of Knowledge Management,* 10(3):72-85.

Bhatt, G. D. (2001). Knowledge management in organizations: Examining the interaction
between technologies, techniques and people. *Journal of Knowledge Management,*
5(1):68-75.

Blakstad, S. H., Morten, H. and Bygdås, A. L. (2009). The knowledge workplace:
searching for data on use of open plan offices. *Paper for EFMC,* Amsterdam.

Blau, P. (1964). *Exchange and power in social life.* New York: Wiley.

Blaxter, L., Hughes, C. and Tight, M. (2006). *How to research.* 3rd ed. New York: Open
University Press.

Bock, G. W. and Kim and Y. G. (2001). Breaking the myths of rewards: an exploratory study
of attitudes about knowledge sharing. [Online] Available at:
http://aisel.aisnet.org/pacis2001 (Accessed 13 February 2015).

Bock, G. W., Zmud, R. W., Kim, Y.G., and Lee, J. N. (2005). Behavioural intention formation in knowledge sharing: examining motivators, social-psychological forces, and organizational climate. *MIS Quarterly,* 29(1):87-111.

Boone, E. (2003). Cross border influences for librarianship: The Toronto experiences. *Journal of Educational media and Library Science*. 41(2):165.

Bryman, A. (2006). Integrating quantitative and qualitative research: how is it done? *Qualitative research*, 6(1):97-113.

Bryant, S.E. (2005). The impact of peer mentoring on organizational knowledge creation and sharing: an empirical study in a software firm. *Group and Organization Management,* 30(3):319-338.

Buckley, S., and Giannakopoulos, A. (2011). Knowledge sharing through communities of practice. *In Proceedings of the 3rd European Conference on Intellectual Capital*. Pp. 103-112. Academic Conferences Limited. April 2011.

Burns, R.B. *Introduction to research methods*. 4th ed. London: Sage.

Business Consulting Services. (2003). Grey matter matters: preserving critical knowledge in the 21st century. [Online] Available at: http://www-935.ibm.com/services/uk/igs/pdf/esr-grey-matter-matters.pdf (Accessed 20 August 2013).

Cabrera, E. F. and Cabrera, A. (2005). Fostering knowledge sharing through people management practices. *International Journal of Human Resource Management,* 16(5):720-735.

Cao, Y., and Xiang, Y. (2012). The impact of knowledge governance on knowledge sharing. *Management Decision,* 50(4):591-610.

Carbery, R. and Garavan, T. N. (2005). Organizational restructuring and downsizing: issues related to learning, training and employability of survivors. *Journal of European Industrial Training,* 29(6):488-489.

Carrillo, P. M., Anumba, C. J., and Kamara, J. M. (2000). Knowledge management strategy for construction: key IT and contextual issues. [Online] Available at: http://itc.scix.net/paper w78-2000-155 (Accessed 22 April 2015).

Casey, M. E. and Savastinuk, L. C. (2006). Service for the next-generation library. *Library journal,* 131(1):40-42.

Chang, C. W., Huang, C.-W., Chiang, C. -Y., Hsu, C. P. and Chang, C. -C. (2012). Social capital and knowledge sharing: effects on patient safety*, Journal of Advanced Nursing, 68*(8):1793-1803.

Charnigo, L. and Barnett-Ellis, P. (2013). Checking out Facebook. com: the impact of a digital trend on academic libraries. *Information technology and libraries,* 26(1):23-34.

Chaudhry, A.S. (2005). Knowledge sharing practices in Asian Institutions: a multi-cultural perspective from Singapore. *Proceedings of the 7th IFLA General Conference and Council of the World Library and Information Congress, Oslo, Norway.*

Chen, I.Y.L., Chen, N.S. and Kinshuk, (2009). Examining the factors influencing participants Knowledge sharing behaviour in virtual learning communities. *Educational Technology and Society,* 12(1):134-148.

Cheng, M. Y, Ho, J. S. Y. and Lau, P. M. (2009). Knowledge sharing in academic
institutions: a study of multimedia university Malaysia.
Electronic Journal of Knowledge Management, 7(3):313-324.

Cheng, Y. C. (1989). Organizational culture: development of a theoretical framework for
organizational research. *Chinese University Education Journal,* 17(2):128-147.

Chennamaneni, A. (2006). Determinance of knowledge sharing behaviour: developing and
testing integrated theoretical model. *Unpublished PhD thesis*. Arlington: University of
Texas [Online] Available at:
http://search.proquest.com/docview/304903211/previewPDF?accountid=11921
(Accessed 21 January 2015).

Chigada, J. (2014). The role of knowledge management in enhancing organisational
performance in selected banks of South Africa. *Unpublished thesis*. University of
South Africa [Online]. Available at: http://uir.unisa.ac.za/handle/10500/14332
 (Accessed 21 January 2015).

Chiu C. M., Hsu, M. H. and Wang, E. T. G. (2006)., Understanding knowledge sharing in
virtual communities: An integration of social capital and social cognitive theories.
Decision Support Systems, 42(3) 1872-1888.

Choudhuri, P. S. (2012). Dimensional structure of service quality for life insurance: a study
of life Insurance corporation of India in Burdwan.
Journal of Business Management, Commerce and Research, 1(3):60-70.

Chowdhury, N. (2006). Building knowledge management in Malaysia: inside
knowledge. [Online] Available at:
http://www.km4dev.org/index.php/articles/news/744
(Accessed 2014/11/04).

Christensen, P. H. (2007). Knowledge sharing: moving away from the obsession with best practices. *Journal of Knowledge Management,* 11(1):36-47.

Clark, A.S. and Kay, F. J. (1986). *Teaching librarians to teach: on-the-job training for bibliographic instruction librarians.* Metuchen, N. J.: Scarecrow Press.

Clarke, R. (2004). Knowledge management in the main library of the University of West Indies, Trinidad. *Information Development*, 20(1): 30-35.

Cohen, L., Manion, L. and Morrison, K. (2011). *Research methods in education.* 7th ed. London: Routledge.

Connelly, C.E and Kelloway, E.K. (2003). Predictors of employees perceptions of knowledge sharing cultures. *Leadership and organization development Journal*, 24(5):294-301.

Cong, X. and Pandya, K. V. (2003). Issues of knowledge management in the public sector. *Electronic Journal of Knowledge Management*, 1(2):25-33.

Creswell, J. W. (2009). *Research design: qualitative, quantitative and mixed approaches.* 3rded. London: SAGE Publications Ltd.

Creswell, J. W. (2008). *Educational research: Planning, conducting and evaluating quantitative and qualitative research.* Upper Saddle River, N.J.: Pearson/Merrill Prentice Hall.

Crewell, J. W. and Plano Clark, V. L. (2007). *Designing and conducting mixed methods research* Thousand Oaks, CA: SAGE.

Creswell, J. W., and Miller, D. L. (2000). Determining validity in qualitative inquiry. *Theory into Practic*e, 39(3):124-130.

Crossan, F. (2003). Research philosophy: Towards an understanding. *Nurse Researcher,* 11(1): 46-55.

Dankert, H. S. and Dempsey, P. R. (2002). Building reference strength through peer training. *Reference Services Review*, 30(4):349-354.

Darwin, A. (2000). Critical reflections of mentoring in work settings. *Adult education quarterly,* 50:197-211.

Darwin, A. and Palmer, E. (2009). Higher education research and development. Higher *Education Research and Development,* 28(2):125-136.

Davenport, T. H., and Prusak, L. (1998). *Working knowledge: how organizations manage what they know*. Boston, MA: Harvard Business School Press.

Davenport, T. H., Sirkka, J. and Michael, C.B. (1996). Improving knowledge work processes. *Sloan Management Preview,* 37(4):53-65.

Davies, F. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*. 13(3):319-340.

De Long, D. (2008). Building the knowledge-based organization: how culture drives knowledge behaviours. [Online] Available at:http://www.providersedge.com/docs/km_articles/Building_the_Knowledge-Based_Organization.pdf (Accessed 11May 2013).

Department of Education. (2002). *Transformation and restructuring: a new institutional landscape for higher education*. Pretoria: Department of Education.

Department of Health, Annual Report. Knowledge management policy. (2011-2012). [Online]Available at: http://www.dhr.gov.in/annual_report/201112/knowledge_management.pdf (Accessed 20 January 2015).

DePoy, E. and Gitlin, L. N. (1998). *Introduction to research: understanding and multiple strategies.* 2nd ed. St Louis, Mo: Mosby.

Devadoss, P. R., Pan, S. L., Huang, J. (2002). Structuration analysis of e-government Initiatives: a case study of SCO. *Decision Support Systems,* 34(3):253-269.

Dewah, P and Mutula, S. (2014). Knowledge retention strategies in public sector organizations: Current status in sub-Saharan Africa. [Online] Available at: sagepub.co.uk/journalsPermissions.nav (Accessed 20 January 2015).

Dewah, P. (2011). Knowledge retention strategies in selected southern African public broadcasting corporations. *Unpublished PhD thesis*: University of Fort Hare. [Online] available at: http://hdl.handle.net/10353/438 (Accessed 16 February 2015).

Diener, E. and Crandall, R. (1978). *Ethics in social and behavioural research.* Chicago, IL: University of Chicago Press.

Durban University of Technology. (2015). Background [Online] Available at: http://library.dut.ac.za/about-us/background/ (Accessed 22 January 2015).

Durban University of Technology. (2012). Library services. [Online] Available at: http://www.library.dut.ac.za/background/htm (Accessed 7 October 2012).

Durst, S. and Wilhelm, S. (2012). Knowledge management and succession planning in SMEs. *Journal of Knowledge Management*, 6(4):637-649.

Earney, S. and Martins, A. (2009). Job rotation at Cardiff University Library Service: a pilot study. *Journal of Librarianship and Information Science,* 41(4):213-226.

Eastman, J. K., and Iyer, R. (2004). The elderly's uses and attitudes towards the Internet. Journal of Consumer Marketing, 21(3):208-220.

Edmonson, R. R. (2010). Knowledge management practices within Hong Kong organizations. *Journal of Knowledge-based Innovation in China,* 2(2):213-232.

