

**THE ROLE OF KNOWLEDGE MANAGEMENT IN ENHANCING
ORGANISATIONAL PERFORMANCE IN SELECTED BANKS OF SOUTH AFRICA**

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SUMMARY

Knowledge management (KM) has been cited as a strategic asset and a source of competitive advantage for organisations. While the issues of KM have been widely discussed by many researchers, there is a paucity of studies pertaining to the role of KM in enhancing organisational performance, especially in the banking sector. The focus of this research was to investigate the role of KM in enhancing organisational performance in selected banks of South Africa. The objective was to find out how knowledge was identified, captured, organised and retained in order to enhance performance of the banks. There is uncertainty about whether the use of KM could partly solve the banks' approaches to improving their quality of service to their communities in the modern information environment.

Though KM has been implemented in commercial and business environments towards operational advantages and financial gains, KM survival principles and tools might help South African banks improve performance and fulfil their mandate. Knowledge, when properly managed, can significantly enhance an organisation's performance. The research design that was used in this study was an embedded case study design. Quantitative data were collected from a sample of middle level managers with the aid of a survey whilst interviews and document analysis were used to collect qualitative data. The findings of this study indicated that KM concepts were not universally understood at selected banks. The findings showed that collaboration between banks and the communities in creating a meaningful and relevant knowledge environment was essential for the survival of organisations.

The banking industry practices were not deliberately based on KM but the study established that they were amenable to KM practices. The recommendation was to perform a knowledge inventory which could help develop appropriate institution-wide policies and practices for proper and well-organised methods of integrating work processes, collaborating and sharing (including the efficient use of knowledge technology platforms), and developing an enabling institutional culture.

Keywords:Banks; Enhancing; Information technology; Information communication tools; Knowledge; Knowledge management; Organisational performance; Knowledge management practices; Knowledge management enablers; Knowledge management strategies

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Education is the most powerful weapon which you can use to change the world (Nelson Mandela, 2003).

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DEDICATION

This thesis would be incomplete without mentioning the support and love given to me by my wife, Lillian (pillar of strength and friend), my loving children: Faith Ruvimbo, Joel Jnr and Charmaine Nokubonga, my mother, Mrs Sarah Chigada, and my sisters, relatives and friends who offered encouragement and inspiration throughout the course of this thesis.

In loving memory of my late father, Mr Enock Chigada, sister Evermary, and brothers, Albert and Thomas, for their pride and contentment with this achievement would have been indescribable.

To all these loving people, this thesis is dedicated.

DECLARATION

I, Joel Chigada declare that the research study on “**The role of knowledge management in enhancing organisational performance in selected banks of South Africa**” is my original work and that all the sources used or quoted have been indicated and acknowledged as complete references, and that the work has not been submitted before for degree purposes.

Name: Joel Chigada

Signed: _____

Date: 30 September 2014

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LIST OF ACRONYMS

AGM	:	Annual general meeting
AST	:	Adaptive structuration theory
CKO	:	Chief knowledge officers
FNB	:	First National Bank
GTSS	:	Group technology systems services
ICT	:	Information communication technology
IT	:	Information technology
KM	:	Knowledge management
KMO	:	Knowledge management officer
MANCOSA	:	Management College of Southern Africa
MMR	:	Mixed methods research
RMB	:	Rand Merchant Bank
SABC	:	South African Broadcasting Corporation
SABRIC	:	South African Banking Risk Information Centre
SBU	:	Strategic business unit
SECI	:	Socialisation, externalisation, combination and internalisation
SME	:	Subject matter experts
SMS	:	Short message services
UK	:	United Kingdom
USA	:	United States of America
UNISA	:	University of South Africa
VAS	:	Value-added services

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CHAPTER ONE: INTRODUCTION AND THEORETICAL BACKGROUND

The greatest enemy of knowledge is not ignorance; it is the illusion of knowledge (Hawking, 2011).

1.0 Introduction

Knowledge management (KM) has become a focal point for debates on mechanisms to assist firms in acquiring a greater competitive edge in the emerging global information economy (Gaffoor and Cloette, 2010). On one hand Davenport and Prusak (1998:47) define KM as “the process of identifying, managing and leveraging individual and collective knowledge to support the firm becoming more competitive”. Nonaka (1991), Tiwana (2008), Lew Platt (ex-CEO Hewlett Packard, 2010) and Ron Young (CEO/CKO Knowledge Associates International, 2010) define KM as an established management approach that has been successfully applied across corporate sectors by methodically creating, sharing, preserving and optimally applying the extensive knowledge present in the organisation to better achieve organisational objectives. But for the purposes of this study, the latter definition of KM will be used because the definition addresses major KM issues related to this study. Cong and Pandya (2003:27) suggest that “any given control mechanism has the capacity to affect both the nature and flow of knowledge in a firm by the manner in which the firm processes particular attributes of knowledge”.

In the knowledge-based economy, managers focus on issues of knowledge capital over more traditional assets and on the capability of their organisations to harness these knowledge assets. The South African banking industry is characterised by intense competition; therefore, banks should utilise their knowledge resources effectively to create competitive advantages and develop a greater ability to act and adapt to the ever-changing tastes and needs of customers. To achieve this competitive advantage, it is imperative that banks must embrace the knowledge management (KM) philosophy as a strategic asset central to product and process innovation, executive decision-making and organisational adaptation and renewal. Enhanced performance is reflected in more informed decision-making, streamlined processes, reduced duplication, more innovation, advanced data integrity and greater cooperation within the bank. “KM contributes to cost efficiency and improved service delivery” (Cong and Pandya, 2003:29).

In the South African banking environment, the sustainable competitive advantage of a bank flows from the creation, ownership, protection and use of difficult-to-imitate commercial and industrial knowledge assets. The banking customers’ ever-changing tastes and preferences require banks to proactively improvise products, get out of projects and product lines that can drag the business down, and get into others that maximise growth potential as radical market shifts threaten to put

the bank's business in the wrong place, at the wrong time, with the wrong product. By rapidly exploiting and applying fragmented internal and external knowledge, a bank can reliably detect emerging windows of opportunity before competition takes the market by surprise. Because the context-and process-specific knowledge that tends to accumulate in the bank's organisational routines is difficult to imitate, benefits of developing this knowledge can accrue to the firm (Zack, 1999). However, there appears to be a dearth of information indicating that the South African banking sector has taken full advantage of the KM philosophy as a strategic asset for organisational performance. This study investigated the role played by KM in enhancing organisational performance in selected South African banks. In the next section, the key terms and concepts used in this study are defined, followed by discussions on the theoretical framework and conceptual setting of this study.

1.1 Definition of terms

It was highlighted in the introduction that this section defines key concepts and terms that are used in this study. These are as follows:

Defining ba: Nonaka and Konno (1998) state that knowledge is shared within a contextualised space called *ba* which is a Japanese word roughly meaning 'place'. This designates a specific time and place where interactions between individuals take place.

Defining data: Data are the representation of raw facts and numerical figures that have no meaning or context on their own (Alavi and Leidner, 2002).

Defining knowledge: The nature of knowledge has been described as 'justified true belief' (Nonaka and Takeuchi, 1995). Davenport and Prusak (1998), state that knowledge is a fluid of framed experience, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information. On the other hand, Bollinger and Smith (2001) describe knowledge as the understanding, awareness or familiarity acquired through study, investigation, observation or experience over the course of time. Knowledge is the most valuable resource because it embodies intangible assets, routines and creative processes that are difficult to imitate (Hyypia and Parjanen, 2008:225).

Defining explicit knowledge: According to Tiwana (2008:45), explicit knowledge is that component of knowledge that can be codified and transmitted in a systematic and formal language: documents, databases, webs, electronic mails and charts.

Defining tacit knowledge: Mostert and Synman (2007) define tacit knowledge as an idiosyncratic, subjective, highly individualised store of knowledge and practical know-how gathered through years of experience and direct interaction within a domain, while Tranfield, Denyer and Burr (2004) state that tacit knowledge is gained from experience rather than instilled by formal education and training.

Defining knowledge management: As pointed out in the introduction section, the definition of KM that was adopted for this study is the one by Nonaka (1991), Tiwana (2008), Lew Platt (ex-CEO of Hewlett Packard, 2010) and Ron Young (CEO/CKO Knowledge Associates International, 2010) who define KM as an established management approach that has been successfully applied across corporate sectors by methodically creating, sharing, preserving and optimally applying the extensive knowledge present in the organisation to better achieve organisational objectives.

Defining organisational performance: This comprises the actual output or results of an organisation as measured against its intended outputs or goals and objectives. According to Gaffor and Cloette (2010), organisational performance encompasses three specific areas of the firm's outcomes: financial performance (profits, return on assets, return on investment); product market performance (sales, market share); and shareholder return (total shareholder return, economic, value added).

1.2 Theoretical framework

The previous section provided a brief introduction and defined keywords used in the study. This section discusses the theoretical framework that was used in this study. Ngulube, Mathipa and Gumbo (2014) state that:

Research in the social and management sciences does not have a tradition of adequately explicating the notion of conceptual and theoretical frameworks. Consequently, the understanding of the development and use of theoretical and conceptual frameworks may be limited. In fact, some researchers do not fully understand what it means to adopt a theoretical or conceptual framework (Mouton, 2004; Ocholla and Le Roux, 2011:62). Theoretical and conceptual frameworks are ignored or misunderstood because they are described and alluded to by many methodologists, but very few of them fully explain or clarify the two constructs (De Vos and Strydom, 2011:35; Leshem and Trafford, 2007:94) and their role in research.

In this study a theoretical framework was adopted in line with the positivist research paradigm. This study was premised on a positivist paradigm, that is, the research was started by theory since it was a quantitative study. Many quantitative studies are theory-driven and mainly concerned with testing or verifying theories rather than developing them. This is supported by Ngulube, Mathipa and Gumbo (2014), who are of the view that theory and research form the positivist paradigm (i.e. deductive approach whereby research mainly starts with a theory) and the interpretivist one (i.e. inductive approach which starts with observations in order to build up theories and generalisations). Ngulube, Mathipa and Gumbo (2014) further state that social science researchers start out with models, then progress to concepts that represent an identified research problem within a subject and collect data to understand and establish linkages between concepts. Theories drive almost all phases of the research cycle because quantitative studies generally use a deductive approach. Theory becomes a container into which data must be poured. The research process begins with theory that is used to formulate research questions followed by data collection and analysis (Ngulube, Mathipa and Gumbo, 2014). The findings assist in confirming or rejecting the theory, and a possible revision of the theory.

The purpose of the theoretical framework for this study was to assist the researcher and shape any inquiry in the following ways:

- serving as a basis of a research plan
- situating the researcher within a scholarly discourse and linking the study to the broader body of literature
- providing a frame within which a problem under investigation can be understood (Bryman, 2006:20)
- shaping the research questions and helping to focus the study
- offering a plan for data collection
- operating as a tool to interpret research findings
- providing a vehicle for generalisations to other contexts.

In this study, the role of KM in enhancing organisational performance in selected banks was based on Polanyi's (1962) theory of personal knowledge which set the basis of the research plan. Polanyi's (1962) theory sets the foundation for much of the later theoretical work done in the field of KM (Grant and Grant, 2008). This study exposed the researcher to the broader body of literature on KM. The use of Polanyi's (1962) theory and that of others has compelled organisations to realise that knowledge and information are key strategic tools needed to make

informed decisions. Polanyi (1962) developed the theory of 'Personal Knowledge' based on the belief that all knowledge is to some degree tacit. Polanyi (1962) speaks of 'knowing' rather than of 'knowledge' and many of his arguments are rooted in the role of language in communicating knowledge (Gaffoor and Cloette, 2010). This study has been linked to a broader body of literature through the discussion of knowledge management theories such as the resource-based, adaptive structuration and organisational knowledge conversion theories, which are discussed in detail in the literature review chapter of the study. The use of theories in the study helped to create a plan for data collection and provided a vehicle for generalisations of this study to other contexts. A brief overview of the KM theories is presented in the next section.

The resource-based theory: This theory rests on the premise that an organisation is a broader set of resources and the growth of an organisation involves the exploitation of existing resources and development of new ones. Penrose (1959) points out that human capital is not entirely specialised and can therefore be redeployed to allow the firm's diversification into new products and services. This theory points out that an organisation's success is due to joint assets, resources and capabilities which it owns and these make the organisation different from others. For instance, banks possess state-of-the-art technology, human capital and financial resources which are jointly used to enhance their operations.

Adaptive structuration theory: Adaptive structuration theory is based on Giddens' (1979 & 1984) structuration theory. This theory was formulated as the production and reproduction of the social systems through members' use of rules and resources in interaction. Poole and DeSanctis (1989) adapted Giddens' (1984) theory to study the interaction of groups and organisations with information technology, and called it 'adaptive structuration theory' (AST). This study will determine if the use of technology plays a crucial role in enabling the creation and retention of knowledge in banks as part of reviewing the AST.

Organisational knowledge conversion theory: This study is anchored in Nonaka and Takeuchi's (1995) theory of organisational knowledge conversion, which views the interaction processes of tacit and explicit knowledge as an essential feature in knowledge management. This theory identifies socialisation, internalisation, externalisation and combination (SECI) as the four modes of interaction that facilitate knowledge management in an organisation. The organisational conversion theory was crucial in the study because it set the basis for data collection for this study. The SECI model is discussed in detail in Chapter Two; however, a discussion of the contextual setting of this study is presented in the next section.

1.3 Contextual setting

In the previous discussion, the importance of a theoretical framework, as espoused by Ngulube, Mathipa and Gumbo (2014), was highlighted. An overview of KM was highlighted in line with arguments suggested by scholars such as Nonaka (1991), Gaffoor and Cloette (2010), Grant and Grant (2008), and Polanyi (1962). In this section, the contextual setting of the phenomena, background of KM, KM practices in selected South African banks, namely, Nedbank and First National Bank (FNB), are presented.

1.3.1 Background of knowledge management

This section presents a discussion on the background of knowledge management. According to Wiig(1999) and Grant and Grant(2008), the study of KM dates back more than two millennia when philosophers and scientists tried to understand the nature of knowledge and most of the studies extensively discussed models and frameworks for KM that are in use in the corporate world today. “Of special note in the evolution of KM is the work of Michael Polanyi”, (Grant and Grant, 2008). It was pointed out earlier that Polanyi’s (1962) theory of ‘personal knowledge’ became the foundation of all KM theories. Polanyi’s (1962) theory was based on the belief that all knowledge is to some degree tacit and Polanyi spoke of “knowing” rather than of “knowledge” (Grant and Grant, 2008).

The area of KM has grown rapidly over the last two decades, compelling organisations to realise that knowledge and information are key strategic tools needed to make informed decisions. Many organisations began to recognise the importance of KM when it rose to stardom and prominence in the early 1990s (Grant and Grant, 2008). During that period, scientists and philosophers did extensive KM research and developed theories and models with the specific aim of extracting a deeper understating of KM. Nonaka (1991) corporatised Polanyi’s concept of personal tacit knowledge by developing the socialisation, externalisation, combination and internalisation, (SECI) model which is discussed later in the literature review section of the study. Because the SECI model’s fundamental assumption is that tacit knowledge can be transferred and converted to explicit knowledge, it became the cornerstone and a widely-adopted KM concept in the first generation and Nonaka’s (1991) work(Grant and Grant, 2008).

In addition to Nonaka’s (1991) SECI model, Nonaka (1995) also suggested the need to create an appropriate environment in which knowledge can be created and transferred. This is referred to as ‘*ba*’, meaning a shared space for emerging relationships, which might be physical, virtual, or mental, providing a platform for advancing individual and/or collective knowledge. The

background of KM sets the tone from which this study explores the role of KM in enhancing organisational performance in selected South African banks. One can pose a question: ‘Do banks create appropriate environments where knowledge is created, shared and retained?’ To answer this question, the study discusses the knowledge creation and retention strategies in Chapter Two of this study in an attempt to address one of the research objectives. The next section briefly discusses the essence of practices in banks.

1.3.2 The essence of KM practices in banks

In the theoretical framework of this study it was pointed out that AST, organisational knowledge conversion and resource-based theories set the foundation for this study. In this section the role of KM in banks is discussed, highlighting its importance and how it enhances organisational performance. Knowledge and information are key strategic tools needed to make informed decisions. In highly competitive environments, the rise of the knowledge economy is leading to a shift in emphasis from products to knowledge and also to the role of value-added services (VAS), knowledge creating and knowledge utilisation activities. According to Cong and Pandya (2003), KM provides increased performance through more efficient, productive, innovative and quality processes. Enhanced performance is reflected in more informed decision-making, streamlined processes, reduced duplication, more innovation, advanced data integrity and greater cooperation within the organisation; thus KM contributes to cost efficiency and improved service delivery. Of the few KM studies (Kok, 2003 and Kruger and Snyman, 2004) done in the South African banking industry, limited research has been done to determine the impact of KM on organisational performance.

From a service perspective, banks’ service offerings are compared and contrasted to public institutions, such as municipalities, which are expected to deliver efficient and effective service to citizens. In their study, Gaffoor and Cloette (2010) highlight the importance of knowledge management in local government. Through the implementation of KM practices, banks are in a position to deliver the best possible services, function effectively and operate in environments characterised by transparency and accountability. In support of Gaffoor and Cloette (2010), Fowler and Pryke (2003) point out that ‘one of the implications is that organisations should be strategically aligned with their clients to provide better services and understanding their clients’ needs’. Public institutions (municipalities) and private organisations (banks) should constantly communicate with their customers to determine and ensure that their needs and wants are fully addressed. This gives both parties an opportunity to share knowledge which is then translated into

information-stored in documents thus eventually becoming organisational knowledge. For managers to be able to preserve organisational knowledge, knowledge creation, sharing and retention strategies supported by KM enablers should be available in an organisation. This denotes the importance of adopting the knowledge retention strategy that will be discussed in the literature review.

Scholars such as Nonaka and Takeuchi (1995), Broadbent (1998), Kok (2003), Wiig (2004) and Tiwana (2008), concur that the creation and management of knowledge requires an appropriate environment. Tiwana (2008) states that an appropriate environment means an environment where top management pays attention to people, culture, working conditions, motivation, organisational structure and information technology (IT). Top management is required to create an environment that encourages and supports knowledge sharing and knock down the cultural barriers that exist in organisations today. Wiig (2004) is of the view that some organisations are appointing Knowledge Management Officers (KMOs) specifically responsible for formulating a knowledge vision and policy (and not to govern the effective use of knowledge). Adding to this, implementation of KM is often impeded by top management's resistance to change, especially with regard to people, processes and technology (Kok, 2003). Change cannot be achieved in one great leap, and it is proposed that management can adopt a staggered approach to the institutionalisation of KM (Kok, 2003). 'The institutionalisation of KM is an evolutionary process consisting of different phases and activities taking place over time' (Davenport, 1998). It was evident in this discussion that KM plays an important role in the performance of an organisation. The discussion also highlighted how organisations dealt with KM. Detailed discussions on KM enablers are presented in the literature review chapter, which also highlights the importance of creating a knowledge management based organisation. In the next section, the backgrounds of the selected banks are presented.

1.3.3 Background of Nedbank

The previous section presented a brief discussion of KM practices in banks. This section is a presentation of the background of one of the selected banks – Nedbank. According to Nedgroup (2012), Nedbank was founded in 1831 as the Cape of Good Hope Bank in Cape Town. In its one hundred and eighty-year (180 years) history, Nedbank has grown to become a force to be reckoned with within the South African banking industry. Currently, Old Mutual holds the majority of shares (51%), whilst the other forty-nine per cent (49%) is made up of different shareholders within and outside the borders of South Africa. When Old Mutual became the

majority shareholder in 2004, strategic and structural changes were implemented to restore the performance of the group and lay a foundation for sustainable growth into the future. Nedgroup (2011) states that, at the Annual General Meeting (AGM), held on the 4th of May, 2005, shareholders formally approved the resolution to change the name of the holding company from Nedcor Group Limited to Nedbank Group Limited. Six (6) Strategic Business Units (SBUs) were formed and these are: Nedbank Capital, Nedbank Corporate, Retail and Business Banking, Group Technology Systems Services (GTSS), Nedbank Africa and Risk Management. The essence of unbundling or establishing was to enhance performance and create SBUs that could create and share knowledge (Nedgroup, 2011).

According to Nedgroup (2011), 2005 was the year Nedbank witnessed a strong performance from all operating divisions. Resources were directed towards improving overall client service as well as creating a high performance culture. A more outward focus was evidenced by the launch of a number of exciting new products, a new brand expression, 'Make Things Happen', and a new advertising campaign (Nedbank, 2011). In view of this strategic move and focus, Nedbank used competitive intelligence and knowledge retrieval systems to gather the dictates of the banking market and then management used intuition to make business decisions. In support of Nedbank management's decision to use intuition, Grant and Grant (2008) and Gaffoor and Cloette (2010) believe that management make business decisions to generate and utilise information to gain competitive advantage.

1.3.4 Background of First National Bank (FNB)

FNB is a subsidiary of the FirstRand Group (FirstRand Group website, 2011). FirstRand was created in its current form in February 1998, through the disposal of Anglo America's interests in First National Bank and Southern Life, as well as the merger of these assets with Rand Merchant Bank (RMB) and Momentum. At the time, this was the largest transaction in the history of local financial services. FirstRand Limited is a multi-branded financial services group whose various companies and divisions are involved in financial services activities, such as retail, corporate, investment and merchant banking, short-term insurance, life insurance, employee benefits, health insurance and asset management. Since 1998, the Group has grown through a combination of corporate action and organic growth (FNB, 2011). Examples of corporate action include:

In March 2002, FirstRand Bank acquired the mortgages book of NBS for R11.9 billion. At the time, NBS was a distressed bank which needed to reduce its asset base. The book was integrated with FNB's existing residential mortgages book and significantly increased the bank's share of the

South African residential mortgage market (FNB, 2011). In June 2002, FNB Namibia merged with Swabou Holdings to become the largest bank in Namibia and a major player in the bank assurance market (FNB, 2011).

In September 2002, FirstRand Bank acquired the housing book of Saambou Bank which, at that time, was under curatorship. The transaction was valued at R1.4 billion and significantly enhanced FNB's position in the low- and medium-income housing market. In October 2002, WesBank acquired the motor vehicle financing book of Barloworld Limited for R830 million (FNB, 2011).

In addition to its growth strategies, FNB established OutSurance, Discovery Health, branches in Africa, and Momentum Insurance as part of its subsidiaries. In addition to these expansion strategies, FNB has been at the forefront in innovative banking products and services and technologies such as the use of interactive communication channels – Short Message Services (SMS) and Twitter (FNB, 2011). FNB and Nedbank were selected for this study for the following reasons:

- Both banks constitute the *crème la de crème* of the South African banking industry characterised by four commercial banks of which the other two big commercial banks are Standard Bank of South Africa and Allied Banks of South Africa (ABSA). The study selected FNB and Nedbank for the following reasons:
- FNB was chosen because it is the second largest South African commercial bank (after ABSA) in terms of staff complement, assets and branch network (Moneyweb, 2012).
- Nedbank was selected because the researcher was formerly employed by the bank so permission to conduct a study on Nedbank was already granted and recruiting participants for the study was relatively easy.
- Selecting one bank would have sufficed, but because a comparative study is applied in this study, it is of paramount importance to extrapolate different research issues. If two or more cases show to be supporting the same theory, replication can be claimed and the greater the number of case studies that show replication, the greater the rigour with which theory has been established (Rowley, 2003:275). A detailed discussion of the case study design is presented in chapter three. The research problem is described in the next section.

1.4 Research problem

The observation that banks were not establishing KM systems and appointing knowledge management champions motivated this study. In addition to that, many people apparently

misconstrued KM to be IT thus impeding KM initiatives in selected banks. Being a highly competitive industry, South African banks are compelled to shift their focus from products to knowledge and value added services, knowledge creating and knowledge utilising activities. However, no documented study or survey at selected banks had investigated why that was so and what needed to be done to improve it. The literature review revealed that there are knowledge management theories that have not comprehensively articulated the impact of the current knowledge management practices in selected banks. Examples are the resource-based theory, the adaptive structuration theory and the organisational conversion discussed in section 2.5 of Chapter Two. There is uncertainty about whether the use of KM principles and tools could partly enhance organisational performance. Kok (2003) and Grant (2008) recommend that organisations should manage knowledge as effectively as possible and they can only do this by drawing on the abilities, insights and skills of a new category of professionals called knowledge officers to increase organisation.

Kok (2003) and Grant (2008) posit that organisations that fail to generate and utilise information and knowledge lose market share to competitors. In the past, it was easy for organisations to gain market share on the premise of products, but in the knowledge economy distinct and superior service offerings are the cornerstone of organisational growth. 'Knowledge and information have become key strategic tools needed to make informed decisions in highly competitive environments. In the absence of information and knowledge, organisations cannot determine their destinations let alone craft strategies to sustain and achieve organisational competitive advantage' (Kok, 2003).

This study was undertaken after realising that the impact of the fast-changing information environment of the 21st century makes it reasonable and necessary for an organisation such as a bank to determine and define what constitutes its knowledge assets. This is because knowing about them enables their effective use, especially if they are organised in a way that is meaningful to the users (Rao, 2004). To a large extent, this requires quality information output, but at the same time doing it inexpensively or at no additional cost to the organisation, and avoiding of the Pareto syndrome (that is the tendency to spend 80% of resources on 20% of the users), especially as budgetary constraints are a major factor in service provision. The important point is for organisations to recognise their valuable knowledge assets and avoid putting themselves where, according to Sharma and Chowdhury (2007), 'they fail to figure out what knowledge they need, or how to manage it in the context of application'

1.5 Purpose of the study

The purpose of this study was to investigate the role of KM in enhancing organisational performance in selected banks of South Africa, namely FNB and Nedbank. The study also sought to investigate and recommend the KM practices and strategies that could be adopted by the selected banks in South Africa to create, capture and retain knowledge as a competitive advantage and for future use in the banks.

1.6 Research objectives

The following research objectives guided the study:

- To assess the level of understanding of KM in selected banks;
- To determine KM policies present in selected banks;
- To investigate the extent to which banks have implemented KM practices such as knowledge creation, sharing and retention through the assessment of existing KM enablers;
- To investigate the role of KM enablers in the implementation of KM strategies in selected banks;
- To determine the factors that inhibit knowledge creation, retention and sharing in selected banks;
- To determine the KM strategies of safeguarding knowledge in selected banks;
- To assess KM systems and solutions in the selected banks;
- To make recommendations to management on KM issues.

1.7 Research questions

The following research questions were formulated:

- What is the level of understanding of KM in selected banks?
- What KM policies are present in selected banks?
- To what extent have banks implemented KM practices such as knowledge creation, sharing and retention through the assessment of existing KM enablers?
- What is the role of KM enablers in the implementation of KM strategies in selected banks?
- What are the factors that can inhibit knowledge creation, retention and sharing in selected banks?
- What KM strategies are needed to safeguard knowledge in selected banks?
- What KM systems and solutions are in selected banks?
- What recommendations can be made to management on KM issues?

1.8 Justification for the study

Creswell (1994) observes that justification of a study explains the importance of the study. The importance of carrying out detailed research on the role of KM in enhancing organisational performance in selected banks of South Africa cannot be overstated. Firstly, as a concept, knowledge management is relatively new in many organizations (Dewah, 2011). While these banks are producing and acquiring knowledge there is no guidance on the capture and retention of such knowledge. In this regard, it is hoped that this study would make a significant contribution towards the existing body of knowledge in the field of knowledge management in banking institutions. The study is intended to provide an integrated picture of knowledge retention practices in two commercial banks. This study suggests ways of improving knowledge management in the banking industry. The study's findings and recommendations make original contributions to the existing body of knowledge on strategies of corporate knowledge retention and to existing works on knowledge management globally. Better knowledge management practices would most probably enable the selected banks acquire and sustain a competitive edge. The banks may adopt the recommendations of the study which are based on the research findings.

Secondly, the study distinguishes KM from IT solutions, thus providing opportunities to banks and other organisations to reconsider their perception and stance towards KM. In addition to this, the study may stimulate interest in top management to create KM systems and platforms, where Chief Knowledge Officers (CKO) are appointed to spearhead KM. The study highlights that IT contributes to KM by creating databases for storing, accessing, organising and communicating information to facilitate the transfer of and access to knowledge. Developments in KM must be concerned with less data and more organisational learning-especially the transfer of best practices and the management of intellectual property. Grant (2008) sums it up by saying that 'a growing body of evidence points to the ability of KM to generate substantial gains in performance'.

The study further points out that knowledge sharing and replication involves the transfer of knowledge from one part of the bank to be replicated in another part of the bank. IT-based knowledge management systems facilitate such transfers and relationships. Therefore, it is imperative to highlight this anomaly in an effort to bring to top management's attention the importance of appointing a knowledge leader. The study will record, analyse and determine if indeed KM plays a role in organisational performance. Findings from the study demonstrate a series of critical issues related to KM: the importance of knowledge sharing, having a knowledge strategy, KM enablers, benefits of KM and top management involvement. KM is becoming a key

strategic and managerial tool and much emphasis has been placed on managerial KM competences at the expense of giving prominence to the need for organisation-wide implementation of KM systems. The study will be a learning paradigm as it extends the knowledge base that currently exists in the field of knowledge management. In addition to the above significance, a comparative study will be undertaken to compare and contrast the results of a KM-based and a non-KM-based organisation. The findings from this study will be the benchmark from which banks need to select the best route whilst helping to raise awareness among bank employees and top management with the potential applications and benefits of KM. The study provides recommendations to organisations to invest heavily in technological knowledge systems, attempting to bring proximity into the global firm, which operates across time and space.

Having justified its significance to all stakeholders, this study was poised to expand the general knowledge base for further research into the area of knowledge management. The study also highlights the benefits of KM: improved customer services, better business practices, leveraging world-wide competence, optimisation of communication and collaboration, faster innovation, higher productivity and the financial worth of the organisation is increased. On the other hand, the study advances the understanding and perception of KM in the banking context and makes recommendations to banks to desist from compromising their strategic planning by basing decisions only on data easily accessible within their formal corporate information systems.

Another justification for this research was to review the perceived and actual knowledge handling practices at FNB and Nedbank. The use of technology as an enabler in tapping knowledge, the importance of collaboration among involved parties, and the roles of KM practitioners in complementing the creation of KM programmes are similar to conclusions that studies by Ajiferuke (2003), Anderson (2007a), Branin (2003), Farkas (2007), Foo and Ng (2008), Mostert and Snyman (2007) and Singh (2007) have in common. The justification for investigating KM practice in the context of banks was also the fact that, in the modern information environment, banks have to know how and be always ready to change the way they operate. Information dissemination and consumption keeps changing. Listening and acting upon the needs of customers and stakeholders, and on effective communication, information sharing, and knowledge retention are assumed to be critical to the success of KM initiatives. Given this scenario, however, it is noted that knowledge is not tangible. As such, it is not so easy to predict possible outcomes of KM initiatives.

1.9 Originality of study

In research, originality starts with the tools, techniques and procedures used. The tools refer to the creation of instruments to do the study, such as a questionnaire. Techniques include processes such as interviewing and observation, while the research procedure includes obtaining Institutional Review Board (IRB) consent and researching during private personal time rather than during official working hours (Mavodza and Ngulube, 2011). The canonical sociological literature on the place of originality in scientific evaluation defines originality as the making of a new discovery that adds to scientific knowledge (Guetzkow and Lamont, 2004:3). The sociological literature links the importance of originality to its presumed role in knowledge building. After all, it is through originality, in greater or smaller increments, that knowledge advances (Guetzkow and Lamont, 2004). In their study, originality in human and social sciences, Guetzkow and Lamont (2004) identify seven categories of originality frequently used in social, human sciences and history and these are original approach, understudied area, original topic, original theory, original method, original data and original results. On the other hand Phillips and Pugh (1999:61) state that the Doctor of Philosophy (PhD) is awarded for an original contribution to knowledge, whilst Francis (1976) in Phillips and Pugh (2005) argues that one can be original in a number of ways such as:

- Setting down a major piece of new information in writing for the first time
- Continuing a previously original piece of work
- Carrying out original work designed by the supervisor
- Providing a single original technique, observation or result in an otherwise unoriginal but competent piece of research
- Showing originality in testing somebody's idea.

In this study, originality was premised on setting down a major piece of new information and testing of somebody's ideas – Nonaka's (1991) SECI model or organisational knowledge conversion theory. There have not been studies at the selected banks specifically targeted at KM in banks, and that makes this particular study original. In fact, as far as this researcher knew, there was no detailed and structured research into any aspect of organisational knowledge management that had been conducted on the role of knowledge management in enhancing organisational performance in selected banks of South Africa. This is the first study conducted in the South African banking industry investigating the role played by KM in enhancing organisational

performance. Not only does it contribute to the knowledge of KM research, but it also adds to the existing literature on the progress of KM development in relation to financial performance, service delivery and market-share growth in banks and other institutions internationally.

Originality in this research therefore relates to the study of a particular case to understand how people in a bank can be major players in the capture, retention and creation of knowledge and, at the same time, be able to disseminate it and use collaboration as a tool. Using the results from other relevant studies that have been conducted elsewhere by scholars such as Nonaka (1991; 1995), Kok (2003) and Grant and Grant (2008) which focused on strategies, topologies or significance of KM, this study focused on the role of KM in selected South African banks. The study used findings from KM studies conducted elsewhere to gauge the impact of knowledge management in South African commercial banks. The studies included: KM in law firms in Botswana (Fombad, 2009); knowledge management practices and the role of an academic library in a changing information environment (Mavodza and Ngulube, 2011); knowledge retention strategies in selected Southern African Public Broadcasting Corporations (Dewah, 2011); KM in military organisations (Manuri and Yaacob, 2011); and KM in local government-Stellenbosch Municipality (Gaffoor and Cloette, 2010). Averweg (2012) also conducted a study on whether or not the intranet augmented knowledge-sharing in the eThekweni Municipality and Mphahlele (2010) conducted a study that investigated KM practices in the South African public sector specifically national government. These studies have been reviewed to ascertain the role of KM in organisations.

1.10 Research design and methodology

A multi-method strategy was used in this study. The research started with a theory (as pointed out in the theoretical framework discussion presented earlier in the chapter) supported by the use of interviews and document analyses. As pointed out by Hesse-Biber (2010), the use and interpretation of qualitative data were used as merely helping to illustrate or further ‘confirm’ the quantitative results. The use of multiple data sources helped this study create a richer set of data which promoted the generalisation of the study’s findings (Lincoln and Guba, 1985). In the next section, a brief discussion of the research methodology is presented.

1.10.1 Research methodology

Research methodology is the mapping out of an approach to solve a research problem. Studying FNB and Nedbank involved an investigation into different types of systems and groups of people, which resulted in more than one sub-unit of analysis; it is regarded as an “embedded case study

design” (Yin, 2003:46). The contexts in this study were FNB and Nedbank, the units of analysis were the different groups of staff from whom data were collected, and the evidence was that KM principles, where applied, resulted in enhanced organisational performance. As pointed out, both quantitative and qualitative research strategies were used in this study.

1.10.2 Research design

The use of an embedded case study design was motivated by the fact that the case study answered the ‘what’ and ‘how’ questions (Rowley, 2002:17) of the study. The case study approach placed a great premium on objectivity and reliability of findings and encouraged replication of results (Saunders, Lewis and Thornhill, 2007:85), thus supporting the assumption that the researcher was neither independent of nor affected by the subject of the study. This study was done in the context of multiple cases (two banks were selected for the study), both as a unit of analysis, and as a research method.

1.10.3 Sampling

A sample includes all individuals in a target population (Diamantopoulos and Schlegelmich, 2005:12). The population for two banks was forty-six thousand (46,000) employees which was too large for this study. The data for this study resided in middle and senior managers of selected banks; therefore it was imperative to collect data from the relevant sample. The combined population for middle and senior managers was one hundred and ninety (190 managers) who were considered for this study. Simple random sample selection was used to collect quantitative data. Diamantopoulos and Schlegelmich (2005:12) state that sample members are chosen randomly for inclusion in the sample, with each population element having an equal probability of being selected. Both purposive and convenience sampling techniques were used to collect qualitative data because the sample members were readily available or accessible and the researcher had specific research objectives in mind.

1.10.4 Data collection instruments

The type and quality of data collected in any study should be plausible. To ensure the integrity of data, credible data collection instruments (a questionnaire, interviews and document analysis) were used during the research process. Besides the extensive literature that was reviewed in this study, the questionnaire and interviews were used to extrapolate data substantiating the theory of the role of KM in enhancing organisational performance, resulting in triangulation (Rowley,

2002:16). Triangulation involves the process of combining and comparing data from multiple sources, whilst corroborating the findings.

1.10.5 Data analysis and presentation

Data was coded and cleaned before being presented in tables and charts (Ngulube, 2005). The study identified relationships between variables to determine emerging themes that support the study. The researcher separated relevant data from irrelevant data in the survey and then broke it down into small segments, which were grouped into categories that reflected the various aspects of the phenomenon as it was experienced. Content analysis was used to analyse qualitative data.

1.10.6 Ethical considerations

According to Cohen (2007:01), ethical considerations are an essential aspect of any research. There may be several factors that may confront researchers. Firstly, this study was approved by the Department of Information Science at the University of South Africa (UNISA) and cleared by UNISA's Research Ethics Board before being undertaken. These processes were undertaken to ensure compliance with UNISA Policy on Research Ethics (2007). The policy specifies that researchers must avoid undertaking secret or classified research. In doing so, the study ensured the following ethical dimensions were addressed to avoid diluting the research process.

Inducement to participate: Individuals' participation was freely given, specific and based on informed consent. Direct or indirect coercion, as well as undue inducement of people in the name of research, was avoided. The researcher informed prospective participants of the purpose of the study (UNISA, 2007; Resnik, 1999) and the study participants were advised that participation in the study was voluntary.

Planning the research: The researcher avoided reporting of misleading results by drafting and properly executing a research plan. Steps were also taken to protect and ensure the dignity of participants as well as those that could be affected by the results of the study (Resnik, 1999).

Responsibility: According to UNISA (2007), researchers need to maintain the dignity and welfare of their participants. This entails protecting participants from harm, unnecessary risks, and mental or physical discomfort that may be inherent in the research procedure. The researcher ensured that participants' dignity and anonymity were protected. Interviews were conducted in safe environments.