Empson, L. (2001). Fear of exploitation and fear of contamination: impediments to knowledge transfer in mergers between professional service firms. *Journal of Human Relations*, 54(7):839-862.

Encyclopaedia of the Nations. (c2007-2015). [Online] Available at: http://www.nationsencyclopedia.com/economies/Asia-and-the-Pacific/Korea-South.html (Accessed 20 January 2015).

Faul, M and Camacho, K. (2004). Knowledge sharing toolkit: an evolving collection of practical knowledge sharing techniques [Online] Available at: http://www.bellanet.org (Accessed 26 April 2013).

Fei, J. (2011). An empirical study of the role of information technology in effective knowledge transfer in the shipping industry. *Maritime Policy and Management*, 38(4):347-367.

Finestone, N. and Snyman, R. (2005). Corporate South Africa: making multicultural knowledge sharing work. *Journal of Knowledge Management*, 9(3):128-14.

211

Flick, U. (1998). *An introduction to qualitative research.* 4th ed. London: Sage.

Foo, S., Chaudhry, A. S., Majid, S. and Logan, E. (2002). Academic libraries in transition: challenges ahead. *In Proceedings of World Library Summit, Singapore, April 22-26.* [Online]. Avalable at: http://www.alia.au/conference/alia2000/proceedings/brrian.hawkins.html (Accessed 8 March 2012).

Foos, N. J., Dana, B. M., Torben, P and Mia, R. (2002). Encouraging knowledge sharing among employees: How job design matters. *Human Resource Management,* 48(6): 871-93.

Foss, N. J., Dana, B. M., Torben, P and Mia, R. (2009). Encouraging knowledge sharing among employees: how job design matters. *Human Resource Management,* 48(6): 871-893.

Ford, D. (2004*). Knowledge sharing: Seeking to understand intentions and actual sharing. *Unpublished doctoral thesis*. Canada: Queen's University.

Freeman, T. (1999). Assessing the innovation capacity of the consortium: an evaluation of the CAM-I cost management systems program. *Journal of Knowledge Management,* 3(1):61-65.

Fullwood, R., Rowley, J. and Debride, R. (2013). Knowledge sharing amongst academics in UK universities. *Journal of Knowledge Management,* 17(1):123-136.

Gable, G. G. (1994). Integrating case study and survey research methods: an example in information systems. *European Journal of Information Systems, 3*(2):112-126.

Garg, A.K and Weele, E.V. (2012). Succession planning and its impact on the performance of small micro medium enterprises within the manufacturing sector in Johannesburg *International Journal of Business and Management,* 7(9):96-107.

Gartner Group. (2000). Knowledge management. [Online]. Available at: www.stevedenning.com/what is knowledgemanagemen.html (Accessed 9 April 2012).

Gibbs, G. (2007). *Analysing qualitative analysis data.* London: Sage Publications.

Gibson, C. B. and Cohen, S. C. (2003). Virtual teams that work creating: conditions for virtual team effectiveness. [Online] Available at: http://www.communicationcache.com/uploads (Accessed 08/10/2014).

Giesecke, J. and McNeil, B. (2004). Transitioning to the learning Organization. *Organizational Development and Leadershi*p, 53(1)54-67.

Gilbert, D., Balestrini, P. and Little Boy, D. (2004). Barriers and benefits in the adoption of e-government. *The International Journal of Public Sector Management,* 17 (4/5):286-301.

Gold, A. H. and Arvind-Malhotra, A. H. S. (2001). Knowledge management: an Organizational capabilities perspective. *Journal of management information systems,* 18(1):185-214.

Grant, K. A. and Grant, C. T. (2008). Developing a model of next generation knowledge management. *Issues in Informing Science and Information Technology*, 5(2):571-590.

Groves, K.S. (2007). Integrating leadership development and succession planning best

practices. *Journal of Management Development,* 26(3):239-260.

Guba, E. G., and Lincoln, Y. S. (2005). Paradigmatic controversies, contradictions, and emerging influences. In N. K. Denzin and Y. S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* 3rd ed.

Guilford, J. P. (1965). *Fundamental statistics in psychology and education.* 4th ed. New York: McGraw-Hill.

Gurteen, D. (2009). Organizational culture. [Online]. Available at: http://www.gurteen.com/gurteen/guteen/nsf/id/organizational-culture (Accessed 20 September 2014).

Hahn, J., and Subrami, M. R. (2000). A framework of knowledge management systems: issues and challenges for theory and practice. *Proceedings of the 21st International Conference on Information Systems, Australia, 302-312.*

Hall, P. M. (2012). Survivors' perspectives of organizational downsizing on knowledge sharing in a downsized environment. *Open Journal of Leadership,* 1(4):17-21.

Hambrick, D. C., Davison, S. C., Snell, S. A., and Snow, C. C. (1998). When groups consist of multiple nationalities: towards a new understanding of the implications. *Organization studies,* 19(2):181-205.

Haque, A and Anwar, S. (2012a). Linking top management support and IT infrastructure with Organizational performance: mediating role of knowledge application. *Canadian Social Science,* 8(1):120-128.

Haque, A and Anwar, S. (2012b). Mediating role of knowledge creation and sharing between

organizational culture and performance: an empirical analysis of Pakistan's banking sector. *Journal of Basic and Applied Scientific Research,* 2(4):3276-3284.

Harle, J. (2009). *Unlocking the Potential: new opportunities for commonwealth libraries.* London: Association of Commonwealth Universities.

Hassandoust, F. and Kazerouni, M. F. (2011). Implications knowledge sharing through e-collaboration and Communication Tools. *Journal of Knowledge Management, Economics and Information Technology,* 1(3):6.

Hawes, L.C. (1975). *Pragmatics of analoguing: theory and model construction in communication reading.* MA: Addison-Wesley.

Henning, E., Van Rensburg, W. and Smith, B. (2004). *Finding your way in qualitative research.* Van Pretoria: Schaik Publishers.

Heo, D., Yoo, Y. (2002). Knowledge sharing in post-merger integration: a case of Western Reserve University. USA sprouts: working papers on information systems. [Online] Available at: http://sprouts.aisnet.org/2-18 (Accessed 26 October 2013).

Hernandez, R. (2006). Knowledge Management is key to preventing brain drain. BP found out the hard way. [Online] Available at: http://www.bizrules.info/blog/2006/09/knowledge-management-is-key-to.html. (Accessed 20 January 2015).

Hofstede, G. (2001). *Cultures consequences: Comparing values, behaviours, institutions, and organizations across nations.* Thousand Oaks, London: New Delhi, Sage Publications.

Holbeche, L. (2005). *The high performance organization: creating dynamic stability and sustainable success*. Elsevier: Butterworth-Heineman.

Holsapple, C. W. (2003). *Handbook on knowledge management*. Berlin: Springer.

Holsapple, C. W., and Joshi, K. D. (2001). Organizational knowledge resources. *Decision Support Systems,* 31(1):39-54.

Holste, J. S. and Fields, D. (2010). Trust and tacit knowledge sharing and use. *Journal of Knowledge Management,* 14: 128-140.

Hong, W., Thong, J. Y. L., Wong, W., Tam, K., 2001/2002. Determinants of user acceptance of digital libraries: an empirical examination of individual differences and system characteristics. *Journal of Management Information Systems,* 18 (3):97-114.

Howe, E. and Kekwaletswe, R. (2010). Utilizing web 2.0 in a virtual learning environment: a South African context. [Online] Available at: http://s3.amazonaws.com/academia.edu.documents/30480661 (Accessed 14 August 2013).

Huseman, R. C. Goodman, J. P. (1999). *Leading with Knowledge-the nature of competition in the 21st century.* California: Sage Publications.

Hussein, A. R. H. and Nassuora, A. B. (2011). Jordanian student's attitudes and perceptions towards knowledge sharing in institutions of higher education. *International Journal of Academic Research*, 3(4):40-405.

Husted, K. and Michailova, S. (2002). Diagnosing and Fighting Knowledge-Sharing *Hostility Organizational Dynamics,* 31(1):60-73.

Hutchings, K. and Michailova, S. (2004). Facilitating knowledge sharing in Russian and

216

Chinese subsidiaries: the role of personal networks and group membership. *Journal of Knowledge Management*, 8(2): 84-94.

Ismail, M. B. and Yusof, Z. M. (2010). The impact of individual factors on knowledge sharing quality. [Online]. Available at: http://www.ibimapublishing.com/journals/JOKM/jokm.html (Accessed 12 January 2015).

Ismail, M. B., and Yusof, Z. M. (2009). Demographic factors and knowledge Sharing quality among Malaysian government officers. *Communications of the IBIMA*, 9:1-8.

Israel, G. D. (1992). *Determining sample size*. University of Florida Cooperative Extension Service: Institute of Food and Agriculture Sciences, EDIS.

Jacobs, E. and Roodt, G. (2007). The development of a knowledge sharing construct to predict turnover intentions. *Aslib Proceedings: New Information Perspectives,* 59 (3):229-248.

Jacobs, E. J. and Roodt, G. (2011). The mediating effect of knowledge sharing between Organisational culture and turnover intentions of professional nurses. *South African Journal of Information Management,* 13(1):1-6.

Jacobson, T.B. (2011). Facebook as a library tool: perceived vs. actual use. College and *Research Libraries,* 72(1):79-89.

Jain, K. K., Manjit, S. S, and Gurvinder, K. S. (2007). Knowledge sharing among academic staff: a case study of business schools in Klang Valley, Malaysia. *JASA*, 2:23-29.

Jain, P. (1998). Perceptions on empowerment and productivity in academic and public libraries in Botswana. *Library Management,* 19(1): 49-58.

Jain, P. (2007). An empirical study of knowledge management in academic libraries in East and Southern Africa. *Library review,* 56(5):377-392.

Jain, P. (2012). Promoting open access to research in academic libraries. [Online]. Available at: http://www.unlib.unl.edu/lpp/ (Accessed 20 September 2012).

Jantz, R. (2001). Knowledge management in academic libraries: special tools and processes to support information professionals. *Reference Services Review,* 29(1):33-39.