Personal information: In accordance with Management College of Southern Africa (2012:46), personal information was collected and processed with the specific informed consent of the

participants involved. The researcher ensured that participants' personal information was not discussed with any third parties and responses were locked away in a safe place. During data collection, participants were advised not to write their names on the questionnaires and the responses were kept locked away in the safe.

Honesty: The research was conducted in an honest, fair and transparent manner and the participants were informed of the purpose and benefits of the study. The participants were randomly selected (to eliminate favouritism) when the questionnaire was sent out. The scope and limitations of the study are briefly highlighted in the section that follows.

1.11 Scope and limitations of study

The scope and limitations of the study are discussed below. The first section discusses the scope, followed by limitations in the second section.

1.11.1 Scope

This study investigated the role of knowledge management in enhancing organisational performance. This research highlighted that its foundation was based on Polanyi's (1962) theory of personal knowledge and knowledge management theories. The resourced-based, organisational knowledge conversion and Adaptive Structuration theories were regarded and adopted as cornerstones of this pragmatic research. Multiple cases were considered to determine replication in support of theory. The study does not discuss the banks' products and/or services, reasons for high staff turnover, private and confidential information or issues outside the parameters of this study.

1.11.2 Limitations

The first limitation of the study was that only middle and senior level managers were involved in the research; therefore, the opinions and perceptions were one-sided. The researcher did not include lower level management and non-managerial employees as this would have entailed studying the whole population, resulting in information overload. Collecting data from forty-six thousand (46 000) participants would have prolonged the research, only to discover that the data collected were irrelevant to the research questions. The second limitation was the sensitivity the research carried. Some respondents did not divulge as much data as was needed for the study due to fear of reprisals. Strict bank policies on privacy and confidentiality were observed.

1.12 Organisation of the thesis

This study comprises six chapters, with each chapter starting off with an introduction and concluding with a summary.

Chapter 1: Introduction and theoretical background

Chapter One provides an introduction to KM and the theoretical background and context of the research. The chapter also discusses the research problem, problem statement, purpose, significance, objectives, questions, scope, limitations and layout of the thesis. The facets underpinning the originality of this study are also discussed in this chapter.

Chapter 2: Literature review

Chapter Two highlights the historical developments and evaluation of existing KM enablers, knowledge work, benefits, practices and other empirical studies done. The literature includes company records, reports, academic papers, journals, the internet and other related sources related to the study. The main areas covered in this chapter are types of knowledge, knowledge management systems, enablers, studies on knowledge management, and organisational performance. Multiple cases are discussed to determine if they support the theory that KM plays a significant role in enhancing organisational performance.

Chapter 3: Research design and methodology

This chapter focuses on the research design and methodology strategy employed for this study. Areas covered in this chapter are population, sample frame, size, selection criteria, data quality and collection methods. In addition, the measurement instruments used (their development, standardisation, item formats, reliability, validity and norms) are discussed. The role of the researcher is defined, together with the steps that are taken to strengthen the trustworthiness of interpretations and conclusions. Each aspect of investigation is justified and explained in full. The study also discusses ethical considerations during the research process.

Chapter 4: Findings and presentation of study findings

Chapter Four presents and interprets the findings of the research. These results are presented in a logical sequence, in the order in which the specific purposes of the study have been formulated. The study presents and analyses results directly relating to the methods of analysis, justification for their choice, the results of the investigation and the significance of the results.

Chapter 5: Analysis and interpretation of results

The overall research and the research analysis are discussed in Chapter Five. A critical evaluation of these results is done in an attempt to ascertain their contribution to knowledge in the field of knowledge management. The findings are compared with results of previous studies insofar as this may contribute to better understanding of the research problem.

Chapter 6: Summary, conclusions and recommendations

The last chapter of the thesis wraps up with a summary of chapters and findings of the study. Gaps identified in the study are summarised, and conclusions and recommendations to bridge the gaps are made in this chapter. The last part of the chapter points out what further investigations appear to be necessary for a better understanding of KM.

1.13 Referencing style used in the thesis

Mavodza and Ngulube (2011:26) posit that conducting research and acknowledgement of scholarly works and ideas by other people are achieved by referencing and citing. The UNISA College of Postgraduate Studies (2012) recommends the Harvard citation style. The significance of the Harvard citation style is the fact that ‘in a doctoral thesis, appropriate citation and critique signals the espousal of the appropriate values, etiquette, style and cultural savvy’ (Parry, 1998:287).

1.14 Chapter summary

Chapter One provided an introduction and discussion on the theoretical background to the study of knowledge management, highlighting the significance, objectives and purpose of the study. The researcher provided detailed discussions on the significance and originality of the study. In the discussion presented, every effort was made to ensure clarity in all sections of this chapter. The next chapter describes how past and recent literature converges on the view that KM plays a crucial role in enhancing organisational performance.

CHAPTER TWO: LITERATURE REVIEW

Do not hover always on the surface of things, nor take up suddenly, with mere appearances; but penetrate into the depth of matters, as far as your time and circumstances allow, especially in those things which relate to your profession (Isaac Watts, 1743).

2.0 Introduction

Chapter Two discusses the historical developments and evaluation of existing KM enablers, knowledge work, KM practices, KM systems and empirical studies on KM. Reviewing literature helps the researcher to establish how other scholars have investigated the same problem (Mouton, 2004). Several sources of published literature were consulted extensively to unravel the depth of the subject of knowledge management. The sources included company records, reports, academic papers, journals, books, the internet and other sources related to the study. The literature reviewed in this chapter is discussed with the aid of a literature research map and the following sections precede the literature map: the importance of literature review, referencing and sources of information.

2.1 The role of the literature review

According to Mavodza and Ngulube (2011:29), doing some reading on a topic helps to clarify matters. While the aim of a literature review is to support one's argument, it also summarises and synthesises the ideas that others have already put forward. The researcher has already pointed out that one of the reasons why this study was undertaken is attributable to the gap that has been identified which has not been addressed by previous research. The literature review helps to refine and shape the direction of the investigation. Leedy and Omrod (2005:64) confirm that the literature review allows one to look again (review) at what others have done in areas that are similar, though not necessarily identical, to one's own area of investigation.

By reviewing various sources of literature, the researcher evaluated the knowledge that previous research has contributed. Reviewing studies done by distinguished scholars and academics such as Nonaka (1991&1995), Kok (2003), Mostert and Synman (2007), Ngulube and Lwoga (2007), Wamundila and Ngulube (2011) and Fombad (2009) make the study more significant and important in contributing to the body of knowledge. The study of KM is seen as a progressing paradigm that contributes significantly to an organisation's performance. Reviewing literature also helps to find out what methodologies, sampling procedures and research designs have been used before. The researcher compares and contrasts these methodologies, research designs and

sampling procedures against the results obtained, thus enabling the researcher to avoid previous mistakes which have the potential to impede the research.

By reviewing various scholarships, the researcher will be able to summarise and synthesise ideas put forward by other scholars. This is because a summary of the literature reviewed is a recap of the important information about the resources, and a synthesis is a re-organisation, or a reshuffling, of that information. Reviewing scholarships enhanced the interpretation of old material to bring new ideas in the area of knowledge management in selected banks. Leedy and Omrod (2005:80) suggest that, in the summary, “you gather up all that has been said and describe its importance in terms of the research problem”. After reviewing relevant literature, the researcher was able to trace the intellectual progression of the field of knowledge management including major debates.

In doing a literature review for this study, it was possible to evaluate the sources and use those that were most pertinent or relevant to KM practice in banks/organisations. The literature review therefore acted as a type of handy guide, that is, a useful resource that helped guide the research process and maintain focus. The research and views of scholars such as Nonaka (1991 & 1995), Takeuchi and Nonaka (1995), Kok (2003), Barclay (2003), Sarrafzadeh, Martin and Hazeri (2006), Ngulube and Lwoga (2007), Vasconcelos (2008), Grant and Grant (2008), Grant (2008), Fombad (2009), Wamundila and Ngulube (2011) and Dewah (2011) see KM as playing an important organisational role, therefore makes the research more significant and important in contributing to the body of knowledge.

2.1.1 Referencing

Referencing is letting readers know where you learned or found the information that you are writing. By quoting various sources, the researcher would be exercising citation which demonstrates the existence of knowledge and an understanding of the subject, an awareness of works and authors that have been instrumental in the development of, or provide meaningful comment on, the subject, and provide a framework to work from in a thesis. Bell (2005:63) points out that:

The best way to ensure you will never use other people’s words or ideas as your own without acknowledgement is to be meticulous about your note-taking and in recording exact details of references.

References are “frozen footprints in the landscape of scholarly achievement; footprints which bear witness to the passage of ideas” (Cronin, 1981:16). The Harvard referencing style was used as per the recommendations of the School of Interdisciplinary Research and Postgraduate Studies at the University of South Africa.

2.2 Sources of information

It was pointed out in the introductory section that reviewing literature enabled the researcher to evaluate knowledge from previous studies and to summarise and synthesise some ideas. The FNB and Nedbank Group Annual reports were used to determine how KM issues were being addressed by selected banks. Document analysis enabled the researcher to determine if there were any emerging themes between the two financial institutions as far as KM was concerned. More information came from books, journals, academic papers and the internet to explain in full the concept of KM. The researcher attended seminars and workshops to gain a deeper understanding of KM. During these seminars and workshops, it was established that some organisations and people still misconstrued knowledge to be information.

Nedbank Group’s (2011& 2012) and FNB’s (2011& 2012) reports indicate that virtually every bank employee has a computer or laptop that can be used for work. The survey results also indicate that employees are regularly using e-mail, Facebook, MySpace, blogs, wikis and Twitter interactive communication systems. By implication, these are platforms that can potentially be used to enhance knowledge creation and sharing. From the books, dictionaries, and journals came information that explained the concept of KM more fully, including the explanation of terms. Other sources were ProQuest Digital Dissertations and Theses, UNISA Libraries (dissertations from within and outside South Africa), and journals for scholarly articles as well as the internet (though highly unreliable and therefore requiring evaluation), social networking in Facebook, wikis and blogs. A number of databases which were extensively used as sources of scholarly articles in this research now allow direct exportation of citations into such citation organisation packages as Reference Manager, ProCite, BibTex and Endnote. Examples of databases from where information was collected include EBSCOhost, SAGE, Emerald, JSTOR, and LexisNexis.

In order to effectively discuss KM in the context of South African banks, it is necessary to understand clearly what it means, including its theoretical foundations. That way, the debate on whether it is fully, partially or not at all relevant in banks in the current information environment can be pursued better. To progress in the literature review, a framework that depicts the literature

reviewed and the progression of ideas helps in making the process organised. In this research, a map of research literature was created as illustrated in Figure 2.1.

2.3 Map of research literature

A literature research map allows the visualisation of who is doing the same or similar type of research, what has been written, what is the consensus, or what discussions are happening. This is an idea suggested in the Learning Light: Literature Road Map model which originates from the University of Sheffield (2007), as well as Ngulube (2003:32) and Altinay and Paraskevas (2008:51). Creswell (2003:39) suggests a “hierarchical order that ends with a proposed study that will extend the literature”, or flow charts or circles, but all with the same goal of depicting what is important and relevant. Altinay and Paraskevas (2008) and Creswell (1994 & 2007) suggest that, in creating a useful map of literature, theoretical areas influencing the development of knowledge for the topic should be included (Creswell, 1994). At each stage, subject headings are placed in a way that represents their relative connection to each other. There is also a need to cite the important authorities. Ideas and subject headings are linked with the use of directional arrows that reflect the connections between subject headings as shown in Figure 2.1.

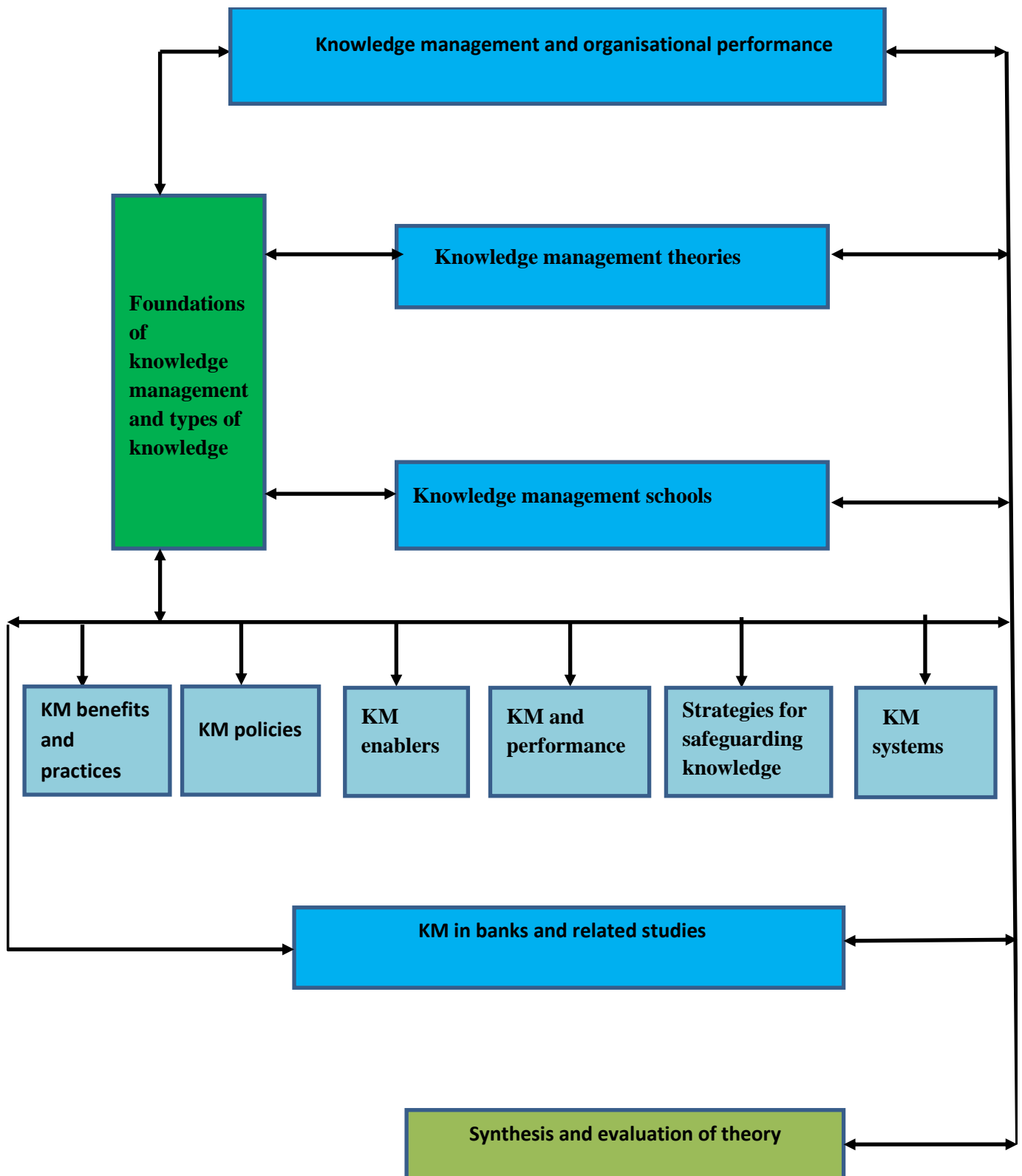


Figure 2.1 Map of research literature

2.4 Foundations of knowledge management

In the first chapter of this study, a background of knowledge management was briefly discussed. It is imperative to restate the major tenets of the foundations of KM in this section to substantiate the discussion on the role of KM in organisations. KM has emerged over the last decade due to many intellectual, societal and business forces (Wiig, 1999). Wiig (1999:3) states the historic efforts as follows:

- Religion and philosophy (epistemology) to understand the role and nature of knowledge;
- Psychology to understand the role of knowledge in human behaviour;
- Economics and social sciences to understand the role of knowledge in society; and
- Business theory to understand work, and its organisation.

The diversity in the origins and meaning of KM means that the theoretical foundations are also likely to vary depending on the discipline in which it is being discussed and/or applied (Kok, 2003). Mostert and Synman (2007), Nguyen, Neck and Nguyen (2009) are of the view that KM is built on organisational culture, organisational behaviour and artificial intelligence theoretical foundations. Lloria (2008:78) is of the view that KM is taking its own direction towards information, knowledge-creating architecture and innovation systems. The knowledge-creating architecture and innovation systems merely refer to complex information technology (IT) systems which also play a crucial role in the day-to-day operations of businesses. The researcher agrees with Wiig (1999), Mostert and Synman (2007) and Nguyen, Neck and Nguyen (2009) that KM is built on a variety of societal, intellectual and societal value systems and that the above theories and studies show that KM can be the deciding factor if leadership can take responsibility in how knowledge is created, retained, shared, stored, recognised or retrieved in the organisation. The above discussion has made it clear that knowledge and information are different but they are depend on each other, and it is hoped that, when capturing information, organisations should be reminded that the information can be transformed into knowledge for future re-use.

However, Mavodza and Ngulube (2011:45) state that KM originates from a variety of disciplines where it is realised that knowledge is a valuable asset which can play a pivotal role in an organisation's performance. This is further supported by Tiwana (2008:51), Kok (2003) and Cong and Pandya (2003) in their findings that organisational performance improves if three basic components of knowledge management are present in the organisation and the components or practices are knowledge acquisition, knowledge sharing and knowledge utilisation.

2.4.1 Knowledge versus information

In many situations, people tend to use data and information interchangeably, yet the two terms are different. In this instance, organisations misconstrue knowledge to be information. This section discusses the differences between the two terms to bring clarity. When facts and data are organised to characterise a particular situation, they become information (Wiig, 1999). In this way data are made meaningful by being put into context. Abraham (1999) also states that there is a difference between information and knowledge, in that information is a tangible representation of data, usually in some end-user-oriented product like a car, book, or article, while knowledge is information in context of an individual's role, learning behaviour or experience. Nonaka and Takeuchi (1995) regard explicit knowledge as information due to the fact that explicit knowledge is outside the mind of individuals.

Knowledge also differs from information in that it can be put into action while information is given to end-users who transform it into knowledge through actions. Unlike knowledge, information can be stored and retrieved easily. Holbeche (2005) and Smith (2005) are of the view that information is shared through a variety of media such as departmental meetings and conferences. Unlike information, knowledge (tacit) is not easy to share. With the advent of interactive communication channels (such as WhatsApp, Facebook, Twitter, e-mail), it is believed that these media of communication have rapidly transformed the information communication landscape. Parties using any of the above communication channels receive massive volumes of information which they store and easily retrieve when the need arises.

Organisational knowledge is both explicit and tacit, and organisations must focus on knowledge because it is the most important resource for the business, as well as focus on how the organisation can capture and use the knowledge to the advantage of the organisation (Stafford and Mearns, 2009). In the knowledge economy, the economy depends on knowledge for growth, provision of superior and differentiated services, highly educated and trained people and knowledge (Drucker, 1995 and 1999). Organisational knowledge stored in both individuals and other repositories for present and future use is referred to as organisational memory (Walsh and Ungson, 1997). Some companies, including South African banks, having realised the importance of knowledge, are forging strategic alliances and partnerships with each other in order to expand the knowledge resources they have at their disposal (Drucker, 1999; Mostert and Synman, 2007).

2.4.2 Types of knowledge

This section discusses the two categories of knowledge available to an organisation as well as to individuals. Polanyi (1962), Nonaka and Takeuchi (1995) concur that knowledge has been categorised into tacit and explicit. Explicit is codified knowledge while tacit is personalised knowledge (Kok, 2003).

2.4.2.1 *Explicit knowledge*

Explicit knowledge is the knowledge that is found outside the minds of individuals. According to Tiwana (2008), explicit knowledge is captured in the form of records, databases, websites and charts and this knowledge can easily be expressed in words, numbers and symbols. Explicit knowledge can also be communicated and shared or transferred to others by the use of information technology. The wide use of technology in the dissemination of explicit knowledge has rapidly transformed the information communication landscape. With the use of information technology (IT), a perception and assumption has been developed in the minds of many people that knowledge is resident within IT. From the above assertion (Magnier-Watanabe, Benton and Senoo, 2011) it is clear that IT is a facilitator or enabler of the transmission of explicit knowledge and knowledge itself. According to Jain (2009) and Jacobs and Roodt (2007), explicit knowledge can be documented, shared or articulated into formal language. Another way to view both explicit and tacit knowledge is to see explicit knowledge as “science” and tacit knowledge as “art” (Luen and Al-Hawamdeh, 2001).

Grant and Grant (2008) further illustrate that explicit knowledge can be packaged as information whereas tacit knowledge is practical knowledge that can be linked to the key of getting things done. From a banking perspective, explicit knowledge is kept in routine records, electronic archival systems (databases), e-mails, policies and on the banks’ intranets (websites). Explicit knowledge is codified knowledge –it can be transmitted to individuals formally and systematically as discussed by Takeuchi and Nonaka (2004). During data collection, it was established that Nedbank used e-mails and intranets to transmit explicit knowledge whilst the use of emails, intranets and interactive communication channels (Short Messages Services (SMS)) was more prevalent at FNB than at Nedbank.

2.4.2.2 *Tacit knowledge*

Tacit knowledge is knowledge residing in the minds and cultures of people, as well as the organisation’s experiences (Rowley, 2003). Irick (2007) defines tacit knowledge as personal,

internal or interior knowledge deeply rooted in an individual's experiences, ideas, norms and values and emotions. Tacit is difficult to put into words because it is highly personal and hard to communicate or share with others (Jain, 2009). One important aspect of tacit knowledge is that expertise rests on it, which makes tacit knowledge a competitive advantage. Luen and Ai-Hawamdeh (2001) view tacit knowledge as knowledge possessed by individuals and communities that is optimised through the creation of communities of practice that can hold, share and grow tacit knowledge.

Jain (2011) is of the view that tacit knowledge can be achieved through face-to-face meetings, teleconferencing and electronic discussions, whilst Nonaka and Takeuchi (1995) think that tacit knowledge can be transmitted through social interactions between individuals – that is, through the socialisation component of the SECI model. Through dialogues, discussions, experience-sharing and observation, tacit knowledge is amplified at the group or organisational level. One would then ask, “How is this tacit knowledge retained by organisations?” Hornby-Atkinson (2007) argues that, in this way, there will be little risk that the know-how of the bank leaves at the same time of the employee's retirement. This view suggests that socialisation can be utilised by banks to retain organisation tacit knowledge that is possessed by experts and experienced individuals in the organisation.

Unlike explicit knowledge, tacit knowledge is dynamic and fast-changing, so it is knowledge in action. Fombad (2009) states that tacit knowledge is more important and generally of a higher value than explicit knowledge because of its fast-changing nature, since it can determine to what extent companies will be competitive in a turbulent market. Literature proves that there is agreement among renowned researchers that tacit knowledge is the most important type of knowledge that exists in organisations (Tiwana, 2008; Nonaka and Takeuchi, 1995, McAdam and McCreedy, 1999) because it can be put to action and used in innovation and creative practices, thus adding value to goods and services. Tacit knowledge represents knowledge based on individuals' competences, experiences and skills of employees (Li and Zhu, 2009; Jacobs and Roodt, 2011). Organisations need both tacit and explicit knowledge as competitive advantages, but the creation, sharing, capturing and retention of knowledge is greatly influenced by the prevailing knowledge management practices in the organisation (Li and Zhu, 2009). One of the objectives of the study was to investigate the extent to which banks have implemented KM practices.

2.5 Use of theory in knowledge management

The theoretical foundations of a discipline are the basis on which research and development of the discipline is focused for generating ideas (Bawden, 2008; Denford and Chan, 2011). This research sets out to understand the foundations and existing theories and schools of KM thought and at the same time investigate the applicability of KM practice to banking situations. Seeking theory is based on the fact that theory is objective knowledge, a map that is defined as a system of interconnected ideas that condenses and organises knowledge about the social world (Neuman, 2006; Mearns, 2008). It is a framework for thinking about a problem and may evolve into a statement of relationships among theoretical propositions (Wilson, 1997). A theory helps people visualise the complexity in the world and explains why things happen (Glazier and Grover, 2002; Neuman, 2006). Theories give researchers different perspectives through which to look at complex aspects and social issues, focusing their attention on different aspects of the data and providing a framework within which to conduct their analysis (Sveiby, 2001). Mitchell and Jolley (2007) specify the benefits of using theory as opposed to the use of common sense in doing research by explaining that:

theory tends to be more consistent than common sense..., usually does not contradict itself..., tends to be more consistent with existing facts than common facts..., is not restricted to making common sense or intuitively obvious predictions..., summarises and organizes a great deal of information..., focuses research..., is broad in scope...can be applied to a wide range of situations, researchers can generate a wide variety of studies from a single theory...explains facts with only a few core ideas.

A few of the theories quoted in KM work and their applications are:

2.5.1 The resource-based theory

Penrose (1959) is considered the originator and key contributor of the resource based theory. Other authors, such as Teece (1982) and Wernerfelt (1984), have made significant contributions to it. The theory rests on the premise that an organisation is a broader set of resources and the growth of an organisation involves the exploitation of existing resources and the development of new ones. Penrose (1959) also points out that human capital is not entirely specialised and can therefore be redeployed to allow the firm's diversification into new products and services. This theory points out that an organisation's success is due to joint assets, resources and capabilities which it owns, and these make the organisation different from others. The resources and capabilities enable the organisation to achieve a competitive advantage.

While a subset of resources enables firms to achieve a competitive advantage, another subset leads to superior long term performance. Valuable company resources and capabilities must be difficult to imitate, and not acquired or replaced easily by competitors. Resources that are valuable and unique to the organisation enable the enterprise to generate profits and a sustainable competitive advantage (Pesic, 2007).

In a study of this nature, FNB and Nedbank's resources include capital, equipment, talent, know-how, skill and knowledge. In a knowledge-based economy, knowledge is the most vital resource in banks, displacing capital in the economy and land in the agricultural economy (Lim, 2007). In a knowledge-based economy, knowledge is the most critical element that determines the success of an industrial undertaking (Nghah and Ibrahim, 2008). However, the resource-based theory is silent on how knowledge should be acquired and retained in the organisation. Such weaknesses leave Nonaka and Takeuchi's (1995) organisational knowledge creation theory unparalleled as the most preferred foundation for knowledge management.

2.5.2 Adaptive structuration theory

Adaptive structuration theory is based on Giddens' (1979 & 1984) structuration theory. This theory is formulated as "the production and reproduction of the social systems through members' 'use of rules and resources in interaction'". Poole and DeSanctis (1989) adapted Giddens' (1984) theory to study the interaction of groups and organisations with information technology, and called it adaptive structuration theory (AST). AST criticises the technocentric view of technology use and emphasises the social aspects. Groups and organisations using information technology for their work dynamically create perceptions about the role and utility of the technology, and how it can be applied to their activities. These perceptions influence the way technology is used and hence mediate its impact on group outcomes.

The adaptive saturation theory is concerned with the behaviour of humans as they use technology (such as computers) in a bank. On the other hand the behavioural school implies the way human beings react to the environment, for instance how people behave at FNB or Nedbank, determines how knowledge is managed. The theory also refers to the nature of group-computer interaction since organisations, such as those in the banking industry, now rely heavily on the use of advanced information technology for the purposes of communication and relaying information. Over-reliance on IT has led many organisations and individuals to believe that knowledge is IT, yet AST focuses on communication using information technology, thus highlighting the concepts of appropriation and structuration (Sedera and Zakaria, 2008).

Dewah (2011) posits that the AST draws some links between individuals and organisational learning due to the key concepts that address aspects of group interaction with technology. Organisational learning is regarded as a continuous phenomenon emerging from the social interactions and practices of individuals (Ryu and Chaudhury, 2005). The behavioural school is a kind of community of practice model where there is continuous learning and informal exchange which is enhanced by the availability of knowledge retained and accessible from within as well as outside the organisation. With the advent of interactive communication technologies such as wikis, blogs, Facebook and Twitter, to name but a few, individuals are exposed to new information and knowledge (Taylor and Todd, 1995; Skyrme and Amidon, 2007).

While AST criticises the technocentric view of technology use, it places emphasis on social aspects. Technologies such as computers enable the transfer, sharing and, most importantly, the retention of knowledge for preservation and re-use. However, in this study AST was applicable because the two banks were using state of the art technology. All the banks' processes were automated and each employee in the bank had a personal computer (PC) or laptop and had access to the intranet and internet. Employees extensively interacted with technology which was likely to change individuals' behaviours. As such the theory was applied to knowledge retention strategies.

2.5.3 Organisational knowledge conversion theory

This study is anchored to Nonaka and Takeuchi's (1995) theory of organisational knowledge conversion which views the interaction processes of tacit and explicit knowledge as essential features in knowledge management. The organisational knowledge conversion (OKC) theory identifies socialisation, internalisation, externalisation and combination (SECI) as the four modes of interaction that facilitate knowledge management in an organisation. Conversion of knowledge from one form to another, results in retention of knowledge in the organisational system. The sharing of knowledge and experience means that, when retirees leave, their knowledge has been retained by new and young employees who remain behind. Senior workers and experts share their knowledge with juniors and new entrants. 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 remain in the system. It also includes those activities that maintain the viability of knowledge within the system.

Nonaka and Takeuchi's (1995) SECI model is about how to create organisational knowledge, how to share it, how to convert knowledge from one type to another and how to manage organisational

knowledge. Knowledge retention refers to all systems and activities that preserve knowledge and allow it to remain in the system once introduced. It includes all activities that maintain the viability of knowledge within the system (Neuman, 2006). The discussion of knowledge retention is presented in detail in section 2.7.3. Nonaka and Takeuchi (1995) posit that, when tacit knowledge and explicit knowledge interact with each other, they create four modes of knowledge conversion which are socialisation, externalisation, combination and internalisation (SECI). Nonaka and Takeuchi (1995) view SECI as the engine of the whole knowledge creation and transfer process. The on-going collaborative engagement results in a knowledge dynamic of sharing and creation of knowledge that may be captured and retained in the organisation. Through social interaction between individuals and organisations, knowledge is created and expanded –this interaction is referred to as knowledge conversion. Harsh (2009) observes that this theory has been advanced and modified by Nonaka and his associates (Nonaka, 1994; Nonaka and Takeuchi, 1995). Nonaka and Takeuchi's (1995:62) four major knowledge conversions referred to above are as follows:

- tacit to tacit – socialisation
- tacit to explicit – externalisation
- explicit to explicit – combination
- explicit to tacit – internalisation

These four words (socialisation, externalisation, combination and internalisation) constitute the SECI model which is discussed in the next section.

2.5.4 The SECI model

The SECI model denotes the four modes of interaction that facilitate knowledge management in an organisation. Knowledge is transferred, shared, stored and retained in the organisation through the conversion of knowledge (tacit and explicit) in the SECI modes. The SECI model's fundamental assumption is that tacit knowledge can be transferred and converted to explicit knowledge. According to Nonaka (1991), the SECI model became the cornerstone and widely adopted KM concept in the first generation, and the dominance of Nonaka's work is evidenced by being the most referenced material in the field of knowledge management (Grant and Grant, 2008). The four modes are discussed in the next section.

2.2.1.1 Socialisation

Socialisation describes an environment where individuals or groups of individuals share personal experiences, mental modes, beliefs, perspectives and tacit knowledge through individual direct interaction (Harsh, 2009; Nold, 2009). During socialisation, individuals share experiences thereby creating tacit knowledge such as mental models and technical skills. In organisations employees share their experiences, mental models, beliefs and perspectives. During socialisation, tacit knowledge from experienced and senior employees is shared with juniors. When employees leave the organisation through various attrition methods, knowledge can still be located in other employees' heads. New employees, who may have greater knowledge of ICTs, for instance, have something to offer. According to this model, individuals may acquire knowledge through observation, imitation and practice – thus without using language. Nonaka and Takeuchi (1995:63) argue that “apprentices work with their masters and learn craftsmanship not through language but through observation, imitation and practice”. Brainstorming camps, also called *tama dashikai*, and informal meetings set up at Honda to solve complex development projects are examples of socialisation within a learning context which yielded new knowledge. From a banking perspective, group interactions are a common site where personal experiences and perspectives are discussed amongst employees. This is a platform where tacit knowledge is shared amongst employees.

2.2.1.2 Externalisation

According to Nonaka and Takeuchi (1995:64), “Externalisation is a process of articulating tacit knowledge into explicit concepts...” Through externalisation, tacit knowledge becomes explicit knowledge, “taking the shape of metaphors, analogies, concepts, hypotheses or models” (Nonaka and Takeuchi, 1995:64). Externalisation describes a process whereby tacit knowledge is converted into a form that is capable of being transmitted to others outside of the immediate group, through the creation of procedures, e-mails, and any other forms of media that transmit knowledge to a wider sphere (Nold, 2009). Examples of externalising knowledge may be speaking to an individual, writing, drawing a diagram, giving a presentation or even conducting a lecture. Externalisation ensures that tacit knowledge is transferred and codified into explicit knowledge and becomes easily shareable with other employees, thus allowing knowledge to remain in the organisation even if the experienced retire or leave the organisation. Codified knowledge is easily stored in computers and other forms, so knowledge is preserved and retained in the organisation. Nedbank and FNB indicated that much of their information and knowledge are stored in databases for re-use.

2.2.1.3 Combination

Combination describes a process whereby individuals outside of the immediate sphere of personal contact receive knowledge that has been shared through some common media to combine the shared knowledge with existing tacit knowledge (Nold, 2009). Nonaka and Takeuchi (1995:67) state that “combination is a process of systematising concepts into a knowledge system”. Different bodies of explicit knowledge are combined. During data collection, it was discovered that both FNB and Nedbank use e-mails and interactive communication channels such as Facebook, Twitter and the intranet as communication media to communicate with customers and employees.

2.2.1.4 Internalisation

Internalisation is the process of embodying explicit knowledge into tacit knowledge. Individuals or groups process newly received knowledge with their own tacit knowledge and by merging knowledge from internal and external sources create an entirely new nugget of knowledge (Nold, 2009). Nonaka and Takeuchi (1995) argue that experiences through socialisation, externalisation and combination become valuable assets when they are internalised into individuals’ tacit knowledge bases in the form of shared mental models or technical know-how. Documentation helps individuals internalise their experiences, thus enriching their tacit knowledge. Manuals facilitate the transfer of explicit knowledge to other people, thus helping them experience the experiences of others indirectly. Knowledge transfer and retention occurs when people exchange tacit and explicit knowledge (Jennex, 2007a). These four modes of Nonaka and Takeuchi’s (1995) SECI model show that knowledge can be transferred from one employee to another and from the heads of employees to documents/databases through knowledge conversion, thus retaining knowledge in the organisation. The explicit knowledge converted into tacit knowledge can only be retained and prevented from loss by sharing it with colleagues.

Organisational knowledge is both explicit (the information contained in policies, manuals of procedures, files, computer memories and databases) and tacit (the knowledge coming from deep understanding, intuition and sound judgment) (April and Izad, 2004). Bell and Shank (2004:50) identify the organisational memory as corporate memory that resides in the heads of the people who work with and for the organisation, the information they create and the records they make or acquire. In light of the above observation, one notes that corporate knowledge is actually tacit and explicit knowledge combined. This knowledge needs to be retained in the organisational system. Lim (2007:180) argues that knowledge within the enterprise (the collective) as well as the employee (individual) has an impact on productivity, efficiency and effectiveness. Skyrme (1999)

observes that organisational memory exists in many places, but most notably the brains of its people. It also exists in records, filing cabinets, personal computer disk files and the physical surroundings. Referring to organisational memory, Oliver (2008:3) asserts that “such knowledge is stored within the organization in physical records such as reports, operating manuals, computer files, or through shared mental models created by employees sharing experiences and best practice.” Organisational knowledge is a strategic corporate asset that needs to be garnered, retained, updated, disseminated and applied to future organisational challenges (Malhotra, 2000). The SECI model showed in Figure 2.2 illustrates the four modes that facilitate interaction and KM in an organisation.

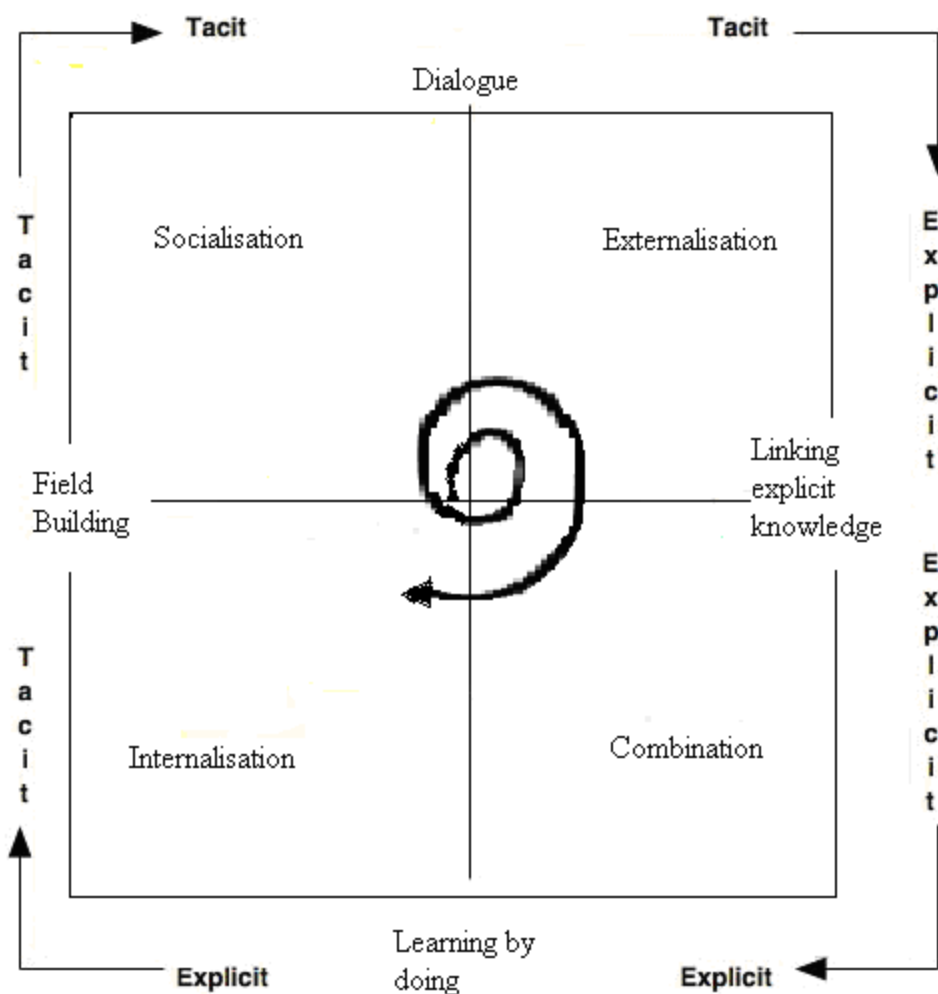


Figure 2.2 The SECI model

Source: (Nonaka and Takeuchi, 1995:71-72)

Synonymously, there is a correlation between the SECI model and the *ba* philosophy (Lwoga, Ngulube and Stilwell, 2010). Nonaka and Konno (1998) state that knowledge is shared within a contextualised space called *ba* which is a Japanese word roughly meaning place, which might be

physical, virtual, or mental, providing a platform for advancing individual and or collective knowledge. Though the SECI and *ba* models were designed specifically with Japanese companies in mind, the two models have a tendency to gradually move from one to the other. In table 2.1, the relationship or similarities of both SECI and *ba* models are presented.