Jarrar, Y. F. (2002). Knowledge management: learning for organisational experience. *Managerial Auditing Journal*, 17(6):322-328.

Jarvi, M. and Uusitalo, T. (2004). Job rotation in nursing: a study of job rotation among nursing personnel from the literature and via a questionnaire. *Journal of Nursing Management,* 12(5):337-347.

Jayaram, V. (2003). The merger process between Libraries at ML Sultan and Technikon Natal: reflections of a practitioner. *South African Journal of Libraries and Information Science*. 69(1): 84-91.

Jia, F. Song-Gen, J. and Shi, Y. (2012). The application of socialization, internalization. externalisation and combination in library knowledge management. *Journal of Biomedical Engineering*, 10(6):478-580.

Jo, S. J. and Joo, B. K. (2011). Knowledge sharing: the influences of learning organization culture, organizational commitment, and organizational citizenship behaviours. *Journal of Leadership and Organizational Studies*, 18(3):353-364.

Johnson, B., and Gray, R. (2010). A history of philosophical and theoretical issues for mixed

methods research. In Tashakkori, A. Teddlie, C. (eds.), *Handbook of mixed methods in social and behavioral research*. 2nd ed. Pp. 69-94. Thousand Oaks, CA: Sage.

Joia, L. A. and Lemos, B. (2010). Relevant factors for tacit knowledge transfer within Organizations. *Journal of Knowledge Management,* 14(3):410-427.

Jones, M.C. (2005). Tacit knowledge sharing during ERP implementation: a multi-site case study. *Information Resources Management Journal,* 18(2):1-23.

Jones, R. (2009). Personal knowledge management through communicating. *Online Information Review,* 33(2):225-36.

Kankanhalli, A. and Tan, B.C.Y. (2005). Contributing knowledge to electronic knowledge repositories. An empirical investigation. *Management Information System Quarterly,*29(1):113-143.

Kanter, R., Stein, B., and T. Jock. (1992). *The Challenge of organizational change: how companies experience it and leaders guide it*. New York: The Free Press.

Kaplan, A. (1964). *In the conduct of inquiry: methodology for behavioural science.* San Francisco, CA: Chandler.

Kemoni, H. N. (2008) Theoretical framework and literature review in graduate records management research. *African Journal of Library Archives and Information Science,* 18(2):103- 117.

Keong, L. C. and Al-Hawamdeh, S. (2002). Factors impacting knowledge sharing. *Journal of Information and Knowledge Managemen*t, 1(1) 49-56.

Keramati, A. and Azadeh, M. A. (2007). Exploring the effects of top management's commitment on knowledge management success in academia: a case study. *International Journal of Social, Education, Economics and Management Engineering*, 1(3):59-64.

Kerlinger, F. (1973). *Foundations of behavioural research*. Holt, Rinehart and Winston: Toronto.

Keyes, J. (2008). Identifying the barriers to knowledge sharing in knowledge intensive organizations.   [Online] Available at: www.newarttech.com/KnowledgeSharing.pdf (Accessed September 2013).

Khalid, K. S. and Mahmood, A. K. (2008). Government employee perception on the usage of storytelling approach to share knowledge in organization environment. *In the Proceedings of Knowledge Management International Conference,* 10-12 June 2008, Langkawi, Malaysia. [Online] Available at: www.kmice.uum.edu.my/kmice08/Paper/CR197.doc (Accessed 29 May 2013).

Kim, J. and King, J. (2004). Managing knowledge work: specialization and collaboration of engineering problem-solving. *Journal of Knowledge Management,* 8(2):53-63.

Kim, S. (2003). Research paradigms in organizational learning and performance: competing modes of inquiry. *Information Technology, Learning, and Performance Journal,* 21(1):9.

Kim, S. and Lee, H. (2005). Employee knowledge sharing capabilities in public and private organizations: does organizational context matter? *In System Sciences, HICSS'05. Proceedings of the 38th Annual Hawaii International Conference on 03-06 January 2005.*

Kim, S. and Lee, H. (2006). The impact of organizational context and information technology

on employee knowledge-sharing capabilities. *Public Administration Review,* 66(3):370-385.

Kim, Y. M. and Abbas, J. (2010). Adoption of library 2.0 functionalities by academic libraries and users: knowledge management perspective. *The Journal of Academic Librarianship,* 36(3):211-218.

King, N.; Kruger, N. and Pretorius, J. (2007). Knowledge management in a multicultural environment: a South African perspective. *Aslib Proceedings*, 59(3): 285-299.

Knoco Consulting. (2014). Knowledge management policies and procedures. [Online] Available at: http://www.knoco.com/html/knowledgemanagement (Accessed 12 December 2014).

Ko, D. G., Kirsch, L. J., and King, W. R. (2005). Antecedents of knowledge transfer from consultants to clients in enterprise system implementations. *Management Information System Quarterly,* 29(1):59-85.

Kollock, P. (1999). *The Economies of Online Cooperation: Gifts and Public Goods in Cyberspace in Communities in Cyberspace.* New York: Rout ledge.

Krishnaswami, R. O. and M. Ranganatham. 2010. *Methodology of research in social scie*nces. 2nd ed. Mumbai: Himalaya Publishing House.

Kumar, N. (2005). Assessing the learning culture and performance of educational institutions. *Journal of Performance Improvemen*t, 44(9)27-34.

Kwok, S. H., and Gao, S. (2006). Attitude towards knowledge sharing behaviour. *Journal o*f *Computer Information Systems,* 46(2):45-51.

Lam, A. (2000). Tacit knowledge, organizational learning and societal institutions: an integrated framework. *Organization studies,* 21(3):487-513.

Lamont, J. (2004). Knowledge management at your service: new solutions and sources for librarians. *Searcher-Medford NJ,* 12(1):57-61.

Lather, P. (2006). Paradigm proliferation as a good thing to think with: Teaching research in education as a wild profusion. *International journal of qualitative studies in education*, 19(1):35-57.

Laschinger, H. K. S., Finegan, J., Shamian, J., and Casier, S. (2000). Organizational trust and empowerment in restructured healthcare settings: effects on staff nurse commitment. *Journal of Nursing Administration*, 30(9):413-425.

Lee, C. K. (2005). Knowledge management and the role of libraries. [Online]. Available at: http://www.nlc.gov.cn/culc/en/index.htm (Accessed 14 May 2013).

Lee, C. K. and Al-Hawamdeh, S. (2002). Factors impacting knowledge sharing. *Journal of Information and Knowledge Managem*ent, 1(1):49-56.

Lee, C. K., Foo, S., Chaudhry, A. S. and Hawamdeh, S. (2004). Developing a theory of voluntary, informal, knowledge sharing. *In Proceeding of the International Conference on Knowledge, Culture, and Change in Organization*, London, UK, August 3-6.

Lee, S. H. (2007). *Digital information and knowledge management: new opportunities for. research libraries.* USA: The Haworth Press Inc.

Leedy, P. D. and Ormond, J. E. (2005). *Practical research: planning and design.*

8th ed. New Jersey: Pearson education, Inc.

Leonard, D. and Sensiper, S. (1998). The role of tacit knowledge in group innovation, *California Management Review*, 40(3):112-132.

Level, A. V. and Mach, M. (2005). Peer mentoring: one institution's approach to mentoring academic librarians, *Library Managem*ent, 26(6/7):301-310.

Li Chang, H., Mirmirani, S. and Ilacqua, J. A. (2009). Confucius institutes distributed leadership and knowledge sharing in a worldwide network. *The Learning Organization,* 16(6):469-482.

Liebowitz, J. and Chen, Y. (2001). Developing knowledge sharing proficiencies: building a supportive culture for knowledge-sharing. *Knowledge Management Review*, 3(6):12-15.

Lim, E. H. T. (1992). Multi-campus library operations: The Victorian experience. *In C. Steele (Ed.), Australian Tertiary Libraries: Issues for the 1990s* Pp. 27-44. Adelaide:Auslib Press [Online] Available athttp://www.ariadne.ac.uk/issue54/lafortune-rvws (Accessed 06 March 2013).

Lin, H. F., Lee, H. S. and Wang, D. W. (2009). Evaluation of factors influencing knowledge sharing based on a fuzzy AHP approach. *Journal of Information Science,* 35(1):25-44.

Lin, H. F. (2007). Knowledge sharing and firm innovation capability: an empirical study. *International Journal of Manpower,* 28(3/4):315-332.

Lin, H. F and Lee, C.K. (2006). Effect of social-technical factors on organizational intention to encourage knowledge sharing. *Journal of Management Decision,* 44(1):74-88.

Ling, C.W. (2009). Knowledge sharing in an American multinational company based in Malaysia. *Journal of Workplace Learning,* 21(2):125-142.

Lipsey, R. G., Courant, P. N., Purrvis, D. D. and Steiner, P. O. (1993). *Economics.* 10th ed. New York: Harper Collins College Publishers.

Liu, N. C and Liu, M. S. (2011). Human resource practices and individual knowledge sharing behaviour: an empirical study for Taiwanese R&D professionals. *International Journal of Human Resource Management,* 22(4):981:987.

Loh, M. (2000). The human factor. [Online]. Available at: http//www.business-times.asia1.com.sg/supplementalstory0,22276,14755,00.html (Accessed 20 November 2014).

Luo, H. (2009). Determinants of knowledge sharing in university academic team. In Knowledge Acquisition and Modeling, 2009. *KAM'09. Second International Symposium*, 1:260-263. IEEE.

Lwoga, E. T., Ngulube, P. and Stilwell, C. (2010). Understanding indigenous knowledge: bridging the knowledge gap through a knowledge creation model for agricultural development: original research. *South African Journal of Information Management*, 12(1):1-8.

MacGregor, R., Evans, D., Sugden, D., Gaussen, T. and Levene, M. (1998). Outcome at 5-6 years of prematurely born children who received morphine as neonates. *Archives of Disease in Childhood-Fetal and Neonatal Edition*, 79(1):F40-F43.

Makori, O. E. (2011). Bridging the information gap with the patrons in university libraries in Africa: the case for investments in web 2.0 systems. *Library Review*, 61(1):20-40.