Table 2.1 Nonaka’s SECI and *ba* models

SECI Model	<i>ba</i> Philosophy
Socialisation: tacit knowledge is shared through shared experiences (for instance, face to face conversations).	Originating: tacit knowledge is shared through shared experiences. As in socialisation, people share this knowledge through face-to-face conversations.
Externalisation: tacit knowledge is converted to explicit knowledge with the help of metaphors and analogies (for example, rock paintings).	Dialoguing <i>ba</i>: it is characterised by collective and face-to-face interactions (individuals share their skills and mental models, which are converted into common terms and articulated as concepts).
Combination: tacit knowledge is systemised and refined (for example, the use of telecommunication technologies).	Systemising <i>ba</i>: defined by collective and virtual interactions (virtual space facilitates the recombination of existing explicit knowledge to form new explicit knowledge).
Internalisation: explicit knowledge is transferred to tacit knowledge (that is translating theory into practice).	Exercising: characterised by individual and virtual interactions. Explicit knowledge is converted into tacit knowledge. This is the same as the internalisation process under the SECI model.

Source: (Nonaka, 1991 & 1995)

2.6 Knowledge management schools of thought

The literature reviewed in this study pointed out that there are differing KM viewpoints depending on the discipline of the authors. The study uses the SECI and *ba* models from theories from Japan (Nonaka, 1991; Nonaka and Takeuchi, 1995), which have been discussed in Chapter One; European studies (Polanyi, 1962; Young, 2010) and studies from Africa (Fombad, 2009; Wamundila and Ngulube, 2011; Dewah, 2011). These KM studies and theories are very important to organisations, and academics have built various studies on these intellectual theories (Nonaka, 1991& 1995; Mostert and Synman, 2007; Neck and Nguyen, 2009; Grant and Grant, 2008). In view of the literature reviewed so far, it is imperative to discuss the three KM schools of thought and how these schools helped the study achieve its objectives. Lloria (2008) states that the three KM schools of thought categorise knowledge in terms of how it is created, shared and/or collaborated in organisations and these schools of thought are discussed below. The KM schools of thought are discussed in relation to the literature that has been reviewed so far in this study.

2.6.1 Economic school

The economic school advocates the exploitation or extensive use of knowledge as an economic resource (Vasconcelos, 2008:426). The economic school is premised on Takeuchi's (2001) principle of knowledge creation. Knowledge has become an organisational strategic asset (Takeuchi and Nonaka, 2004). Being a strategic organisational asset, the researcher believes that organisations should create platforms to create this knowledge as asserted by Lwoga and Ngulube (2007), who view knowledge assets as determining the inputs and outputs of the knowledge creation process. Nonaka (1991) corporatised Polanyi's concept of personal tacit knowledge by developing the socialisation, externalisation, internalisation, and combination (SECI) model. Knowledge should be transformed from one form to another because of a continuous process of interactions between tacit and explicit knowledge in an organisation (Takeuchi and Takeuchi, 2004). It must be pointed out that there seems to be a dearth of information suggesting the smooth interaction between tacit and explicit knowledge in banks. During data collection, it was established that there are instances where employees in one department did not know the products of another department, whilst these departments are in the same division. In addition, it was also indicated (during data collection) that the IT departments of FNB and Nedbank are regarded as the champions and custodians of knowledge, thus directly linking this assertion to the notion that knowledge is resident within the IT paradigm.

Rowley (2002:234) points out that, in the economic school, organisations are seen as dynamic learning environments. An organisation needs a culture that ensures that knowledge is valued and recognised as a resource that also supports individual and organisational learning. Recognising knowledge as an economic and strategic resource depends on the organisation's leadership, goals, vision and corporate strategy pursued. In support of the researcher's belief, Baskerville and Dulipovici (2006) view knowledge as a strategically significant resource that depends on organisational culture, policies, documents, routines, employees and systems.

Walczak (2005) states that KM is not really about managing knowledge, but rather about managing and creating a corporate culture that facilitates and encourages the sharing, appropriate utilisation and creation of knowledge that enables corporate strategic competitive advantage. Organisations that adopt a knowledge culture are more inclined towards learning and innovation. South African banks are competing in a complex and challenging environment which is being transformed by many factors ranging from globalisation, technology and increasingly rapid diffusion of the same technology, to the development and use of knowledge. The use of knowledge resident in banks should be used as a competitive advantage to develop and create new products and services that satisfy customers' preferences. According to Walczak (2005:1), the world economy has shifted from an industrial manufacturing or product-oriented economy to one that is knowledge-based, where the principal commodity is knowledge or information.

The proponents of the economic school of thought (Nonaka, 1991; Nonaka and Takeuchi, 1995; Rowley, 2002; Walczak, 2005; Lwoga and Ngulube, 2007) fully agree with the KM enablers discussed in section 2.9 above that an enabling culture, IT, knowledge platforms and visionary leadership are critical elements needed to enable the creation, sharing and storage of knowledge in an organisation. It is believed that organisations need knowledge assets to be able to create and transfer knowledge, and that recognising knowledge as an economic resource depends on the leadership, goals and management of the organisation. According to Tredinnick (2006), the concepts of tacit and explicit knowledge that suggest the transformation of knowledge into information is simply codification. In the next section, the study presents a discussion relating to the technocentric school of thought.

2.6.2 Technocentric school

The second KM school of thought is the technocentric school, which argues that technology controls and protects information and knowledge. Based on this perception, academics, knowledge practitioners and IT professionals fail to distinguish KM from IT, an issue similar to that which

was raised in chapter one of this study. During data collection for this study, it was established that some participants from the selected banks also believed that knowledge management was the same as information technology. The study by Grant and Grant (2008) concurs that the technocentric school appears to put technology ahead of human beings, thus creating the notion that knowledge is resident in IT instead of asserting that IT is an essential enabler that is a vital cog in the wheel of knowledge management. Hedgebeth (2007:49) states that the exchange of knowledge between individuals and enterprises is accomplished by knowledge sharing technologies, enabling tools that provide communication and capture knowledge in the form of wikis, blogs, online repositories and instant messaging applications. Mavodza and Ngulube (2011:51), citing Abell (2000), Jain (2007), Ngulube and Lwoga (2007), Singh (2007), Tellis (1997b), and Yeh, Lai and Ho (2006) mention that there has been consensus among researchers that IT could enable the rapid search of, access to, and retrieval of information which has been captured and retained. This knowledge supports collaboration and communication between organisational members.

Hedgebeth (2007:49) states that knowledge sharing technologies are developed to add great value to enterprises, especially when the tools used are knowledge management enablers. In section 2.9 above (the role of KM enablers in enhancing organisational performance), the study extensively discussed IT as an enabler for knowledge creation, retention and transmission. The discussion made it clear that ICT tools and technologies play a crucial role in the communication process between two individuals or organisations. It was also highlighted that IT is not knowledge, neither is knowledge resident in IT, but the use of IT technologies is a competitive advantage in knowledge retention, capturing or storage in the organisation. The researcher disagrees with the notion that IT controls information and knowledge but, rather, IT helps organisations to control and protect information and knowledge in the organisation. The basis for this disagreement is this: How is it possible for IT to control tacit knowledge which is resident in individuals? Laudon and Laudon (2012) support the researcher's argument that information communication technologies (ICT) tools such as Facebook, Twitter, wikis and blogs are mere enablers and facilitators for knowledge transmission. The third KM school of thought is discussed in the next section.

2.6.3 Behavioural school

The behavioural school implies the way human beings react to the environment, for instance how people behave at FNB or Nedbank, as determining how knowledge is managed. King and Marks (2008:29) opine that KM is only one element of the capabilities necessary to create an effective

knowledge organisation (EKO). This is supported by Stankosky (2005), who categorises KM as a pillar of learning. The behavioural school is a kind of community of practice model where there is continuous learning and informal exchange which is enhanced by the availability of knowledge retained and accessible from within as well as outside the organisation. The perceived usefulness of the individual contributions and teamwork reinforces KM efforts (Kulkarni, Ravindran and Freeze, 2006). The behavioural school of thought is directly related to the organisational culture discussed in this study. Individuals who are keen to openly share knowledge tend to possess a positive learning attitude. The employees who are not keen to share might possess negative attitudes or they are afraid to lose their knowledge.

Though technology is an enabler and facilitator of KM, the human factor is essential; that is, one cannot solely adhere to the technocentric school of thought whilst ignoring the economic and behavioural schools – this confirms the AST and OKC theories. Of concern to the South African banking industry is whether investing in social networking and interactive technologies such as WhatsApp, BlackBerry Messaging, Twitter, Facebook, wikis and blogs would enhance the value and quality of banking services, taking into consideration the level of computer literacy and affordability of mobile phones with in-built software such as these (Brown, DeHayes, Hoffer, Martin and Perkins, 2009:81). The discussion of the KM schools of thought has created awareness of implementation of KM practices in organisations as well in banks to enable the utilisation of skills and competencies for the survival of an EKO. It is imperative to review other studies conducted in different sectors in Southern Africa, and this is done in the next section.

2.7 Knowledge management benefits, policies and practices

The first part of this section discusses the benefits of KM followed by a discussion of KM policies and practices in the second and third sections respectively.

2.7.1 Benefits of knowledge management

The benefits of knowledge management may be realised if there is a KM policy, vision, KM enablers and a CKO championing the knowledge management process, and everybody, including top management, show enthusiasm and support for KM efforts. The successful implementation of knowledge management practices in the South African banking industry may result in better banking service delivery, improved product offerings and streamlined decision-making. Knowledge management provides professional satisfaction as new entrants in the banking industry will be eager to acquire new knowledge. April and Izadi (2004) are of the view that knowledge management results in the preservation of organisational memory that may be easily stored and

retrieved for re-use. Some KM authors such as Abell and Oxbrow (2001), Kok (2003), Grant and Grant (2008), Fombad (2009), Mostert and Synman (2007) and Wamundila and Ngulube (2011) agree that organisations that have effective knowledge management strategies in place achieve the following benefits:

- Improved customer services and continuous product innovation.
- Reliability and better business practices.
- Product and services quality by leveraging world-wide competence.
- Faster innovation through quality methods and quality solutions.
- Optimised communication and collaboration.
- Faster integration of new employees, therefore, a reduction in training costs.
- Selling KM know-how to customers.
- Higher employee productivity.
- KM increases the financial worth of the organisation.
- KM creates the opportunity for employees to develop their skills, performance and experience through group work and knowledge sharing. That is achieved through internal knowledge dissemination and external information awareness (Jain, 2011).
- Knowledge sharing creates value in an organisation and strategically enables a competitive advantage.

These benefits contribute to the organisation's overall performance. In the banking industry, knowledge is required for innovation and improved service delivery. FNB is the leading and most innovative bank in the South African banking landscape (FNB, 2012). The bank developed switch debit orders services, the e-bucks points and rewards systems for its customers, and pioneered interactive communication channels (SMS, e-mail) and the Vendor Voucher dispensing system (airtime top-up vouchers) via Automated Teller Machines (ATMs).

Capitec Bank is a South African bank that has been credited for successfully implementing the biometrics authentication systems (Capitec Bank, 2013). When a prospective client applies for a loan, Capitec Bank requests the client's Identity Document, payslip and three months' bank statements. The consultant takes a photograph of the client's face, a thumbprint and the client's Identity Number, and sends a "match request" to the Department of Home Affairs, which then

pulls the client's profile. The record is then sent back to Capitec Bank for verification and validation purposes as a basis for decision-making. If the results "mismatch", the application is declined, while a positive result denotes an approval (Capitec Bank, 2013). This Capitec Bank technology is a culmination of the bank's ability to embrace knowledge management. Some banks that embrace knowledge management benefit through enhanced collaboration, improved communication, better decision-making and increased innovation (Jennex, 2007a). Knowledge management can also provide opportunities for achieving substantial savings and significant improvements in human performance (Albers, 2009). The above benefits were expected to trigger FNB and Nedbank to implement KM practices. KM success is achieved through the present policies in the organisation. In the section that follows, a discussion of KM policies is presented.

2.7.2 Knowledge management policies

In the contemporary knowledge-based economies studies have shown that knowledge is not just another resource like labour or capital, but it is the only important meaningful resource (Drucker, 1995). As a source of economic success, knowledge has displaced traditional factors of production such as land and labour, hence the need for organisations to develop KM policies. Senior management in the organisation needs to make KM expectations clear by explicitly stating what needs to be done in knowledge management, and by whom. They need to write these expectations down, and keep reinforcing them by what they say. They also need to make sure these expectations do not get weakened by, or conflict with, other company structures and expectations. One clear way to define expectations is to define an in-house standard or in-house policy for knowledge management (Knoco, 2014).

Senior management can be clear about what they expect in terms of knowledge management by publishing standards and by setting clear accountabilities. They also need to make sure that their expectations for knowledge management are supported by what they say and do. For example, they must assign the time and resources needed to manage knowledge. They must also make sure that the reward and recognition system in the organization is supportive of knowledge management. There is no point, for example, in expecting high levels of collaboration from the business units, and at the same time rewarding internal competition by sponsoring "factory of the year awards" (Knoco, 2014).

The creation of knowledge is likely to happen if there were policies and procedures that enabled it. A need to acquire, share or create a realisation of existing knowledge gaps were likely to drive KM policies. Employees can refer to documented policies for guidelines. The absence of

documented policies reflects an organisation in dire need of business process re-engineering, as stated by Wamundila and Ngulube (2011). In their study, Wamundila and Ngulube (2011) found that the state of affairs at the University of Zambia (UNZA) with regard to records, policies and documentation management reflected an institution in dire need of business process reengineering. Considering the number of specialised units and tasks available at UNZA, the existing documented processes, policies, work manuals and procedures were not sufficiently representative of what could, potentially, be documented.

Apart from strict bank policies on privacy and confidentiality, the study also investigated if the selected banks had documented processes and procedures for knowledge management. Documenting processes and procedures are in line with the advocacy for the creation of knowledge repositories for operational benefit, as stated by Singh (2007). From the literature reviewed, some of the knowledge management policies that should be documented include:

- Rewards/incentives schemes for creating reusable knowledge resources
- Leveraging/hiring retirees
- Extending the retirement age of experts
- Appointment of knowledge management champions in the organisation
- Clearly defined KM goals and objectives

2.7.3 Knowledge management practices

This study investigated the extent to which banks have implemented KM practices such as knowledge retention and sharing and knowledge creation, enabling the study to address one of the objectives. According to Sarrafzadeh, Martin and Hazeri (2006), KM practices are defined as the way ideas are translated into action and in the process accomplishing specific goals. KM practices include the understanding of KM, and knowledge generation, acquisition, organisation, storage, transfer, sharing and retention (Branin, 2003). Singh (2007:177-178) argues that:

Information professionals need to develop the capabilities to survive in knowledge based society, but on the other hand, organisations are envisaged to increase investment and put more effort in ensuring that information and knowledge available in databases, patents, trade secrets or tacit knowledge is fully utilised and transferred into products and services that give value to the organisation.

An effective knowledge organisation (EKO) is an organisation that creates a dynamic knowledge capability (King and Marks, 2008). Such a capability is a complex, integrated and internally-consistent set of capabilities to acquire, create, store, transfer and share knowledge effectively and efficiently to continuously improve the application of knowledge to business processes, practices, products and relationships (King and Marks, 2008:29). The importance of such a knowledge capability for an organisation has come to be conceptually well-understood because knowledge is so different from other organisational resources. It is important for an organisation to have a clear understanding of what KM means to its operations if it needs to consider using KM practices that enhance efficiency and lend value to organisational knowledge (Mavodza and Ngulube, 2011:53). The KM practices that will be presented are knowledge acquisition, sharing and retention.

2.7.3.1 Knowledge acquisition

Pacharapha and Ractham (2012) define knowledge acquisition as the process of development and creation of insights, skills and relationships. The researcher believes that organisations subconsciously engage in knowledge acquisition and fail to realise that, in the process, talents and relationships are lost during the process (Tiwana, 2008:51). But in the absence of knowledge retention strategies, organisations continue to lose valuable knowledge. For knowledge to be acquired, willingness and ability of a recipient to acquire and use knowledge are crucial elements (Gupta and Govindarajan, 2000; Alavi and Leidner, 2001; Ragsdell, 2009). Employees' negative attitudes towards learning and sharing can inhibit knowledge acquisition.

Since the willingness of a source and a recipient are important for their sharing and acquiring behaviours, various motivation drivers are studied by researchers. On the source side, three sets of motivation drivers are described. The first set includes individual factors, i.e. attitude towards knowledge sharing, cost and benefit from knowledge sharing. The second set comprises contextual factors, i.e. subjective norms and organisational climate. The last set is the knowledge factor, i.e. perceived value of knowledge (Bock, Zmud, Kim and Lee, 2005; Kankanhalli, 2005; Wasko and Faraj, 2005; Ford and Staples, 2006).

To motivate a recipient's acquisition, knowledge content and a knowledge source should be perceived as valued knowledge sources (Desouza, Awazu and Wan, 2006; Ford and Staples, 2006). The value of knowledge content derives from its potential benefit for a recipient. Since, to acquire knowledge by learning from others requires interaction between a recipient and a source; characteristics of a source send value signals to a recipient. The salience of value from a knowledge source and knowledge content are different for those who are experts or novices in a

particular knowledge domain (Desouza, Awazu and Wan, 2006). Knowledge acquisition is closely related to knowledge sharing which is discussed in the next section.

As pointed out by Nonaka (1991), and Nonaka and Takeuchi (1995), the SECI and *ba* models play a crucial role in the creation or acquisition of new knowledge and/or finding new knowledge through interactions and collaborations with other individual systems. KM affects an organisation's strategic planning, goals, projections and objectives on how best to use the services and knowledge products for the future (Stankosky, 2005). The chances of successful implementation of KM practices are based on whether there is a KM policy or supporting KM infrastructure and enablers to handle the KM practices. Despite a myriad of barriers, the modern information environment includes a variety of information; information providers and platforms for doing so has made it necessary for organisations, including banks, to consider using KM practices to survive.