Mangosuthu University of Technology (2009). Library services. [Online] Available at:
 http://www.ac.za/inex.php (Accessed 7 October 2012).

Maponya, P.M. (2004). Knowledge management practices in academic libraries: a case study
 of the University of Natal, Pietermaritzburg Libraries. [Online] Available
 at:http://mapule276883.pbworks.com/f/pdf (Accessed 16 May 2013).

Marick, A. D. (2001). Knowledge management technology. *Journal of BM Systems,*
 40(4):814-830.

Martens, W. J. (1998). Health impacts of climate change and ozone depletion: an
 ecoepidemiologic modeling approach. *Environmental Health Perspectives,*
 106(1):241.

Materska, K. (2004). Librarians in the knowledge age. *New Library World,*
 105(3/4): 142-148.

Mathipa, E. R, Gumbo, M. T. (2015). *Addressing research challenges: making headway for
 developing researchers.* Cape Town: Mosala-Masedi.

Mavodza, J. (2010). Knowledge management practices and the role of an academic library in
 a changing information environment: the case of the
 Metropolitan College of New York. *Unpublished PhD Thesis*: University of South
 Africa [Online] Available at: http://uir.unisa.ac.za/handle/10500/3945
 (Accessed 20 August 2013).

Mayekiso, N. (2013). *Knowledge sharing practices in academic libraries with special
 reference to the Unisa Library.* South Africa: University of Cape Town.

McCarthy, J. (2005). Planning a future workforce: an Australian perspective. *New Review of Academic Librarianship,* 11(1):41-56.

McDermott, R. and O'Dell, C. (2001). Overcoming cultural barriers to sharing knowledge. *Journal of Knowledge Management,* 5(1):76-85.

McGregor, S. L. T. and Murnane, J. A. (2010). Paradigm, methodology and method: Intellectual integrity in consumer scholarship. *International Journal of Consumer Studies,* 34(4): 419-427.

McManus, B. (2009). The implications of Web 2.0 for academic libraries. *Electronic Journal of Academic and Special Librarianship,* 10(3):1-7.

McManus, D. and Loughridge, B. (2002). Corporate information, institutional culture and knowledge management: a UK university library perspective. *New Library World,* 103(9):320-327.

Mertens, D. M. (2010). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods.* 3rd ed. Los Angeles: Sage.

Miles, M. B and Huberman A. M. (1994). *Qualitative data analysis: an expanded sourcebook.* 2nd ed. Thousand Oaks. CA: Sage.

Miller, D. L. and Karakowsky, L. (2005). Gender influences as an impediment to knowledge sharing: when men and women fail to seek peer feedback. *Journal of Psychology*, 139(2):101-118.

Ministry of Education (2006). Pandor: knowledge management in higher education. [Online]. Available at: http://www.polity.org.za/article.php?a_id=81650

(Accessed 9 September 2012).

Mitchell, H. (2005). Knowledge sharing the value of storytelling.
International Journal of Organizational Behaviour, 9(5):632-641.

Mngadi, B. P. (2007). Communities of practice in institutions of higher learning: A descriptive study of humanities. *Unpublished Thesis.* Pietermaritzburg: University of KwaZulu-Natal.

Mohammad, A. H., Hamdeh, M. A. and Sabri, A. T. (2010). Developing a theoretical framework for knowledge acquisition. *European Journal of Scientific Research,* 42(3):439-449.

Molm, L. D., Peterson, G., and Takahashi, N. (2001). The value of exchange. *Social Forces,* 80(1):159-184.

Money, W. (2004). Application of the Technology Acceptance Model to a knowledge management system. *Proceedings of the 37th Hawaii International Conference on System Sciences,* [Online] Available at: http://ieeexplore.org/stamp.jst (Accessed 20 February 2013).

Moon, J. W., and Kim, Y. G. (2001). Extending the TAM for a world-wide-web context. *Information and Management*, 38(4):217-230.

Mouton, J. and Marais, H. C. (1989). *Basic concepts in the methodology of the social sciences.* Pretoria: Human Sciences Research Council.

Mouton, N., Louw, G. P. and Strydom, G. L. (2013). Restructuring and mergers of the South African post-apartheid tertiary system (1994-2011): a critical analysis. *Journal of International Education Research*, 9(2):127-144.

Mphidi, H. and Snyman, R. (2004). The utilization of an intranet as a knowledge management tool in academic libraries. *The Electronic Library,* 22(5):393-400.

Mpofu, R. T. (2011). Knowledge management practices in Malawi. *African Journal of Business Management*, 5(32):12408-12417.

Muller, N.J. (2006). Mergers and managers: what's needed for both to work? reflections on a merger of two higher education libraries in KwaZulu-Natal. *South African Journal of Library and Information Science,* 72(3):198-207.

Munigala, A. (2014). Use of Microblogs in India: A study of Twitter usage by librarians and in libraries. *Journal of Library Administration*, 54(7):590-608.

Munyua, H. M. (2011). Agricultural knowledge and information systems (AKISs) among small-scale farmers in Kirinyaga district, Kenya. *Unpublished thesis*, University of KwaZulu-Natal, Pietermaritzburg.

Mushi, R. J. (2009). Intellectual capital and public university libraries in Tanzania: a knowledge sharing perspective. *Unpublished MIS dissertation*: Oslo University College [Online] Available at: https://oda.hio.no/jspui/bitstream/10642/878/2/Mushi_ReubenJacob.pdf (Accessed 26 January 2015).

Mushtaq, R. and Bokhari, R. H. (2011). Knowledge sharing: Organizational culture and transformational leadership, *Journal of knowledge management*, 12(2):1-8.

Mustafa, E. and Nuraddeen -Abubakar, N. (2009). The impact of learning culture and information technology use on knowledge-sharing: a case of Kfupm. *ECIS 2009 Proceedings*. [Online] Available at http://aisel.aisnet.org/ecis2009/160 (Accessed 18 January 2014).

Mutula, S. M. (2004). IT diffusion in Sub-Saharan Africa: implications for developing and managing digital libraries. *New Library World,* 105(1202/1203):281-289.

Mutula, S. M. and Jacobs, D. (2010). Knowledge management solution to challenges of higher education in South Africa. *International Journal of Innovation in the Digital Economy*, 1(1):1-18.

Nazim, M., Mukherjee, B. and Hindu, B. (2012). Implementing knowledge management in Indian Academic Libraries. *Journal of Knowledge Management Practice,* 8(2):53-63.

Neely, A. (1998). Measuring *business performance.* London: Economist Books.

Neser, J. J., Joubert, S. J. and Sonnekus, E. F. (1995). *Introduction to methodology: criminology, penology and policy science.* Pretoria: University of South Africa.

Neuman, W.L. (1994). *Social research methods: qualitative and quantitative approaches.* Boston: Allyn and Bacon.

Neuman, W.L. (1997). *Social research methods: qualitative and quantitative approaches.* 3rd ed. Boston: Allyn and Bacon.

Neuman, W. L (2003). *Social research methods: Qualitative and quantitative approaches*. Bonston: Pearson Education.

Noe, R.A., Colquitt, J.A., Simmering, M. J. and Alvarez, S.A. (2003). Knowledge management: developing intellectual and social capital. In Jackson, S.E., Hitt, M.A. and Denisi, A.S. (Eds) *managing knowledge for sustained competitive advantage. San Francisco,* CA: Jossey-Bass.

Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization science*, 5(1):14-37.

Nonaka, I and Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. New York: Oxford University Press.

Nonaka, I., Toyama, R. and Kono, N. (2000). SECI, Ba and leadership: a unified model of dynamic knowledge creation. *Long Range Planning,* 33:5-34.

Nonaka, I., and Konno, N. (1998). The concept of ba: building a foundation for knowledge creation. *California Management Review,* 40:40-47.

Noor, N. M. D. and Salim, J. (2011). Factors influencing employee knowledge sharing capabilities in electronic government agencies in Malaysia. *International Journal of Computer Science,* 8(4):169-188.

Nunally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill.

Oberg, L. R. (1992). The emergence of the paraprofessional in academic libraries: Perceptions and realities. *College and research libraries*, 53(2):99-112.

O'Dell, C. and Grayson, C. J. (1998). If only we knew what we know: identification and transfer of internal best practices. *California Management Review,* 40(3):154-174

Olorunsola, R. (2000). Job rotation in academic Libraries: the situation in a Nigerian University library. *Library Management,* 21(2):94-8.

Ondari-Okemwa, E. (2007). An investigation into the practices, procedures and challenges of knowledge management in government-owned organizations in Kenya.

Unpublished PhD thesis, Department of Information and Library Studies, Cape Town: University of Cape Town.

Ooi, K. (2009). Total quality management and knowledge management: literature review and proposed framework. *African Journal of Business Management,* 11(3):633-643.

Paliszkiewicz, J. O. (2011). Trust and knowledge sharing a critical combination. Serries: *Studies and Proceedings*, 42:168-175.

Pangil, F. and Mohd Nasurdin, A. (2009). Assessing the relationship between organisational commitment and knowledge sharing behaviour. *Malaysian Management Journal,* 13(1/2):35-50.

Parirokh, M. Daneshgar, F. and Fattahi, R. (2008). Identifying knowledge-sharing requirements in academic libraries. *Library Review,* 57(2):107-122.

Parry, J. (2008). Librarians do fly: strategies for staying aloft. *Library Management,* 29(1/2):41-50.

Patton, M. Q. (1980). Qualitative evaluation and research methods 2nd ed. London: Sage.

Pauline, D. and Mason, D. (2002). A socio-technical view of knowledge sharing at Buckman Laboratories. *Journal of Knowledge Management,* 2(1):55-66.

Pfeffer, J. and Sutton, R. (2000). *The knowledge-doing gap: how smart companies turn knowledge into action.* Boston: Harvard Business School Press.

Phillips, D. C. and Burbules, N. C. (2000). *Post positivism and educational research* Lanham, MD: Rowman and Littlefield.

Pickard, A. J. (2007). *Research methods in information*. London: Facet Publishing.

Polanyi, M. (1966). *The tacit dimension.* London: Routledge and Kegan Paul.