The organisational tacit knowledge of experts and ageing members of the workforce should be transferred to other employees so that the knowledge is retained in the system. Knowledge transfer is critical for an organisation to sustain a competitive advantage and this depends on the successful transfer of the same knowledge within the organisation. Resources embedded in social networks are needed to contribute to career success and development of intellectual capital in the organisation (Tsai and Ghoshal, 1998). Relationships and networks are established amongst the members in the social network. The relationships then influence knowledge transfer, and support development of mentoring relationships that guide knowledge creation activities of junior and less experienced employees. For knowledge creation to take place, strong structural ties need to be in place in the organisation.

2.7.3.2 Knowledge sharing

KM practices help organisations to refocus on using knowledge that already exists, creating an environment for innovation rather than limiting themselves to best practice solutions only (Laudon and Laudon, 2012). The KM practices also enable banks to converge towards knowledge portals rather than separate silos of knowledge. In this instance, most South African banks' employees operate as knowledge silos; there is little evidence to show that these employees freely share knowledge and information. In chapter one, it was established that employees at FNB or Nedbank do not necessarily know what products or services are offered by other departments, which is against the notion of interconnectedness pointed out by Mavodza and Ngulube (2011:54).

Turban, Mclean and Wetherbe (2004) define knowledge sharing as the wilful application and transfer of one or more person's ideas, insights, solutions and knowledge to another person(s), either directly or via an intermediary, such as a computer-based system. This sharing occurs during induction (of new employees) or when employees quit the organisation. The willingness to share the knowledge should be on the part of employees who possess the knowledge. Knowledge shared by individuals and by a community of practice becomes organisational knowledge; therefore, knowledge sharing plays a pivotal role in ensuring that knowledge remains in the organisation even when the knowledgeable employees have left.

Knowledge that can be shared within the South African banking environment includes expertise on banking IT platforms and architectures; systems to combat credit card fraud; best practices; knowledge about customer needs, habits and attitudes; interactive communication channels; and risk management and mitigation technologies. Knowledge shared by individuals and by a community of practice becomes organisational knowledge. Individuals connect and interact; in the process, knowledge is shared and, in turn, this knowledge is retained in organisational processes. The AST was applicable in the study as it was discovered during data collection that employees in banks interact with technology extensively: every employee in the bank had a PC or laptop and had access to the intranet or internet. The interaction between employees and technology enhances the creation and sharing of knowledge. Knowledge sharing plays a pivotal role in ensuring that the knowledge remains in the organisation even when the knowledgeable have left the organisation.

Being learning organisations, banks are adopting project-based approaches to solving problems (Nedbank, 2013; FNB, 2013). In that context, project teams are established to work on temporary assignments which provide platforms for social interactions. This reinforces tacit knowledge sharing. Individual project team members acquire new tacit knowledge through socialisation activities such as imitation, observation and copying as espoused by Nonaka and Takeuchi (1995) in the knowledge conversion theory. Staplehurst and Ragsdell (2010) conducted a study investigating knowledge sharing activities of two small and medium sized companies in the United Kingdom (UK). The results of the study showed that employees preferred sharing facilities such as meeting rooms and desks, as well as sharing knowledge outside of the office during work time. Sharing knowledge in meetings provides a free environment where members make their contributions. In this study, it is noted that both Nedbank and FNB employees like sharing knowledge outside of the office during smoke and tea-breaks. Knowledge can also be shared during seminars, conferences, team-building exercises, written reports, performance appraisals

and conventional employee suggestion programmes. Knowledge sharing can encounter challenges such as lack of time, lack of experience and lack of visible rewards for sharing knowledge.

Employees should be given platforms to interact face-to-face, such as conferences meetings, so as to share a common understanding through shared language and narratives across networks. Trust also increases the incentive to exchange knowledge and norms of reciprocity facilitate the transfer of novel information and tacit knowledge (Sheriff and Sheriff, 2008). But as trust develops, members feel less pressed to protect their knowledge and skills and they start freely exchanging knowledge. Through knowledge transfer, recipients increase their knowledge base, retain it and utilise it for the benefit of the organisation (Sheriff and Sheriff, 2008).

There is a direct relationship between knowledge sharing and knowledge retention in that tacit knowledge shared amongst employees must be codified and recorded so that it becomes organisational knowledge that can be stored and retrieved for future use (tacit knowledge converted to explicit knowledge – externalisation mode). Explicit knowledge must be retained by the organisation. Jacobs and Roodt (2007) conducted a study to discuss the development of a knowledge sharing questionnaire and the role of knowledge sharing in predicting nurses' turnover in South Africa. The study found that, if hospitals and nursing employees neglected the importance of knowledge sharing, there was a possibility of losing nurses' knowledge and the nurses might not share what they knew before they left, taking their knowledge to competitors; finally, the shared knowledge needs to be stored (Dewah, 2011:71). The next section presents a discussion on organisational knowledge retention.

2.7.3.3 Knowledge retention

This section reviews studies that investigated the retention of knowledge. Kim (2005) defines knowledge retention as all systems and activities that capture and preserve knowledge and allow it to remain in the organisational system once introduced. The knowledge and expertise from employees should be retained before they leave the organisation. In the absence of knowledge retention strategies, organisations lose tacit knowledge when employees leave for other organisations and due to other forms of attrition. As long as employees stay in employment with the bank, they continue to play a competitive role through effective decision-making, communication and contribution. Once employees leave the organisation, knowledge in their heads is also gone. A study by Wamundila and Ngulube (2011) on how to enhance knowledge retention at the University of Zambia indicates the existence of knowledge retention challenges. Wamundila and Ngulube (2011) point out that these retention challenges exist in the form of

retirements (58.9%), resignations (64%) and deaths (58.9%). This suggests that knowledge leakage is not peculiar to public institutions alone but cuts across all industries.

According to Nonaka and Takeuchi (1995), 80% of knowledge lies in the brains of people who possess know-how, secrets and personal skills that will never be shared if no one works on it. This is consistent with Polanyi's (1962) view that "we know more than we can tell". Tacit knowledge is the lifeblood of an organisation. Tiwana (2008) suggests that, in order to make better use of tacit knowledge, a way must be found for it to be transferred directly to one another, making it explicit so that it can be shared throughout the organisation. Individuals who are rich in tacit knowledge (experienced employees, retirees and other talented experts) constitute a wealth of intangible assets of the organisation (Nonaka and Takeuchi, 1995). The researcher believes that the loss of tacit knowledge in banks can negatively affect the quality of products and services offered by these institutions.

A study by Lahaie (2005), conducted to investigate the impact of corporate memory loss on a health care institution by retiring senior executives in Huronia Hospital in Canada, found that mentoring and succession planning were popular vehicles for knowledge transfer for retention purposes. The study established that little was being done to archive corporate memory (knowledge) or to manage the organisation's tacit knowledge. Employees' knowledge is a critical strategic resource that should be treated and retained as such.

Dewah (2011) investigated knowledge retention in Southern African public broadcasting corporations, and his findings indicated that SABC and ZBC continued to lose expertise, skills and knowledge due to staff attrition. Employees retire due to age and in most cases these are subject matter experts whose critical knowledge needs to be captured (Kim, 2005). Loss of knowledge can result in duplication of work, expensive searches for expertise and knowledge, and employees not learning from the experienced. When senior managers leave without handing over guidance, the job performance of the successors does not often equal that of the retiree or transferee (Dewah, 2011:86). Not all knowledge in the bank is of critical value, and therefore need not be captured and retained, but critical knowledge that is at risk of loss should be captured. The global financial crisis of 2008 adversely affected all global financial institutions and South African banks laid off employees. Apart from retrenchments, banks lose knowledge through restructuring (as in the case of ABSA), retirement, resignations and other situations.

The awareness of knowledge loss through staff attrition is prompting companies to institutionalise certain processes to capture as much knowledge from their employees as possible. However, the

most interesting observation is that some banks have no strategies in place to capture and retain organisational knowledge and, instead, continue to lose portions of their workforce's knowledge. Retention of knowledge from knowledgeable employees is a critical resource and a core element for the bank to achieve a significant competitive advantage (Grant and Grant, 2008). The contexts of knowledge retention within the bank include individuals, structures, organisational culture and the physical environment of the workplace. When senior executives leave the organisation, they usually depart with knowledge of the organisational culture, daily operations of the bank, knowledge of past successes and failures and strategies of the organisation, thus leaving their successors vulnerable due to lack of that critical knowledge. Wamundila and Ngulube (2011) posit 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 use of advanced technology to capture work processes. This knowledge has to be captured and stored in databases, documents, software and processes, products, and services.

In their study, Wamundila and Ngulube (2011) investigated how knowledge might be retained at the University of Zambia (UNZA) among 13 members of senior management and 205 academics. The results indicated that 275 of the respondents agreed that UNZA used succession planning as a retention strategy, while 48% confirmed being members of a community of practice to retain knowledge. Succession planning and community of practice strategies assist in capturing tacit knowledge of experts. Wamundila and Ngulube (2011) and Levy (2011) found out that knowledge retention could be achieved through documentation and integrating knowledge back into the organisation with special emphasis on retaining best practices. To safeguard against loss of knowledge, organisations need to devise ways of retaining employees' know-how and best practices so that knowledge can be passed onto future workers and replacements who should regain the on-the-job knowledge the ex-employees spent years accumulating (Thilmany, 2008). Knowledge retention is a key KM practice that forms part of the objectives of this study; therefore, discussing the risks of losing knowledge was crucial as this supported the arguments already discussed above.

2.7.3.4 Factors inhibiting knowledge acquisition, creation, sharing and retention

This section discusses factors that inhibit the acquisition, creation, sharing, retention and transferring of knowledge. Some employees feel indispensable when they hoard knowledge, with the perception that "knowledge is power" becoming a major obstacle to the sharing of knowledge among organisational employees. Other employees feel that disclosing knowledge and expertise to

their counterparts leads to erosion of individual power and, therefore, that the only alternative is to withhold that knowledge. Mistrust amongst employees was identified as one of the factors that inhibited knowledge creation and sharing in the selected banks. Due to the strict bank policies on privacy, employees were reluctant to share information or knowledge with their colleagues for fear of being reported. To internalise knowledge sharing, Jacobs and Roodt (2011) suggest that organisations and employees should build and maintain trust across the organisation. Studies have shown that reward, incentive systems and recognition support knowledge sharing (Chua, 2003; Jacobs and Roodt, 2011).

Some employees may be reluctant to receive knowledge from their colleagues for fear of being viewed as less knowledgeable and thus dependent on others (Ramirez, 2007). This perceived inferiority may be an obstacle to knowledge sharing. Some employees are unwilling to share knowledge for fear of making mistakes and failures, even if the knowledge could prevent other employees from making the same errors (Ramirez, 2007). Organisational employees may share knowledge for various reasons that include a desire to gain recognition, reward and self-actualisation. In contrast, workers who regard themselves as full of expertise prefer not to collaborate with their colleagues (Ramirez, 2007). As pointed out in the preceding sections, banks have created silo mechanisms which do not allow employees in different departments to freely create and share knowledge. The strict bank policies on privacy and confidentiality can play an important role in inhibiting employee interactions.

Another important factor that was identified in the study was the aspect of unhealthy competition and spirit of rivalry between organisational departments. Most respondents who partook in the study confirmed that information and knowledge about other departments' products and services were not readily available to the entire organisation. Nonaka (1995) states that organisations should create an enabling environment where knowledge can be acquired, shared or transferred. This space/environment is referred to as *ba* (Nonaka, 1995). Other factors that were identified in this study include deaths, retirements and resignations of experienced employees. In the next section a discussion of KM enablers is presented.

2.8 The role of KM enablers in the implementation of KM strategies

One of the objectives of the study was to determine the role of KM enablers in the implementation of KM strategies in the organisation. To address this objective, the study discusses the importance and roles of leadership and strategy, IT, culture, human capital, and organisational structure as major KM enablers in the organisation. KM can provide significant advantages to the organisation

if it is supported by organisational processes, suitable structures and strategies, and favourable working environments (Wiig, 1999; Kok, 2003; Grant, 2008; Mostert and Synman, 2007). The following KM enablers have been cited in the literature consulted for this study:

2.8.1 Leadership and strategy

Committed and effective leadership, coupled with strategy, should be present within the bank so that top management takes full responsibility for crafting policies, programmes and strategies. Lack of top management support and dedication scuttles the successful implementation of KM practices. Rylatt (2003) suggests that a successful KM strategy is attributable to exemplary leadership that values trial and error and shows a commitment to innovation and continuous improvement. In the view of Rylatt (2003), it should be stated that effective KM requires long term commitment from all organisational members, who should be receptive to external and internal environmental changes, and leadership that demonstrates enthusiasm for improvement.

Along the same vein, top management should craft a KM policy and appoint a chief knowledge officer responsible for formulating KM vision that captures and leverages structured knowledge with IT. The Chief Knowledge Officer (CKO) has the mundane task of ensuring that everyone in the organisation shares information and knowledge, and values knowledge as critical to their business strategies. According to Heibeler (1996), Arthur Anderson and American Productivity and Quality Centre (APQC) developed the Organisation Knowledge Management Model (OKMM) and stated that the OKMM advocates for leadership to have the following qualities:

- Management of organisational knowledge is recognised as being central to the organisational strategy.
- The organisation grasps the potential of its knowledge resource and develops strategies for marketing it.
- The organisation uses knowledge and learning to support existing core competences and to create new ones.
- Individuals are appointed, evaluated and rewarded on the basis of their contribution to developing organisational knowledge.

Squier and Synman (2004) are of the view that knowledge management requires a leader who has the specific knowledge and skills to champion the concept of knowledge management and spearhead the enormous challenges to overcome inherent obstacles to the free flow of knowledge within an organisation. The knowledge management strategy must be linked to the business

strategy (Tiwana, 2008). According to Saint-Onge (2002) a knowledge management strategy provides the framework within which an organisation manages new initiatives aimed at leveraging the intangible assets of the organisation. The knowledge management strategy should not be managed parallel with the business strategy, but should be an integral part of the business strategy (Snyman and Kruger, 2005).

2.8.2 Information technology

Although all processes in banks are technologically driven, it does not necessarily mean that the IT systems are fully utilised in furthering KM. Technology facilitates communication between management and employees, as well as quick access to, the search for and the retrieval of information. There are various information technology tools that can support KM in banks. It is the responsibility of the bank to acquire the right KM systems, provide training for its workforce and ensure the systems are fully utilised. For instance, Kok (2003:1) states that “if an organisation has a CKO, the CKO must capture and leverage structured knowledge with IT as a key enabler”.

In the absence of a CKO, it is difficult to design and implement the bank’s knowledge architectures. IT is a crucial enabler in the implementation of an effective KM system only if management cultivates a culture of learning and enthusiasm. Some organisations are technologically equipped, but the use of technology does not support and enhance a culture of learning and knowledge creation (Nahapiet and Ghoshal, 1998). South African banks used in this study possess the technological infrastructure to facilitate any KM efforts. However, there is room for improvement to have systems that allow the creation and sharing of knowledge within the organisation. In support of this, Davenport (1996) points out that the knowledge leader plays a leading role in the design and implementation of a company’s knowledge architectures and the same knowledge leader is more likely to view technology as only an enabler for an effective knowledge management system. Dewah’s (2011) study, which investigated how information communication technologies were used by three broadcasting corporations as tools and enablers of knowledge acquisition and retention, the findings indicated that technology comprising collaborative computing tools, knowledge servers, enterprise knowledge portals, electronic document management systems, knowledge harvesting tools and search engines were critical enablers of knowledge management. The pace at which new technologies are coming into the market brings new types of issues and challenges; therefore, management is also encouraged to adapt to these new technologies as a way of retaining knowledge in the organisation. Wiig (2004:4) argues that IT is significant in enabling knowledge management but it occupies a

secondary role because it serves as passive infrastructure. However, Jain (2011) posits that effective knowledge management practices could be achieved by utilising the latest in IT in order to capture, create, store, transfer, share, retrieve, maintain and update knowledge.

IT provides bankers with tools (e-mails, telephone, SMS, internet, intranet, Facebook, WhatsApp and Twitter) to handle, store, locate, distribute, receive and communicate present tacit and explicit knowledge through social networks among people in possession of the knowledge. As highlighted in the preceding sections, FNB has been very innovative in utilising IT-related interactive communication tools to disseminate or receive knowledge and information from its customers. IT provides a platform for customers to interact with the bank virtually from their offices or homes and conduct all their banking transactions without physically going into the banking halls (Moneyweb, 2013). Virtual organisations can use networking technologies, chat rooms, videoconferencing, discussion forums and wikis as collaborative tools that enable knowledge sharing, transfer and retention in the organisation (Albers, 2009). With reference to the Adaptive Structuration Theory, discussed earlier, it was evident that banks relied more on technology as the basis for knowledge creation and storage. Every employee in the bank had a laptop or access to a personal computer. This further substantiates that the AST was relevant to this study.

2.8.3 Organisational structure

Nonaka (1994) and Kok (2003) point out that bureaucratic structures are not conducive to the process of creating knowledge within the organisation, as only top management has the power and ability to create information. Schoorman, Mayer and Davis (2007) suggest that organisation should have models/organograms that take into consideration all members of the organisation to generate knowledge is the ideal solution. When an organisation embarks on KM, it has to align its organisational structure to facilitate the creation and effective flow of knowledge throughout the organisation. Currently, Nedbank and FNB have top-down approaches which do not promote KM. Burke (2011) observes that matrix organisational structures allow the cross pollination of skills when managing projects.

Matrix structures allow the creation, sharing and transfer of tacit knowledge to explicit knowledge and vice versa, which depict Nonaka's SECI and *ba* models (Nonaka, 1994). As pointed out in the first chapter of this study (section 1.3.5), under similarities between FNB and Nedbank, the retail and business banking division is the division responsible for a bank's banking halls; automated teller machines (ATMs); billboards; and all banking transactions, such as deposit-taking, issuance of credit, debit, cheque and garage cards, personal loans, educational loans, bonds, and vehicle

finance services. These services are offered in clusters and it is from these clusters that employees do not know products offered by other clusters. The clusters are made up of structures that make it difficult to promote the creation and sharing of knowledge. Typical examples of this situation are the transactional, business banking and card units, providing almost identical financial solutions. During data collection, the study identified the gaps created by flat structures that did not create platforms for knowledge sharing.

2.8.4 Organisational culture

Holbeche (2005) and Brown (2011) define organisational culture as a set of values, beliefs and behaviour patterns that form the core identity of an organisation which help in shaping the employees' behaviour. Organisational culture provides a sense of identity to employees, supplying unwritten guidelines for behaviour. Organisational culture should encourage knowledge sharing. A culture that promotes the creation of new knowledge in the organisation is vital because this allows banks to create new knowledge from shared and existing knowledge. The new knowledge must be preserved and retained as knowledge assets in appropriate media.