Polit, D. F. and Beck, C. T. (2004). Nursing research: *Principles and method*s. 7th ed. Lippincott Williams and Wilkins.

Popovich, M. G. ed. (1998). *Creating high-performance government organizations: a practical guide for public managers.* San Francisco: Jossey-Bass.

Powell, R. (1985). *Basic research methods for librarians.* Norwood: Ablex Publishing Corporations.

Probst, G., Raub, S. and Romhadt, K. (2000). *Managing knowledge: Building blocks for success*. Chichester: John Wiley and Sons.

Punch, K. F. (2003*). Survey research: the basic*. London: Sage Publications.

Ragsdell, G. (2009). Participatory action research: a winning strategy for KM *Journal of Knowledge Managemen*t, 13(6):564-576.

Rah, J. A., Gul, S., and Ashraf Wani, Z. (2010). University libraries: step towards a web based *Journal of Knowledge Management system*, Vine, 40(1):24-38.

Rahman, R. A. (2011). Knowledge sharing practices: a case study at Malaysia's healthcare research institutes. *The International Information and Library Review*, 43(4):2017-214.

Ram, S., Anbu. K., J. P. and Kataria, S. (2011). Responding to user's expectation in the library: innovative Web 2.0 applications at JUIT Library: a case study program. *Electronic Library and Information Systems*, 45(4):452-469.

Ramirez, A. (2006). Papers Selected From Centre for Business Information, Organisation and Process Management (BIOPoM). *1ˢᵗ International Conference 2006 University of Westminster, London UK, 29 June.*

Ramirez, A. (2007). To blog or not to blog: understanding and overcoming the challenge of knowledge sharing, Journal *of Knowledge Management Practice*, 8(1):1-12.

Ramlo, S. E. and Newman, I. (2011). Q Methodology and its position in the mixed-methods continuum. *The International Journal of Q Methodology*, 34(3):172-191.

Rapert, M. I. and Wren, B. M. (1998). Reconsidering organizational structure: a dual perspective of frameworks and processes. *Journal of Managerial Issues,* 10(3):287-302.

Reamy, T. (2002). Imparting knowledge through storytelling. KM world. [Online] Available at http://www.providersedge.com/docs/km_articles/Imparting_Knowledge_Through_storytelling.pdf (Accessed 20 June 2013).

Riege, A. (2005). Three dozen knowledge sharing barriers managers must consider. *Journal of knowledge management*, 9 (3):18-35.

Robinson, L. (2009). A summary of diffusion of innovation. [Online] Available at: www.enablingchange.com.au (Accessed 01 October 2013).

Roknuzzaman, M. and Umemoto, K. (2009). How library practitioners view knowledge management in libraries: a qualitative study. *Library Management,* 30(8/9):643-656.

Rosen, B., Furst, S. and Blackburn, R. (2007). Overcoming barriers to knowledge sharing in virtual teams. *Organizational Dynamics,* 36(3):259-273.

Rowley, J. (2000). Is higher education ready for knowledge management? *International Journal of Education Management,* 14(7):325-333.

Rowold, J. (2007). Individual influences on knowledge acquisition in a call centre Training context in Germany. *International Journal of Training and Development,* 11(1):21-3.

Rubenstein, A., and Geisler, E. (2003*). Installing and managing knowledge management systems*. Hartford, CT: Greenwood.

Salisbury, M. W. (2003). Putting theory into practice to build knowledge management systems. *Journal of Knowledge Managemen*t, 7(2):128-141.

Salter, A. J., and Martin, B. R. (2001). The economic benefits of publicly funded basic research: a critical review. *Research policy*, 30(3):509-532.

Sambrook, S. (2005). Exploring succession planning in small growing firms. *Journal of Small Business and Enterprise Development,* 12 (4):579-94.

Sandhu, M. S., Jain, K. K., and Ahmad, I. U. K. (2011). Knowledge sharing among public sector employees: evidence from Malaysia. *International Journal of Public Sector Management,* 24(3):206-226.

Sannwald, W. (2000). Understanding organizational culture. *Library Administration and Management,* 14 (1):8-14.

234

Sarantakos, S. (1998). *Social Research*. Basingstoke: Macmillan.

Sarrafzadeh, M. Martin, A. and Hazeri, A. (2010). Knowledge management and its potential applicability for libraries. *Library Management*, 31(3):198-212.

Schinke, S. P. and Gilchrist, L. (1993). Ethics in research. In Grinnel, R.M. (Ed). *Social work, research and evaluation*. 4th ed. Illinois: Peacok, Pp 80-92.

Sekaran, U. (2000*). Research methods for business*: a *skill-building approach*. New York: John Wiley and Sons.

Semertzaki, E. (2011). *Special libraries as knowledge management centres*. Oxford: Chandos Publishing.

Senaji, T. and Nyaboga, A. B. Knowledge management process capability: operations strategy perspective. *International Journal of Management and Information Systems,* 15(3):147-158.

Seonghee, K., and Boryung, J. (2008). An analysis of faculty perceptions: Attitudes toward knowledge sharing and collaboration in an academic institution. *Library and Information Science Research,* 30(4):282-290.

Shah, S. R. and Mahmood, K. (2013). Knowledge-sharing behaviour in dairy sector of Pakistan*. Library Philosophy and Practice*, (e-journal). [Online] Available at: http://digitalcommons.unl.edu/libphilprac/917 (Accessed 15 April 2014).

Shanhong, T. (2000). Knowledge management in libraries in the 21st century. *66th IFLA Council and General Conference. Jerusalem-Israel* 13-18 August. [Online] Available at:http://www.unlibrary.nairobi.org/PDFs/KMliraries 21st.pdf (Accessed 28 February 2015).

235

Sharratt, M., and Usoro, A. (2003). Understanding knowledge-sharing in online communities of practice. *Electronic Journal on Knowledge Management,* 1(2):187-196.

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for informatio*n, 22(2): 63-75.

Shepherd, E. (2010). In-service training for academic librarians: a pilot programme for staff. *The Electronic Library*, 28(4): 507-524.

Shepstone, C. and Currie, L. (2008). Transforming the academic library: creating an organizational culture that fosters staff success. *The Journal of Academic Librarianship,* 34(4):358-368.

Silverman, D. (2010). *Qualitative research: a practical handbook.* 3rd ed. London: Sage Publications Ltd.

Sitlington, H. and Marshall, V. (2011). Do downsizing decisions affect organizational knowledge and performance? *Management Decision*, 49(1):116-129.

Skyrme, D. (2007). *Knowledge networking: Creating the collaborative enterprise*. Oxford: Butterworth-Heinemann.

Soliman, F. and Spooner, K. (2000). Strategies for implementing knowledge management: role of human resources management. *Journal of Knowledge Managemen*t, 4(4): 337-345.

Sondergaard, S., Kerr, M., and Clegg, C. (2007). Sharing knowledge: contextualizing socio-technical thinking and practice. *The Learning Organization*, 14(5):423-435.

Soper, M. E, Osborne, L. N, and Zweizig, D. L. (1990). *The librarian's thesaurus: a concise guide to library and information term*. Chicago: American Library Association.

Stafford, C. and Mearns, M. A (2009). What happens when organisations embrace social networking? knowledge sharing at a multinational business solutions corporation. [Online] Available at: http://www.sajim.co.za/index.php/SAJIM/article/vi (Accessed20 May 2013).

Statistics South Africa. (2011). [Online] Available at: http://www.statssa.gov.za/publications/statsdownload (Accessed 20 January 2015).

Stewart, C. (2007). Issues for South African academic libraries in the post-apartheid era: a review of selected literature. [Online] Available at: http://www.worlib.org/vol17no2/stewart_v17n2.shtml (Accessed 21 November 2012).

Stilwell, C. (2000). Venturing into academic journal publishing: some issues and guidelines. *African Journal of Library, Archives and Information Science,* 10(2):167-175.

Stover, M. (2004). Making tacit knowledge explicit: the ready reference database as codified knowledge. *Reference Services Review,* 32(2): 164-73.

Stoffle, C. A., Allen, B., Morden, D. and Maloney, K. (2003). Continuing to build the future: academic libraries and their challenges. Portal: *Libraries and the Academy,* 3(3):363-380.

Sveiby, K. E. (2001). A knowledge-based theory of the firm to guide in strategy formulation. *Journal of intellectual capital,* 2(4):344-358.

Sveiby, K. E. (2007). Disabling the context for knowledge work: the role of managers' behaviours. *Management Decision*, 45(10):1636-1655.

Swanepoel, A. (2005). Lessons learned from library mergers at colleges of higher education in Flanders. *South African Journal of Library and Information Science,* 71(1): 85-92.

Syed-Ikhsan, S. and Rowland, F. (2004). Knowledge management in public organizations: a study on the relationship between organizational elements and the performance of knowledge transfer. *Journal of Knowledge Management,* 8(2):95-111.

Szulanski, G. (1996). Exploring internal sickness: impediments to the transfer of best practice within the firm. *Strategic Management Journal,* 17(10):27-43.

Tan, N. Y., Lye, Y. H. and Lim, Y. S. (2010). Motivational factors in influencing knowledge sharing among banks in Malaysia. *International Research Journal of Finance and Economics,* 44(1):7-32.

Teng, S. and Al-Hawamdeh, S. (2002). Knowledge management in public libraries. *Aslib Proceedings,* 54 (3):188-97.

Terra, J. C .C. and Gordon, C. (2002). *Realizing the promise of corporate portals: leveraging knowledge for business success.* Massachusetts: Butterworth-Heinemann.

Thibault, J. W., and Kelly, H. H. (1952). *The social psychology of groups*. New York: John and Sons.

Thongprasert, N. and Cross, J. M. (2008). Cross-cultural perspectives of knowledge sharing for different virtual Classroom Environments: a case study of Thai students in Thai

and Australian Universities. [Online] Available at: http://ro.ecu.edu.au/ceducom/51 (Accessed 15 January 14, 2015).

Tiwana, A. and Bush, A. (2001). Social exchange architecture for distributed web communities. *Journal of Knowledge Management,* 5(3):242-248.