Being an enabler of knowledge in the organisation, culture is a major determinant of knowledge retention because it influences knowledge sharing. In their study, Mustaq and Bokhari (2011) investigated the impact of organisational culture and their findings show that organisational culture and transformational leadership had an influence on knowledge sharing. These findings support Ragsdell (2009), who found that organisational culture facilitated knowledge sharing. Jacobs and Roodt (2011) also investigated the relationships between organisational cultures, knowledge sharing and turnover intentions in the nursing profession of South Africa by sampling 539 nurses in private and public hospitals. Their findings revealed a positive correlation between organisational culture and knowledge sharing; nurses would share knowledge if they perceived desirable outcomes of their efforts. In the advent of high staff departures experienced in organisations, bank management is encouraged to establish the most effective means of managing the brain drain through the creation of a knowledge sharing culture where knowledge sharing, capture and re-use are part of everyone's daily responsibility (Poole and Sheehan, 2006). Therefore, an ideal knowledge management culture is characterised by trust, openness, teamwork, collaboration, risk-taking, tolerance for mistakes, autonomy, common language, courage and time for learning (Schoorman, Mayer and Davis, 2007; Albers, 2009).

2.8.5 Human capital

Nedbank is still in the process of meeting the Black Economic Empowerment (BEE) initiatives (Nedbank, 2012). Although employee appointments are carried out in accordance within the stipulated set of predefined skills and competencies requirements, there is no uniformity in terms of induction and training and development policies across the SBUs, which poses a major drawback when implementing a KM concept. There is a high staff turnover ratio in all SBUs. Some of the reasons are attributable to management styles, remuneration and working conditions. This is problematic for KM in that fundamental organisational knowledge may be lost. However, the reasons for high staff turnover are beyond the scope of this study.

Tiwana (2008) also points out that “the departure of some employees reduces collective firm-wide competence (tacit knowledge walk-outs). The banking industry provides a good example of how knowledge walk outs become instant threats. The departure causes loss of knowledge, key clients, suppliers, best practices and even revenue.” Nedbank had been losing key personnel to competitors and, in no time, key customers were being lost to those competitors. Tiwana (2008:20) also mentions that “top management should reward intellectual capital incentives that are too attractive to be resisted. An employee’s contribution to the internal knowledge repository should be regarded as an essential evaluation criterion for promotion.”

In the event that one or all of the enablers are dysfunctional, it would be a mammoth task to implement successful KM, and its role could not be distinguished in the organisation. Although knowledge enablers can enhance a firm’s capability to manage knowledge, it is still unclear how to use these enablers in a strategic fashion. Therefore, the CKO must draft knowledge management strategies that facilitate the above-mentioned enablers; they determine how to use knowledge resources and capabilities. The fit between knowledge management processes and knowledge management strategies is a lynchpin in improving organisational performance.

2.9 Risks of losing knowledge

Organisations can lose knowledge at any point in time due to workforce attrition. Critical knowledge in some of the banks’ departments largely rests with people rather than processes. When such people leave the bank, they take with them that critical knowledge. If the expertise of these senior or experienced people is not shared or transferred to the next employee, the potential to innovate is eroded and the risk of unavoidable mistakes increases, becoming a regular occurrence. Knowledge loss can negatively affect the operations and performance of the bank. The loss of expertise and on-the-job knowledge that was built up over the employee’s career, the loss

of client intelligence, established internal and external networks and loss of social and networking skills are some of the risks of losing implicit knowledge in organisations due to staff attrition (Poole and Sheehan, 2006).

Dewah (2011) investigated knowledge retention strategies at three Southern African broadcasting corporations: South African Broadcasting Corporation (SABC), Zimbabwe Broadcasting Corporation (ZBC) and Botswana Broadcasting Corporation (BBC). The findings from the study indicated that the SABC had been losing its key personnel and had witnessed a total overhaul of the top leadership responsible for transforming the corporation. In 2007, 76 staff members and 16 journalists quit SABC. The ZBC has not been spared either. Over the last decade the brain drain of skilled professionals from Zimbabwe has become voluminous and damaging. Sixty percent (60%) of the workers were retrenched in 2010. Dewah (2011) does not give findings about the BBC, but in view of the findings from the SABC and ZBC, it is evident that implicit knowledge has been lost from these corporations. The risk of losing critical knowledge has had negative operation impacts for these two organisations. This could have been reduced by knowledge retention through capturing of the organisations' individual tacit knowledge and subsequently transforming it into organisational knowledge and document processes. A discussion of KM strategies needed to safeguard knowledge is presented in the next section.

2.10 Strategies for safeguarding knowledge

The loss of knowledge in an organisation can be reduced by the use of appropriate knowledge retention, creation and sharing strategies to capture knowledge and information in the organisation. There are various approaches that can be adopted to retain knowledge: communities of practice, repositories, mentoring and apprenticeship programmes, use of subject experts, project milestones, and other strategies that are discussed in the section that follows:

2.10.1 Communities of practice

Communities of practice are voluntary groups of people held together by a common sense of purpose, sharing a set of problems, concerns and a passion for a particular topic, who deepen their knowledge and expertise in a particular area of concern by interacting on an on-going basis with a real need to know what each other knows (Wenger, 1998 & 2006; Albers, 2009). Jain (2009) posits that such people have a common sense of purpose and common interests; they share work-related knowledge and experiences and engage in a collective process of learning. Normally communities of practice work on company projects and initiatives, share both tacit and explicit knowledge by

taking information and materials, and refine them to a point where they can become corporate positions on topics.

According to Wenger's (1998 & 2006) concept of Social Cultural Learning Theory, business people have adopted the communities of practice because of the recognition that knowledge is a critical asset that needs to be managed strategically. Since it is difficult to transfer tacit knowledge, the use of communities of practice helps knowledge transfer from the experienced, skilled, talented old employees to the new employees. Because communities of practice possess tacit knowledge, the only way to optimise them is to have the tacit knowledge shared for the benefit of the organisation.

2.10.2 Mentoring and apprenticeship programmes

The subject expert or experienced employee transfers tacit knowledge to the inexperienced employee (Nonaka, 1997). Mentorship entails the pairing of an experienced member of staff with an inexperienced or new employee in order to assist the new employee in acquiring new knowledge (Beazley, Boenisch and Harden, 2002). During mentoring and apprenticeship training, senior or experienced managers transfer their knowledge, wisdom, specific insights and skills to their juniors within a short space of time so that, when the experienced employees leave the organisation, the organisation's practices, knowledge, history, stories and culture are preserved.

2.10.3 Subject matter experts

These are experienced experts who demonstrate a mastery of a particular topic or job (for example, a computer systems engineer or a pilot) and play a crucial role in knowledge management in the organisation because they can provide solutions. Organisations such as banks are encouraged to establish effective succession planning policies to ensure knowledge and expertise retention.

2.10.4 Leveraging retirees

Retirees are used by organisations as consultants who provide critical skills and experience for special projects or assignments to mentor junior and less experienced employees, thus allowing them to share knowledge and experiences. Retirees should be allowed to return to work as consultants who are immediately productive as they know the organisation (Poole and Sheehan, 2006).

2.10.5 Story-telling

This strategy envisages people-to-people interactions, communities of practice and teaching of lessons learnt, and story-telling provides the required interaction set-up (Poole and Sheehan, 2006). Story-tellers in an organisation maintain cohesion and provide guidelines for people to follow (Holbeche, 2005). Stories are instrumental for knowledge sharing and collaboration, because listeners are given an opportunity to ask questions which then puts the story into perspective. An organisation that adopts any or all of the knowledge retention strategies highlighted above is regarded as a learning organisation or one that has recognised the importance of knowledge. It should be noted that story-telling is not as effective as other strategies discussed if there is interference.

2.11 Knowledge management systems

KM needs a systematic approach to develop capabilities which accelerate the evolution of knowledge into a key organisational resource (Sandhawalia and Dalcher, 2010). Moneyweb (2013) posits that competitive advantage rests on the ability to constantly develop capabilities that form the basis for products and services offered by the organisation. Gold, Malhotra and Segars (2001) identify IT and organisational structure and culture as infrastructure capabilities, and acquisition, conversion, application and protection as process capabilities. As previously highlighted by Dewah (2011), ICT tools provide an enabling platform for knowledge capturing, sharing and retention. Gold, Malhotra and Segars (2001) concur with this assertion. IT facilitates knowledge flow and eliminates barriers to communication within an organisation. Flexible organisational structures encourage knowledge sharing and collaboration across boundaries within the organisation, whilst a rigid structure is viewed as a major stumbling block to knowledge sharing and collaboration. An organisational structure's capability for facilitating 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). Wamundila and Ngulube (2011) found in their study that policies, procedures and processes of the University of Zambia (UNZA) were not properly documented – an opportunity for losing knowledge. Organisational culture is central to encouraging interaction and collaboration, which are important to facilitate knowledge flow between individuals, and provides individuals with the ability to self-organise their own knowledge and practice networks to facilitate solutions (O'Dell and Grayson, 1998). The knowledge management solutions are discussed in the following section.

2.11.1 Knowledge management solutions

Knowledge sharing technologies can add great value to enterprises, especially when the tools are used as knowledge management enablers. Laudon and Laudon (2012) identify six broad categories of KM technologies which are namely: collaboration, mobile work, content management, business intelligence, business process management (BPM) and knowledge sharing. These will be briefly discussed below:

Business intelligence tools: These are suites of knowledge sharing products targeted to on-demand customer relationship (CRM) applications. They provide support for information and knowledge sharing among sales, service/support, marketing, financial and any other operations within the organisation. The systems also offer Account Intelligence Product information, which is an application that supports the KM technology category of knowledge sharing (Laudon and Laudon, 2013:450).

Knowledge sharing technologies: These technologies help organisations to integrate vast assortments of disparate application interfaces, controls and datasets, thus enabling information sharing and centralised management of information and knowledge across the organisation. Hedgebeth (2007) posits that an organisation would enjoy return on investment (ROI) by consolidating and leveraging the functions of many applications into one integrated solution – thus, these systems support KM technologies of collaboration, business process management and content management.

Collaboration technologies: These technologies are designed to assist the enterprise with group intranet and team collaboration activities, and they provide support to document management. Banks deal with huge volumes of customer records, files and employee details which should be managed. In the past, external file management companies (such as Metrofile and Document Warehouse) were contracted to manage company files, but since the advent of these collaboration technologies, document management has been done in-house. Collaboration technologies support virtual meetings, subject expert repositories, image galleries, instant messaging, wireless web services, training and e-mail management (Hedgebeth, 2007:51).

Business process management: Clemence and Gido (2012) state that project-based organisations have recognised the importance of collaborative BPM systems as ideal tools for teams working on knowledge-focused projects. Knowledge-focused projects are projects where experience, thinking and intelligence are the main inputs (Hedgebeth, 2007).

Expert systems: Expert systems and other artificial intelligence (AI) technologies have been maturing over the years. According to Hedberg (1995) AI may be hiding in many little-known places, but it is alive and kicking. Mrs Fields Cookies, Disney Store, IRS, Microsoft Word, the White House, Xerox, Compaq, and many other organisations have used expert systems to assist them in their activities (Hedberg, 1995). So the question remains, why are knowledge management officers not recognising the importance and need for expert systems within their knowledge management structure? The importance of AI should not be underestimated and this is summed up by Barnes (2002) with the statement below:

Business value added comes from identifying and applying expert systems in situations where expertise and knowledge are required to solve problems. Knowledge engineers elicit expertise from domain experts and organize and structure it in ways that can be stored and applied in active forms to structure, guide, perform, and manage tasks; solve problems; and make decisions. Expert and knowledge-based systems provide the framework for handling the exchange and integration of knowledge from various sources. They allow knowledge bases to be created for ultimate sharing and analysis. They are an ideal technology for capturing, preserving, and documenting knowledge, especially in today's environment where organizations are reengineering, downsizing, and losing senior managers due to early retirement packages.

The discussion on knowledge management practices presented earlier would not have been complete if the study had not discussed systems that facilitated KM practices. In chapter one, the study stated that organisations misconstrue IT to be knowledge; yet, from the discussion on KM systems, it has been made clear that IT or ICT tools are merely enablers for knowledge creation, sharing and retention. In the knowledge economy, the day-to-day activities of the business are, to a great extent, automated to improve efficiency and productivity; therefore, technology is playing a crucial role in organisational performance. One can assume what the situation in banks would be with their huge volumes of transactions if files and processes were manually processed. This would impede accuracy and timeous processing of results and decision-making. The discussion of KM systems has helped to clarify the incorrect notion that IT is knowledge, and it is important to review other studies to find out what their results are in relation to KM.

2.12 Knowledge management in selected banks

This section discusses how KM is understood and the status quo of KM in selected banks. World economies are increasingly becoming knowledge-based and, as such, organisations are

encouraged to manage knowledge wisely (Stafford and Mearns, 2009). Drucker (1995) defines a knowledge economy as an economy that depends on knowledge for growth, provision of superior services, highly educated and trained people and knowledge supplanting the traditional resources of production. Organisations such as banks require a significant segment of highly educated employees where knowledge assets are accorded more importance than capital and labour assets (World Bank, 2009).

Organisations fight for highly educated, skilled and experienced employees who are believed to possess expert knowledge. During data collection, it was established that business analysts, process engineers, financial managers and accountants have been rotating in all major South African commercial banks. These individuals have gained a great deal of bargaining power during salary negotiations (Banking Association of South Africa, 2013). These individual professional employees possess tacit knowledge that is critical to the operations of the bank. Though the banks' knowledge is stored in other repositories, tacit knowledge is by far the more important of the two types of knowledge. Nonaka and Takeuchi (1985) state that staff mobility and loss may mean that organisations are losing valuable organisational knowledge and corporate insight whenever their staff walks out of the door. This is the leverage that is being used by staff to wield bargaining power during salary negotiations (Banking Association of South Africa, 2013). Organisations are encouraged to put measures in place to capture the knowledge they need in order to retain it.

2.12.1 Understanding of KM in selected banks

Understanding and managing knowledge is as important to banking institutions as it is for any other kind of organisation. Despite the significance of implementing a knowledge management initiative, there are very few banking institutions formally engaged in fully integrated KM programmes (Prodromos and Vraimaki, 2009). Knowledge management has secured an important position in this new era of competitive business environment. One of the key success factors of financial institutions (FIs) is the effective and efficient application and deployment of information and knowledge systems in the areas of operations, management, accounting and marketing. But do these FIs understand knowledge? The fact that there is often a lack of demarcation between the meanings of information and knowledge is the reason that the terms have been discussed in section 2.4.1 of this chapter.

FNB and Nedbank maintain their competitive edge through customer relationship management (CRM) solutions, self-service and content management. The selected banks manage loads of data - from customer information to millions of financial transactions through the use of systems and

KM solutions (FNB, 2012 and Nedbank, 2012). That information can be a blessing and a curse depending on how the banks manage their knowledge. Both FNB and Nedbank incorporate a variety of KM solutions - enterprise content management, web-based self-service and CRM technology - to remain competitive in the market and offer superior customer service (FNB, 2013; Nedbank, 2013). FNB has appointed a head of knowledge management and intelligence who directly reports to the Executive Director IT and Information Services (FNB, 2013). It was established that the IT directorate at FNB was responsible for all knowledge created, shared and store in the bank, a clear indication that banks even misconstrued IT to be knowledge (Grant, 2008). IT is merely an enabler of KM in an organisation but many institutions including banks fail to distinguish the difference.

Nedbank has entrusted the Group Technology Shared Services (GTSS) department with the responsibility of managing the bank's knowledge. The GTSS is responsible for the bank's IT infrastructure, architecture and knowledge platforms, and the Chief Information Officer reported to the group IT executive of the bank. FNB and Nedbank have added a web-based self-service to enable customers search for questions against their online knowledgebase. Schwartzman (2014), Chief Operating Officer (COO) at ServiceWare Technologies, states that the goal is to improve the customer experience. Knowledge management captures the actual experience of the customer and identifies those questions or behaviours that need to be addressed proactively. From this analysis, it was evident that the selected banks did not really understand the differences between IT and knowledge or information and knowledge.

Maponya (2004) suggests that KM practices aim to draw out the tacit knowledge people have. Understanding the practices requires a close look at the banks' policies and strategies, leadership, knowledge capturing and acquisition, and knowledge sharing. To be effective, it is important for banks to understand the context in which the information is required, as well as organising the information (re-packaging) in a manner most useful to the users, at the same time learning from previous experiences and situations, and as a result being able to anticipate user requirements. This knowledge then needs to be retained so that continuity remains even when the creator leaves the organisation. Eventually, a knowledge bank (Branin, 2003), or repository or portal may be the result.

2.12.2 Role of knowledge management in selected banks

The primary role of KM in business in the knowledge economy is to facilitate opportunistic application of fragmented knowledge through integration. Enhanced performance is reflected in

more informed decision-making, streamlined processes, reduced duplication, more innovation, advanced data integrity and greater cooperation within the bank. According to Cong and Pandya (2003), “This means that KM can contribute to cost efficiency and improved service delivery”. Lack of knowledge management practices might lead to high costs as a result of lost institutional memory, knowledge gaps and uninformed decisions. Managing knowledge in a bank can leverage efficiency across all its services to customers through accessing the right information for making informed decisions and eliminating duplication of efforts. In a study on knowledge retention strategies in public broadcasting corporations in Southern Africa, Dewah (2011) suggests that, by capturing tacit knowledge of an ageing workforce and availing easy access to all relevant information, partnerships with all stakeholders can be enhanced and the organisation’s general performance can be improved.

2.12.3 Knowledge management and organisational performance

In this section, the study substantiates the perception that KM is crucial in enhancing organisational performance. The literature from other studies is reviewed to ascertain the extent to which the previous studies agree or disagree with the notion that KM plays a crucial role in an organisation’s performance. The successful implementation of knowledge management practices such as knowledge creation, sharing and retention in South African banks may result in better service delivery due to better performance by employees. Fombad (2009) is of the view that KM results in better employee performance, employee satisfaction and teamwork.

A study conducted by Arora (2011) investigated how knowledge management can improve performance in the public sector in India. Arora (2011) acknowledges that knowledge management provides the overall strategy and techniques to manage e-government content eloquently in order to make knowledge more usable and accessible and to keep it updated. Knowledge management can be put into practice as a reform instrument and an integral part of e-government to increase effectiveness, efficiency and productivity (Arora, 2011:165). Zhou and Gao (2007) posit that knowledge management enhances governments’ competence, improves service quality and promotes healthy development of e-government. Misra (2007) confirms that knowledge management is no longer a choice but an imperative if economies have to survive in the unfolding era of privatization, liberalisation and globalisation. The findings from Arora’s study (2011) show that:

- Employment of knowledge management allows standardisation and automation of customer services and support processes, as well as the introduction of a customer-centric universal front office delivery model;
- Improved and more consistent public service quality;
- More accessible services aligned with customer preferences;
- Relief of skilled personnel from routine customer service work, thus enabling the workers to focus on more-value-added activities;
- Knowledge management has to be considered an important building block in the improvement of public services and successful realization of e-government initiatives in government institutions and municipalities.

Dewah (2011:61) posits that knowledge management results in the preservation of organisational memory that may be easily stored and retrieved for re-use. According to Cong and Pandya (2003), the capacity to integrate and apply distributed knowledge to create agility, responsiveness and adaptivity is now, more than ever, the only competitive differentiator. The growing need for knowledge management in the banks cannot be over-emphasised. Cong and Pandya (2003) point out that “KM provides increased performance through more efficient, productive, innovative and quality processes”. Tiwana (2008) also mentions that “KM addresses problems related to the business – whether it is creating and delivering innovative products or services; managing and enhancing relationships with customers, partners, suppliers and/or improving work processes”.