Topper, E. F. (2011). What's new in libraries: succession planning in libraries? *New Library Wor*ld, 109(9/10):480-482.

Townley, C.T. (2001). Knowledge management and academic libraries. *College and Research Libraries,* 62 (1):44-55.

Trivedi, M. (2007). Knowledge management in health science libraries. [Online] Available at: http://southernlibrarianship.icaap.org/content/v08n02/trivedi_m01.html (Accessed 13 December 2012).

Tsai, M. T. and Lee, K. W. (2006). A study of knowledge internalization: from the perspective of learning cycle theory. *Journal of Knowledge Management,* 10(3):57-71.

Tsai, W. P. (2002). Social structure of competition within a multiunit organization: coordination, competition and inter-organizational knowledge sharing. *Organization Science,* 13(2): 179-90.

University of KwaZulu-Natal (2009). The transformation charter. [Online]. Available at: http://www.ukzn.ac.za/docs/general-docs/the-tranformation-charter.pdf (Accessed 02 December 2012).

University of Zululand (2012). Library Services. [Online] Available at: http://www.library.unzulu.ac.za/background/htm [Accessed 7 October 2013].

Van den Hooff, B. and De Ridder, J. A. (2004). Knowledge sharing in context: the influence of organizational commitment, communication climate and CMC use on knowledge sharing. *Journal of Knowledge Management,* 8(6):117-130.

Variant-Anna, N. E. and Puspitasari, D. (2013). Knowledge sharing in libraries: a case study of knowledge sharing strategies in Indonesian University Libraries [online] available at: http://creativecommons.org/licenses/by/3.0/ (Accessed 2014/11/08).

Vermeulen, R. (2002). Narrowing the transfer gap: the advantages of "as if" situations in training. *Journal of European Industrial Training,* 16(8):366-374.

Voelpel, S. C. and Han, Z. (2005). Managing knowledge sharing in China: the case of Siemens ShareNet. *Journal of knowledge management*, 9(3):51-63.

Wah, C. Y., Menkhoff, T., Loh, B. and Evers, H. D. (2007). Social capital and knowledge sharing in knowledge-based organizations: An empirical study. *International Journal of Knowledge Management*, 3(1):29-48.

Walczak, S. (2005). Organizational knowledge management structure. *Learning Organizations,* 12 (4):330-339.

Wamundila, S. and Ngulube, P. (2011). Enhancing knowledge retention in higher education: a case of the University of Zambia: original research. *South African Journal of Information Management,* 13(1):1-9.

Wang, S., and Noe, R. A., (2010). Knowledge sharing: a review and directions for future Research. *Human Resources Management Review,* 20 (2):115-131.

Watson, S. and Hewett, K. (2006). A multi-theoretical model of knowledge transfer in

organizations: determinants of knowledge contribution and knowledge reuse. *Journal of Management Studies,* 43(2):141-173.

Weber, R. P. (1990). *Basic content analysis.* 2nd ed. Thousand Oaks, CA: Sage.

Wei, L. (2010). Virtual knowledge sharing in a cross-cultural context. *Journal of Knowledge Management,* 14(1):38-50.

Wen, S. (2005). Implementing knowledge management in academic libraries: a pragmatic approach, In: *3rd China-US Library Conference, Shanghai,* March 22-25. [Online] Available at: http://www.white-clouds.com/iclc/cliej/cl19wen.htm (Accessed 06 June 2013).

Weir D, Hutchings K. (2005). Cultural Embeddedness and Contextual Constraints: Knowledge Sharing in Chinese and Arab cultures. *Knowledge and Process, Management, 12* (2): 89-98.

White, T. (2004). Knowledge management in an academic library: based on the case study KM within OULS. *In 70th IFLA General Conference and Council, Buenos Aires*, *Argentina,* August 22-27.

Wijetunge, P. (2012). Organizational storytelling as a method of tacit-knowledge transfer: case study from a Sri Lankan university. *The International Information and Library Review,* 44(4):212-223.

Wildemuth, B. M. (1993). Post-Positivist research: two examples of methodological pluralism: Information and Community Policy. *The Library Quarterly*, 63(4)450-468.

Willem, A. (2003). The role of organization-specific integration mechanisms in

inter-unit knowledge sharing. *Unpublished thesis* [Online] Available at:http://72.14.203.104/search?q=cache:AwAf_ok1x7UJ:www.ofenhandwerk.com/oklc/pdf (Accessed 20 September 2012).

Wimmer, R. D. and Dominick, J. R. (2006). *Mass media research: an introduction.* 8th ed. Belmont, CA: Thomson Wadsworth.

Wright, P. M. and Snell, S. A. (1998). Towards a unifying framework for exploring fit and flexibility in strategic human resource management. *Academy of management review,* 23(4):756-772.

Xiaoping, S. and Lin, S. (2007). Developing knowledge innovation culture of libraries. *Library Management,* 28 (1/2):36-52.

Yahya, S. and Goh, W. K. (2002). Managing human resources toward achieving knowledge management. *Journal of Knowledge Management*, 6(5):457-468.

Yang, S. C. and Farn, C. K. (2009). Social capital, behavioural control, and tacit knowledge sharing. A multi-informant design. *International Journal of Information Management,* 29(3):210-218.

Yang, J. T. (2007). Knowledge sharing: Investigating appropriate leadership roles and collaborative culture. *Tourism Management,* 28(2):530-543.

Yin, R. K. (2002). *Case study research: design and methods*. 3rd ed. London: Sage.

Youndt, M. A., and Snell, S. A. (2004). Human resource configurations, intellectual capital, and organizational performance. *Journal of Managerial Issues,* XV (193):337-360.

Zammito, J. H. (2004). *A nice derangement of epistemes: Post-positivism in the study of science from quine to latour.* Chicago, IL: The University of Chicago press.

Zeller, R. A. and Carmines, E. G. (1980). *Measurement in the social sciences: The link between theory and data, CUP Archive.* Australia: Cambridge University Press.

Zhang, J., Dawes, S. S. and Sarkis, J. (2005). Exploring stakeholders' expectations of the benefits and barriers of e-government knowledge-sharing. *Journal of Enterprise of Information Management*, 18(5):548-567.

Zhang, L. (2006). Communication in academic libraries: an East Asian perspective. *Reference Services Review,* 34: (1)164-176.

Zhou, A. Z. and Fink, D. (2003). Knowledge management and intellectual capital: an empirical examination of current practice in Australia. *Knowledge Management Research and Practice,* 1(2):86-94.

APPENDIX 1: LETTER OF INFORMED CONSENT

05 November 2012

Dear Respondent,

My name is Ndakasharwa Munetsi, a PhD student in the Department of Library and Information Studies, Pietermaritzburg Campus University of KwaZulu-Natal. I am carrying out a research on **knowledge sharing culture among library staff in University Libraries in KwaZulu-Natal Province**. The purpose of the study is to examine knowledge sharing strategies among library staff and identify factors which influence knowledge sharing in university libraries.

I would like to invite you to participate in a survey to obtain your views on knowledge sharing culture in your library. Participation is voluntary; you may choose not to participate or withdraw from the survey. The attached survey questionnaire and information obtained from this survey will be kept anonymous and completely confidential. Only findings in aggregate form will be submitted to the relevant authorities. The School of Social Sciences within the College of Humanities, University of KwaZulu-Natal will maintain confidentiality and anonymity of records identifying you as a participant.

Should you need further clarification please feel free to contact me on the contact details given below.

Thank you in advance for your participation in this study.

Yours Sincerely,

Ndakasharwa Munetsi

Mobile: +27 784014611

Email: munetsi.ndakasharwa@gmail.com

Name…………………………………………………….Date……………………………………

Signature

I…………………………………………………………………………………………….hereby

consent to participate in the above survey

Name…………………………………………………..Date……………………………………

Signature………………………

APPENDIX 2: SURVEY QUESTIONNAIRE FOR LIBRARIANS

Section A: Demographic Information

1. University …………………………………………

2. Name of your Library ……………………………………

3. Section: Information services……………………………………………………………..

4. Position/Rank:

   Circulation………………………………………………………………….

5. Gender: Female [ ]   Male   [ ]

6. Age: a) 20-24 [ ]   b) 25-30 [ ]   c) 31-35 [ ]   d) 36-40 [ ]   e) 41-45 [ ]

   Above 45_____

7. Highest Educational Qualification:

   a) Matric [ ]   b) Certificate   [ ]   c) Diploma [ ]

   b) Bachelor's degree [ ]   c) Masters' Degree [ ]   d) PhD [ ]   Be-Tec [ ]

   Others please specify: Honours_____

8. Working experience in the library?

   0--5yrs [ ]   5-10yrs [ ]   10-15yrs [ ]   15-20yrs [ ]

   20-25 years [ ]   Others Specify_____

9: SECTION B: THE EXTENT OF KNOWLEDGE SHARING IN UNIVERSITY LIBRARIES IN KWAZULU-NATAL

What approaches are used in your library to ensure knowledge sharing and acquisition of relevant skills? **Pease indicate the extent to which you agree or disagree with following statements by putting a tick (√) in the appropriate**

ANSWER ALL STATEMENTS

s/no.	Statements	Disagree	Agree	Neutral	Strongly Agree	Strongly Disagree
1	Staff gain new ideas through social gatherings					
2	Staff improve their by learning from other organizations and institutions					
3	Individuals are committed to professional development					
4	Seminars, workshops and training and development are held periodically and adequately to help gain new knowledge					

10: In as far as knowledge sharing is concerned, is acquisition of knew knowledge a priority in your library. If yes please explain how do you capture and acquire new knowledge in your library_____

_____

11: SECTION C: KNOWLEDGE SHARING STRATEGIES

What channels of communication do you prefer to use for knowledge sharing purposes. **Pease indicate the extent to which you agree or disagree with the following statements by putting a tick (√) in the appropriate box.**

ANSWER ALL STATEMENTS

s/no	Statements	Disagree	Agree	Neutral	Strongly Agree	Strongly Disagree
1	Whenever I want to share knowledge, I prefer using social networks such as face book, Twitter, wikis and blocks in my library.					
2	I use videoconferencing to share knowledge with my co-workers					
3	I use intranet and knowledge repositories to share knowledge with my co-workers					
4	I prefer to share knowledge through storytelling					

12: Please indicate knowledge sharing facilities and tools provided by your library?

    a) Departmental meetings   [ ]

    b) Library blog   [ ]

    c) Communities of Practice   [ ]

    d) Coffee room discussions   [ ]

    e) Mobile Phones   [ ]

    f) Others Please specify: _____

13: What do you think are the ways for encouraging knowledge sharing in your library? **Please indicate the extent to which you agree or disagree with the following statements by putting a tick (√) in the appropriate box.**

ANSWER ALL STATEMENTS

s/no.	Statements	Disagree	Agree	Neutral	Strongly Agree	Strongly Disagree
1	KS can become a culture in the organization if top management regularly displays and reinforces the theme that knowledge is the lifeblood of an organization'					
2	Non-monetary shall be more effective in encouraging KS					
3	KS can be encouraged if it is linked with the performance appraisal of the staff					
4	KS can be encouraged if there is a policy which promotes job rotation among employees					
5	KS can be encouraged through staff development and providing adequate resources					

13a: Does your library have a policy on KM practices   [   ] Yes   [   ] No

If yes please explain what the policy says about knowledge sharing

_____

_____

14: SECTION C: ATTITUDES AND PERCEPTIONS OF STAFF TOWARDS KNOWLEDGE SHARING

13: What are the general attitudes and perceptions of library staff towards knowledge sharing**? Please indicate the extent to which you agree or disagree with the following statements by putting a tick (√) in the appropriate box.**

ANSWER ALL STATEMENT

s/no	Statements	Disagree	Agree	Neutral	Strongly Agree	Strongly Disagree
1	To me, sharing knowledge with my co-workers is harmful					
2	To me, sharing knowledge with my co-workers is good					
3	To me, sharing knowledge with my co-workers is pleasant					
4	To me, sharing knowledge with my co-workers is worthless					
5	To me, sharing knowledge with my co-workers is wise					

15: The use of information technology affects users' intentions to use or rejection of technology which in turn affects users' attitude and perceptions of its usefulness.

How do library staff members in your library perceive the use of IT applications in sharing knowledge?_____

_____

16: What skills and expertise do you share with your colleagues? **Pease indicate the extent to which you agree or disagree with following statements by putting a tick (√) in the appropriate box.**

ANSWER ALL STATEMENTS

s/no	Statements	Disagree	Agree	Neutral	Strongly Agree	Strongly Disagree
1	I share classification and cataloguing skills about library materials with colleagues					
2	I share knowledge and expertise on using online databases with my colleagues					
3	My colleagues share with me new working skills they learn					
4	My colleagues share new skills in library practices with me					

17: SECTION E: FACTORS AFFECTING KNOWLEDGE SHARING AMONG LIBRARY STAFF

Knowledge sharing culture is the extent to which people share their views and exchange their beliefs and shared values which determine the expectations of behavior within an organization. **Please indicate the extent to which you agree/ disagree with the following statements by putting a tick (√) mark in the appropriate box.**

ANSWER ALL STATEMENTS

s/no	Statement	Disagree	Agree	Neutral	Strongly Agree	Strongly Disagree
1	There is KS culture in my organization					
2	My colleagues share their working experience and knowledge in my library					
3	I communicate/share knowledge with my colleagues in teams or group					
4	I share knowledge within the group if I know that the knowledge is helpful to members of the groups					
5	I am willing to share knowledge with my colleagues					

18: How do you describe the organizational structure in your Library**? Pease indicate the extent to which you agree or disagree with following statement by putting a tick (√) in the appropriate box.**

s/no	Statements	Disagree	Agree	Neutral	Strongly Agree	Strongly Disagree
1	Structure of the organization is rigid					

19: What do you think are factors which affect knowledge sharing? **Pease indicate the extent to which you agree or disagree with following statements by putting a tick (√) in the appropriate box**

ANSWER ALL STATEMENTS

s/no	Statements	Disagree	Agree	Neutral	Strongly Agree	Strongly Disagree
1	Inadequate or lack of opportunity for education and training					
2	Lack of rewards and recognition systems that would motivate staff to share knowledge					
3	Lack of formal and informal activities to cultivate culture of knowledge sharing in my library					
4	There is general lack of trust among colleagues in my library					
5	There is lack of interaction between those who need knowledge and those who can provide knowledge					
6	There is no system to identify the colleagues with whom I need to share my knowledge					
7	Lack of resources					
8	Retention of highly skilled and experienced staff is not a high priority in my library					
9	Physical work environment and layout of work areas restrict effective knowledge sharing in my workplace					
10	Staff in my library does not share knowledge because of the fear of it being misused by taking unjust credit for it					

20: Which of the following do you think are cultural barriers to knowledge sharing in your library? **(Please tick those which apply)**

a) Functional Silo (**when departments/ functions do not share its processes and collaborating with each other**) [ ]
b) Lack of time [ ]
c) Not willing to share knowledge [ ]
d) Lack of trust [ ]
e) Knowledge sharing not a part of daily work [ ]
f) Lack of training [ ]
g) Gender differences [ ]
h) Differences in education [ ]
i) Beliefs, norms and values [ ]
j) If any other, please specify _____

21: Does knowledge sharing contribute towards staff development in your library? **Pease indicate the extent to which you agree or disagree with following statements by putting a tick (√) in the appropriate box.**

ANSWER ALL STATEMENT

s/no	Statements	Disagree	Agree	Neutral	Strongly Agree	Strongly Disagree
1	Knowledge sharing support staff development in my library					
2	Knowledge sharing emphasize awareness of goals and mission of					

254

	the library to staff					
4	Knowledge sharing improves quality of staff					
5	knowledge sharing keeps staff up to date with current trends					
5	Knowledge sharing retains individual knowledge through codification of tacit knowledge					

22: In your opinion, what do you think must be done to improve knowledge sharing among library staff?

_____

23: Any other Comment: _____

Thank you

N Muchaonyerwa

Cell: +27 78 4014611

E-mail: munetsi.ndakasharwa@gmail.com

APPENDIX 3: INTERVIEW SCHEDULE: LIBRARY DIRECTORS AND SENIOR

LIBRARY STAFF

Section A: Biographical Information

Name--

University--

Name of your Library---

Gender: ---

Age: ---

Highest Educational Qualification: ---

Designation--

Working experience in the library---

Section B: Extend of knowledge sharing in university libraries

1. How do you maintain relationships among library staff in your library?

…………………………………………………………………………………

…………………………………………………………………………………

………………………………………………………………………………….

2.   How do new employees become familiar with the organization's policy, vision and mission statement?

..…………………………………………………………………………………

…………………………………………………………………………………..I

n as far as knowledge sharing is concerned, is acquisition of knew knowledge a priority in your library. If yes please explain how do you capture and acquire new knowledge in your library?

…………………………………………………………………………………

…………………………………………………………………………………

<u>Section C: Knowledge Sharing Strategies in University Libraries</u>

The channel is a medium by which knowledge is communicated or passed on from one part to another.

3. What is the role of knowledge sharing in library operational and management functions?

    …………………………………………………………………………………………..
    …………………………………………………………………………………………..
    …………………………………………………………………………………………

4. What are the different forms and channels of communication that are used to share knowledge in your library?

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

5. Does your library have a policy on Knowledge management? If yes please explain what the policy says about knowledge sharing…………………………………………………..

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

6. Is there a rewarding/incentive system to motivate library staff to share knowledge in your library? If yes please explain how employees are motivated to share their knowledge?

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

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

7. Is there any knowledge sharing mechanism/knowledge management system that library staff members use to share their tacit knowledge with each other? If yes please elaborate how the staff contribute their knowledge using the system is being used

257

8. What capacity building strategies are there in your library to support knowledge sharing?

………………………………………………………………………………………………

………………………………………………………………………………………………

Section D: Attitudes and Perceptions of Library staff on Knowledge sharing

9. Do you think it is easy to change the ways of doing things among library staff to improve KS in your library?

Factors Affecting Knowledge Sharing

10. What cultural aspects affect knowledge sharing in your library?

………………………………………………………………………………………….

………………………………………………………………………………………….

11. What do you think are the challenges affecting knowledge sharing among staff?

………………………………………………………………………………………………

………………………………………………………………………………………………..

12. How do you describe the organizational structure in your library?

………………………………………………………………………………………………

……………………………………………………………..………………………………

………………………………………………………………………………………………

14 How do you recognise those who contribute their knowledge in your library?

…………………………………………………………………………………………

………………………………………………………………………………………………

…………………………………………………………………………………………

15 What do you think are the implications of knowledge sharing in terms of staffing and budgets?

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

16 What do you think are the possible effects of losing experts or competent staff in your library?

…………………………………………………………………………………………..

…………………………………………………………………………………………..

…………………………………………………………………………………………..

17 In your own opinion what do you think are the benefits of knowledge sharing among library staff?

Thank you

N Munetsi

Cell: 0784014611

Email:munetsi.ndakasharwa@gmail.com

APPENDIX 4: OBSERVATION CHECK LIST

Department Name_____

List of activities to observe

1. Presence of staff noticeboards

2. Presence on social media

3. Open office space or operating in silos, etc.

4. Scheduled workshops, seminars, training programmes

5. Organisational structure of library

6. Organisation of departments

7. Communication between and within departments

8. Availability programs/ schedule and places for discussion or meeting on current issues.

    Yes [ ]   No [ ]

9. Office design. Yes [ ]   No [ ]

10. Availability of communication tools such as computer, internet, intranet mobile, fixed phone and others. Yes [ ]   No [ ]

11. Availability of knowledge infrastructure such as printed as well as electronic materials

Brochures Yes [ ]   No [   ]

Knowledge repositories [   ] Yes   No   [   ]

APPENDIX 5: DOCUMENT REVIEW CHECKLIST

1. Department Name_____

2. Types of documents reviewed

- Policies for knowledge sharing

- Annual reports

- Strategic plans

- Budget for capacity building

3. Programs/ schedule for knowledge sharing

 Yes [ ]   No [   ]

4. Internal records available for capacity buildings strategies

Yes [ ]   No [   ]

5. Review on mission statements and policies

6. Statistical analysis for workshops, seminars and trainings attended

Yes [ ]   No [   ]

APPENDIX 6: INTRODUCTION LETTER FOR DATA COLLECTION

Information Studies
School of Social Sciences
University of KwaZulu-Natal
Private Bag X01
Scottsville 3209, South Africa
Tel: +27 (0) 33 2605571

24 October 2012
Vice Chancellor

Attention: Ethical Office

Dear Sir/Madam,

RE: **APPLICATION FOR RESEARCH DATA COLLECTION**

Reference is made to the above subject.

Ms **Ndaka** is a duly registered PhD student in the Information Studies Programme at the University of KwaZulu-Natal, in South Africa. As part of the requirement for the award of the doctoral degree, she is undertaking a study on topic: **Knowledge sharing strategies in university libraries.** The study covers four university libraries in KwaZulu-Natal Province

The purpose of this letter is to kindly request a written permission from your office to enable her collect data from your University. Possible dates for data collection are flexible within October-November 2013. The data will be collected through **survey questionnaire and interviews**. Your authorization to this request will be highly appreciated.

Yours sincerely,

Professor Stephen Mutula
Academic Leader, Development Supervisor

APPENDIX 7: REQUEST FOR PERMISSION TO UNDERTAKE RESEARCH AT DUT

Information Studies
School of Social Science
University of KwaZulu-Natal
Private Bag X01, Scottsville 3209
mutulas@ukzn.ac.za

02 October 2012

Ms Lucile
Durban University of Technology

Dear Ms Lucile,

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

Reference is made to the above subject.
My name is Ndakasharwa Munetsi a PhD student at the University of KwaZulu-Natal, Pietermaritzburg campus. I am doing research on **Knowledge Sharing strategies in University Libraries in KwaZulu-Natal Province**. As part of the requirements for the award of the degree, I am required to undertake an empirical study. I have selected University of Technology as one of my study case. Therefore I am writing kindly to request written permission to collect data from the library staff as well as the library directors of the Durban University of Technology. The possible dates for collecting data are from June 1 - 31 October 2013.

I look forward to your permission to collect data in your University Library.

Yours Sincerely,

N. Munetsi
Mobile: +27 784014611
Email: munetsi.ndakasharwa@gmail.com

APPENDIX 8: REQUEST FOR PERMISSION TO UNDERTAKE RESEARCH AT UKZN

Information Studies
School of Social Science
University of KwaZulu-Natal
Private Bag X01, Scottsville 3209
Pietermaritzburg
mutulas@ukzn.ac.za

Dr. N. Buchanan
E.G Malherbe library
Howard College Campus
Durban

02 October 2012

Dear Dr. Buchanan,

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

Reference is made to the above subject.
My name is Ndakasharwa Munetsi a PhD student at the University of KwaZulu-Natal, Pietermaritzburg campus. I am doing research on **Knowledge Sharing strategies in University Libraries in KwaZulu-Natal Province**. As part of the requirements for the award of the degree, I am required to undertake an empirical study. I have selected University of KwaZulu-Natal Library as one of my study case. Therefore I am writing kindly to request written permission to collect data from the library staff as well as the library director of the University of KwaZulu-Natal Library. The possible dates for collecting data are from June 1 – 31 October 2013. I look forward to your permission to collect data in your University Library.

Yours Sincerely

N. Munetsi
Mobile: +27 784014611
Email: munetsi.ndakasharwa@gmail.com

APPENDIX 9: REQUEST FOR PERMISSION TO UNDERTAKE RESEARCH AT MUT

Information Studies
School of Social Science
University of KwaZulu-Natal
mutulas@ukzn.ac.za

01 October 2012

The Vice Chancellor
Mangosuthu University of Technology

Attention: Library Director

Dear Madam,

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

Reference is made to the above subject.

My name is Ndakasharwa Munetsi a PhD student at the University of KwaZulu-Natal, Pietermaritzburg campus. I am doing research on **Knowledge Sharing Culture in University Libraries in KwaZulu-Natal Province**. As part of the requirements for the award of the degree, I am required to undertake an empirical study. I have selected Mangosuthu University of Technology as one of my study case. Therefore I am writing kindly to request written permission to collect data from library staff as well as the library director from the Mangosuthu University of Technology Library. The possible dates for collecting data are from June 1 – 31 October 2013.

I look forward to your permission to collect data in your University Library.

Yours Sincerely

Ndakasharwa Munetsi
Mobile: +27 784014611
Email: munetsi.ndakasharwa@gmail.com

APPENDIX 10: REQUEST FOR PERMISSION TO UNDERTAKE RESEARCH AT UNIZULU

Information Studies
School of Social Science
University of KwaZulu-Natal
mutulas@ukzn.ac.za

01 October 2012

Library Director
University of Zululand

Dear Madam,

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

Reference is made to the above subject.

My name is Ndakasharwa Munetsi a PhD student at the University of KwaZulu-Natal, Pietermaritzburg campus. I am doing research on **Knowledge Sharing strategies in University Libraries in KwaZulu-Natal Province**. As part of the requirements for the award of the degree, I am required to undertake an empirical study. I have selected Mangosuthu University of Technology as one of my study case.   Therefore I am writing kindly to request written permission to collect data from library staff as well as the library director from the Mangosuthu University of Technology Library. The possible dates for collecting data are from June 1 – 31 October 2013.

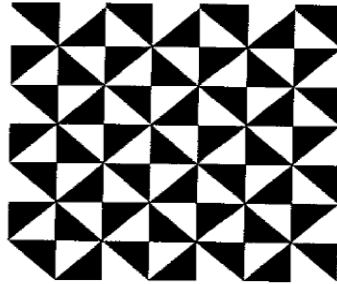I look forward to your permission to collect data in your University Library.

Yours Sincerely

Ndakasharwa Munetsi
Mobile: +27 784014611
Email: munetsi.ndakasharwa@gmail.com

268

APPENDIX 11: DURBAN UNIVERSITY OF TECHNOLOGY GATE KEEPER'S

LETTER

DUT
DURBAN
UNIVERSITY OF
TECHNOLOGY

04 October 2013

Prof. S Matulwa

Information Studies department

School of Social Sciences

University of KwaZulu-Natal

Pietermaritzburg

RE: PERMISSION TO ADMINISTER THE QUESTIONAIRE AT THE DURBAN UNIVERSITY OF TECHNOLOGY LIBRARY

Your letter and ethical clearance letter dated 20 September on the above subject matter refers.

I write to inform you that Ms Ndakasharwa Munetsi, a Phd student in your department has been granted permission to administer her questionnaire with the Librarians in different units of the university Library

Thank you

DURBAN UNIVERSITY OF TECHNOLOGY
ALLAN PITTENDRIGH LIBRARY
STEVE BIKO CAMPUS
P.O. BOX 1334, DURBAN 4000
TEL: (031) 373 2360/248

Manager: DUT Library Sites

APPENDIX 12: UNIVERSITY OF KWAZULU-NATAL GATE KEEPER' S LETTER

UNIVERSITY OF
KWAZULU-NATAL

Ms Ndakasharwa Munetsi
c/o Information Studies
School of Human & Social Studies
UKZN

18th September 2013

Dear Ms Munetsi,

This serves to confirm that you have permission to conduct your research in the University of
KwaZulu-Natal Library.

Yours sincerely

Dr N Buchanan
Director of Library Services : UKZN

Director of Library Services

Postal Address: Howard College Campus, Durban 4041, South Africa

Telephone: +27 (0)31 260 2317   **Facsimile:** +27 (0)31 260 2051   **Email:** webster@ukzn.ac.za   **Website:** www.ukzn.ac.za

Founding Campuses: Edgewood   Howard College   Medical School   Pietermaritzburg   Westville

APPENDIX 13: UNIVERSITY OF MANGOSUTHU GATE KEEPER' S LETTER

Mangosuthu
University of Technology

UMLAZI - KWAZULU NATAL

P.O. Box 12363 Jacobs 4026 Durban Tel: 031 307 7111 Fax: 031 907 2892

MEMORANDUM

To   :   Ms Ndakasharwa Munetsi

From   :   Mrs Lindiwe Ndaki
                  Senior Director: Library Services

Date   :   02 October 2013

Subject   :   **PERMISSION TO COLLECT DATA**

Permission to collect data from the MUT Library is granted.

Thank you

Mrs Lindiwe Ndaki
Senior Director: Library Services

APPENDIX 14: UNIVERSITY OF ZULULAND GATE KEEPER'S LETTER

UNIVERSITY OF ZULULAND

Library and Information Services

Private Bag x1001
KwaDlangezwa 3886
Tel: 0359026463
Fax: 0359026451
http://www.unizulu.ac.za

naidooi@unizulu.ac.za

21 June 2013

Ndakasharwa Munetsi

Dear Ms Munetsi,

Permission to Collect Data for research purpose

Permission is granted to collect data during University's academic Recess – 24 June – 12 July 2013 only.

You will have to contact staff members to make your appointments for interviews, contact details are available on the UNIZULU webpage.

Sincerely

Ms L Vahed
Director
Library and Information Services

UNIVERSITY OF ZULULAND
LIBRARY & INFORMATION
SERVICES

24 -06- 2013

LAILA VAHED
DIRECTOR

APPENDIX 15: UKZN ETHICAL CLEARANCE LETTER

UNIVERSITY OF
KWAZULU-NATAL

INYUVESI
YAKWAZULU-NATALI

12 November 2013

Ms Ndakasharwa Munetsi (212562279)
School of Social Sciences
Pietermaritzburg Campus

Protocol reference number: HSS/0965/013D
Project title: Knowledge sharing strategies in University libraries in KwaZulu-Natal province – South Africa

Dear Ms Munetsi,

Expedited Approval

In response to your application, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have 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.

take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Dr Shamila Naidoo (Deputy Chair)

/ms

cc Supervisor: Professor S Mutula
cc Academic Leader Research: Professor Sabine Marschall
cc School Administrator: Ms Nancy Mngeau