Schiuma (2012) opines that knowledge represents one of the fundamental constituent parts of any organization and it can be incorporated into people’s abilities or ingrained into structural and technological capital. Thus management of knowledge is at the core of an organization’s business growth. Thus managers are interested in managing knowledge not for the sake of knowledge management, but because the planning, design, assessment and revision of the organizational knowledge resources and processes can support the business performance improvements. In particular, organizations are challenged to become continuous innovators creating organizational context in which change, imagination and creativity are part of employees’ mind-sets. Nowadays organizations need to optimize the use of resources and make sure that innovation is really the engine for competitiveness and sustainability. Accordingly, they are increasingly called to compete in a fast and unpredictable scenario, and be able to manage holistically all the different organizational business dimensions, such as the focus on customers and more generally on stakeholders; the design, development, production and distribution of new and existing products;

the research of new market opportunities; the development and engagement of human resources; the re-organization of the supply-chain with particular attention to the creation of inter-organizational relationships and the development of new business models.

In order to meet these and other challenges organizations need to become more and more flexible, resilient and able to absorb or produce pro-actively new business solutions for driving business performance improvements. The understanding of how this capacity can be achieved by organizations is related to the relevance that knowledge plays as a resource and source of value creation (Schiuma, 2012:513). Nowadays organisations need to optimise the use of resources and make sure that innovation is really the engine for competitiveness and sustainability (Schiuma, 2012:518).

The current age of globalisation and an interconnected world has called for increasing dependence on knowledge-based work in the context of large organisations. Similarly, knowledge as a strategic resource of the organisation has become significant in the present competitive environment. To achieve competitive advantage, knowledge should be harnessed and mobilized effectively in organisations (Venkitachalam and Bosua, 2014). The knowledge-based view of the firm positions employee knowledge as one of the central assets to achieve competitive advantage in an organisation (Grant, 1996). Knowledge creation and transfer are both core, mutually interdependent processes in the mobilisation of knowledge. Knowledge creation is similar to exploration whereas knowledge transfer enables exploitation and application of existing organisational knowledge (Grant, 1996). The views by Venkitachalam and Bosua (2014) confirm that knowledge management plays a key role in organisational performance.

The use of the World Wide Web (global connections of computers over the internet) has brought vast changes in how knowledge is managed, shared and archived. As a result, a large number of modern information users tend to determine what information they want to use, with the use of social networking such as blogs, real simple syndication (RSS), and chat (Anderson, 2007b; Bell and Shank, 2004; Carpenter and Steiner, 2005; Coyle, 2007; Dempsey, 2006; Fichter, 2005; Foo and Ng, 2008; Harris and Lessick, 2007; Macgregor and McCulloch, 2006). The focus is on “how the individual receives, uses, enhances and shares information” (Green, 2008:13). An example of the use of collective intelligence is Wikipedia, which allows additions and changes from any individual who perceives him/herself as an expert. The Open Access Initiative is an example of how much the Internet has become a tool for information and knowledge sharing and exchange

(Suber, 2007). The initiative also allows for scholarly publishing to take place faster, with pre-prints available well before actual publication dates. The use of theory can help understand and anticipate changes in the discipline of knowledge management.

2.12.4 Knowledge work

Wiig (2004) views knowledge work as the use of personalised and codified knowledge to execute duties and responsibilities at work. Effective organisational performance is achieved through the use of personal knowledge, understanding and judgments. Workers on all levels –managers, experts, unskilled and skilled workers – are required to think independently to act effectively. Drucker (1997) is of the view that, for the foreseeable future, knowledge work will remain the key driver of economic growth. Knowledge is there to increase productivity and innovation. It is believed that, in the knowledge economy, banks must own and be able to use knowledge to improve goods and services. Buckman (2004) supports the above notion by pointing out that neither resources nor capital can create an on-going competitive advantage in the face of superior knowledge. Banks must be able to put knowledge to work. Therefore, institutions of higher learning should not teach raw facts and analysis skills but should rather teach knowledge work (Buckman, 2004).

Nonaka and Takeuchi (1995) think that knowledge is a major input to influence innovation and those knowledge workers are agents for change in knowledge-creating companies. Wiig (2004) also thinks that knowledge workers must respond to daily work challenges in how they serve the enterprise, its customers and themselves in the best way possible. Knowledge workers must have an in-depth understanding of the organisation's goals and motivation to think "outside the box", use critical thinking and have personal motivation, enthusiasm and freedom to act. In this way, knowledge management provides knowledge workers with the necessary impetus, tools and processes required to improve organisational performance. Dewah (2011) states that the use of IT enables people to work and perform organisational duties from anywhere, working more hours and improving productivity. This is supported by Buckman (2004) who is of the opinion that:

- People using laptops are two to four times more productive than those using desktops, because desktops can function only when their users are physically in the office.
- Knowledge work can occur anytime and anywhere, wherever people want to engage their brains. There is no need to be physically present at the office to do knowledge work.

- People work best at different times of the day or night. Encouraging knowledge work to be done at the time of best production can improve productivity relative to the time expended.

The transfer of ideas and knowledge can only be aided by IT in contemporary societies, hence the inclusion of IT as a critical enabler of knowledge transfer and knowledge retention. In the absence of the knowledge worker, it is impossible to transfer and retain knowledge; therefore, it is imperative to briefly discuss the knowledge worker in this study. Cooper (2006) defines knowledge workers as those people who promote the creation of new knowledge and integrate that knowledge into the organisation. The knowledge work system incorporates research findings into the information systems maintained by the bank so that other divisions may use that knowledge. With the development of more secure user-friendly databases as central repositories, banks have been storing, processing, sharing and retrieving large volumes of information gathered from a myriad of sources. The knowledge workers for banks, in this instance, include business analysts, financial managers, project managers, legal experts, human resources practitioners, system engineers and accountants. The discussion of the various objectives of this would not be complete if the study failed to highlight the different knowledge managements systems needed in an organisation. The purpose of the next section is for the study to present a discussion on organisational learning.

2.12.5 Learning organisations

To substantiate the perception that KM is crucial in enhancing organisational performance, this section discusses learning organisations. Steyn and du Toit (2009) define a learning organisation as an organisation that has adopted project management practices. The successful or unsuccessful implementation of a project is a learning curve for the project team. The project team records all successes and failures scored and, from that, the organisation develops strategies to improve the performance. Senge (1990), on the other hand, defines a learning organisation as an organisation where people continuously expand their capacity to create results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free and where people are continually learning how to learn together. A learning organisation equips employees with operational knowledge which benefits the organisation if the knowledge is retained. Langer (2005) observes that a learning organisation is a form of organisation that actively enables the learning of its employees in such a way that it creates positive outcomes: innovation, efficiency, improved alignment with the environment and competitive advantage.

The organisation plays a pivotal role in organising, planning, facilitating and supporting the learning of its members. This study notes that South African banks consider themselves “learning organisations” because of their constant interactions with MasterCard and Visa (owners of credit, cheque, garage, fleet and debit cards). The learning aspect has been influenced by the rules and policies that require banks to continuously adhere to. In a way, the element of learning is derived from banks equipping their employees with operational knowledge, which helps combat credit card fraud as well as minimising risk. As pointed out earlier, FNB is at the forefront of banking product and technology innovation, a clear indication of a learning organisation where the bank continues to make improvements and create value for its customers. These processes indicate that knowledge is created and shared. Knowledge is closely linked to learning and, as such, organisational learning is all about knowledge acquisition. Nonaka and Takeuchi’s (1995) tacit knowledge transfer through the socialisation process is also closely linked to learning by imitation, copying and on-the-job training. When knowledge is acquired, it also needs to be retained and maintained as an organisational asset (Wenger, 2006).

Learning organisations are greatly influenced by the organisational culture and leadership prevalent in the company (Dixon, 1999 & 2002). Knowledge management initiatives may support and promote a learning culture that may foster growth, thus improving the knowledge retention rate (Dubin, 2005). Banks with a learning culture favour the building and development of the collective organisational memory so that knowledge and competencies of the past are transferred to new employees across generations of learning. Holbeche (2005) observes that learning organisations use learning as leverage to reach their goals and the resulting benefit of learning is the retention of key personnel to provide organisational knowledge.

2.13 Knowledge management in financial institutions

This section presents a discussion of the study conducted by Squier and Snyman (2004), which investigated the current state of knowledge management implementation in three South African financial organisations. Two data collection methods were used to collect data, namely, questionnaires and face-to-face interviews with senior representatives of the organisations. An electronic version of the questionnaire was sent to 30 designated senior representatives of the three financial organisations (that is, ten respondents from each organisation). Face-to-face interviews were conducted with one senior representative of each financial organisation. A total of 24 of the 30 e-mailed questionnaires were completed and returned. The findings from Squier and Snyman (2004) indicated that all three financial organisations were pursuing organisational excellence and

had business improvements and strategies in place. The study also found that knowledge was a major strategic imperative for staying competitive whilst other responses indicated that knowledge management was another management fad that would soon be replaced by another term within a few years.

Interestingly, results of the study (Squier and Snyman, 2004) indicated that the financial organisations were either still to appoint a CKO or the CKO was already in place, but these institutions regarded the knowledge of their employees and technological investments as major keys to generating competitive advantage. In addition, responses from the study indicated that knowledge management was regarded as a temporary philosophy in the organisation. Squier and Snyman (2004) also note that barriers to knowledge management in the three financial institutions were attributable to organisational culture resistance, organisational structure and technology. These elements have been discussed extensively under the knowledge management enablers section above and the study concurs with Squier and Snyman (2004) that, in the absence of knowledge sharing and retention culture in the organisation, it will be an uphill task for the organisation to create, share and transfer knowledge. Both technology and organisational structure play significant roles in enabling a knowledge sharing environment, but the findings in Squier and Snyman (2004) indicated that these were major barriers. Managers are encouraged to establish organisational structures and adopt information technology tools that enable the capturing, sharing and retention of knowledge.

In Burstein, Zyngier and Rateb (2002)'s study, KM in the financial services sector: understandings and trends in Australia, the aim was to derive an indicative understanding of the status of KM in the Australian financial services sector. Quantitative data were required for a measurable indication of trends in KM, whilst qualitative data were required to gather a rich unique picture of individual companies for comparative and confirmatory purposes. The quantitative data for Australian financial institutions were derived from the study of KM strategies in Australia by researchers from the school of information management and systems. Burstein, Zyngier and Rateb (2002: 148) posit that an organisation benefits from its capacity to manage its knowledge by assimilating new knowledge, building new knowledge, and distributing new and existing knowledge effectively. The understanding of the flow of knowledge, the capacity to manage the flow and leverage the capacity of the organisation to create and innovate is a decision mechanism. KM strategies serve beyond record management, data mining and indexing systems in database application environments. Burstein, Zyngier and Rateb (2002:149) state that an organisational knowledge base consists of collective and individual assets that are used to perform activities of

that organisation, or could be harnessed to do so. An audit of the knowledge resources in an organisation will reveal the resources an organisation already has and will, by disclosure of gaps, demonstrate the resources that are required. This assertion by Burstein, Zyngier and Rateb (2002) is supported by the discussion of resource-based theory in which the researcher pointed out that FNB and Nedbank possess human skills, financial resources, unique product offerings and technology as competitive advantages.

The findings from Burstein, Zyngier and Rateb (2002) showed that 92% of organisations had the intention to manage knowledge and 76% of the organisations demonstrated an awareness of internal knowledge resources. The sharing of best practice (44%) indicated that theoretical KM literature was not prominent. Only 8% of the respondents claimed existence of the organisational centralised repository for explicit knowledge as a defined strategy or part of a defined strategy to manage knowledge. The majority (92%) of respondents did not consider this factor important enough for managing knowledge, probably considering such repositories as more of a part of the traditional IT infrastructure. The findings indicated that Australian financial services companies were in the initial phases of KM strategy and appeared to be far ahead of their European counterparts (Burstein, Zyngier and Rateb, 2002). Of the European financial institutions, only 41% of the organisations already had or were setting KM programmes up and 29.5% were examining the need for KM programmes. A further 29.5% of the organisations were not even considering programmes to manage organisational knowledge.

Empirical research revealed that KM is a difficult concept but one that was fairly well understood by the Australian financial service industry. These organisations were in the process of implementing some form of strategy to manage knowledge. Empirical evidence showed that 60% of Australian banking institutions had developed mechanisms for sharing best practice, while only 33% of insurance institutions had developed such mechanisms (Burstein, Zyngier and Rateb, 2002:159).

2.14 Synthesis and evaluation of theory

Most of the thoughts about KM discussed in this chapter have roots in the commercial sector, public institutions and the military organisations. Theory, as it applies to banking situations, is still developing. However, it is still important to synthesise and evaluate the existing KM theory to understand it further, as well as to create inroads into the development of that which is relevant to banks. There are characteristics to look out for in evaluating theory. These include an outline of the theory, who its proponents are, where and how it can be applied, whether or not it promises

prediction, how global it is, whether or not the concepts used in it are understood with ease in the context of the discipline, how easy it is to apply, and its applicability to one's research. These theories give an insight into what work has been happening in knowledge management. They are important to the study of KM and the place of KM in modern banks. The lessons learnt from the above studies are:

Lloria (2008:79) summarises the state of KM as being in the following stages. Firstly:

KM is related both to business practice and to research. Despite the fact that KM comes from varying disciplines such as psychology, sociology, economics, engineering, computing or business management among others, none of these disciplines provides an integrating KM framework.

According to Nonaka and Teece (2001:330), what is required is transdisciplinary research that goes beyond mere interdisciplinary research activities. When information scholars do more research, the scholars will develop academically and professionally, thus establishing their own position and recognition as information scientists. Grant (2008) opines that organisations misconstrue IT to be KM, which is consistent with Lloria (2008:79) who states that KM goes further than technology management of information management. Organisations need human intervention, learning and tacit knowledge, among others, to get the most out of knowledge.

The schools of thought discussed are all part of KM and related. The case study of Dewah (2011), for example, illustrates the involvement of people from different departments in the same broadcasting corporation towards KM practice featuring the human element, readiness to use technology, and interrelations in that organisation. The AST has been applicable to this study in support of Lloria's assertion (2008) that organisations depend on technology to function. The interaction between human capital and technology facilitates the creation and sharing of technology.

Thirdly, (Lloria, 2008:79) adds that:

Knowledge is principally found in people and is developed through learning. Effective KM implies that such knowledge goes from being a human asset to being a business asset. In this process, we underline the importance of a definite commitment on the part of all members of the organisation, a correct diffusion of knowledge in the firm and especially the successful incorporation of processes and systems, products and services so that knowledge becomes institutionalized in the firm and remains with its members.

Having summarised KM with commercial banks theories in context, the state of KM theory and practice can be summed up as evolving. This evolution has become a necessity because of an environment of unprecedented technological and communication changes that require financial institutions to engage in knowledge management through re-focusing and re-tooling. Table 2.2 synthesises and evaluates the KM theories that have been looked at in this chapter, juxtaposed with a view to consider the appropriateness of KM principles to banking environments.

Table 2.2 Synthesis and evaluation of theory

Characteristic of theory	Resource based theory	Adaptive structuration theory	Organisation knowledge conversion theory	Knowledge management
Proponents	Penrose (1959), Teece (1982). Wernefelt (1984)	Giddens (1979,1984), DeSanctis (1984, 1986), DeSanctis and Poole (1989)	Nonaka (1991), Nonaka and Takeuchi (1995)	Polanyi (1962), Nonaka (1991), Nonaka and Takeuchi (1995)
Applications	User-oriented studies	Information retrieval	Information retrieval, KM studies	Giddens (1979,1984), DeSanctis (1984, 1986), DeSanctis and Poole (1989), Nonaka (1991), Nonaka and Takeuchi (1995),
It is global?	Yes	Yes	Yes	Yes
Are the concepts used in the theory well understood in KM?	Not clear	Yes	Yes	Yes
Does it promote prediction?	Not easy	Yes	Yes	Yes
Is it easy to identify its applicability	Yes	Yes	Yes	Yes
Is it practical for my research	Yes	Yes	Yes	Yes

2.15 Studies related to KM practices in other organisations

This section reviews findings from studies conducted by other researchers to determine the methodologies and strategies deployed during data collection. As pointed out in section 2.1 of this

study, the purpose of a literature review is to gain knowledge, support one's argument, and summarise and synthesise the ideas that others have already put forward. Attention is paid to the studies conducted on Southern African organisations that have adopted and experienced positive company growth as a result of proper utilisation of the knowledge assets possessed by the organisations. The studies that have been identified are discussed in the following categories: financial institutions, institutions of higher learning, broadcasting, law firms and the military.

2.15.1 Higher education institutions

In a study by Wamundila and Ngulube (2011) which investigated how knowledge retention may be enhanced at the University of Zambia (UNZA), a quantitative case study design employing a triangulation of data collection methods was used. Data were collected using interviews and questionnaires. Thirteen senior management staff who were deemed to be relevant to the study were purposively selected for the interviews, whilst a questionnaire was used to collect data from a stratified random sample of 205 academics obtained from a database at the computer centre. One hundred and twenty-four (that is 60%) of the surveyed academics responded to the questionnaires that were sent out at the end of 2009.

The step taken by Wamundila and Ngulube to investigate knowledge retention strategies at the University of Zambia (UNZA) is applauded because the majority of studies that have been reviewed in this study relate to financial, health and broadcasting institutions. Previous studies by Kok (2003) and Mostert and Snyman (2007) did not address knowledge management issues relating to universities. It is not only the corporate world that should be informed about the importance of knowledge management – institutions of higher learning also face high staff attrition rates due to retirement, death, ageing or leaving for other organisations. In their study, Wamundila and Ngulube (2011) tried to ascertain the retention strategies at UNZA, like any other organisation that is conscious about knowledge retention. Authorities such as Henczel (2000) and Hylton (2002) argue that the lack of knowledge assessment as a knowledge retention tool undermines operational performance, as it would be difficult for an organisation to uncover and ascertain its operational strengths and weaknesses with regard to vital operational knowledge.

The findings from Wamundila and Ngulube's study (2011) indicated that 17 (13.7%) respondents mentioned the availability of teaching practice manuals. Mention of manuals for functions such as consultancy, recruitment and training of staff was limited. Thus, the survey findings revealed that none of the known documented processes, policies, work manuals and procedures covered core academic functions such as curriculum development, research and academic citizenship. The state

of affairs at UNZA with regard to records, policies and documentation management reflected an institution in dire need of business process reengineering. Considering the number of specialised units and tasks available at UNZA, the existing documented processes, policies, work manuals and procedures were not sufficiently representative of what could, potentially, be documented. Although a training policy was available, there was no comprehensive policy on recruitment or procedures on other human resources functions such as industrial relations, safety and health, and performance appraisal” (Wamundila and Ngulube, 2011).

Upon further analysis of Wamundila and Ngulube’s study (2011), the findings from the surveys and interviews showed that the policies, processes, work manuals and procedures were not documented, thus seriously breaching the principles of knowledge retention. This affirmation of the importance of documented processes, policies, work manuals and procedures is in line with the advocacy for the creation of knowledge repositories for operational benefit by Dewah (2011). Notably the study indicates that knowledge management practices play a crucial role in sustaining knowledge acquisition, creation, sharing and transferring. UNZA had, on the other hand, adopted recruitment and selection (interviewing of candidates), training and development, brainstorming, subject matter experts, expert systems, and after-action reviews as knowledge retention strategies. Knowledge practices at UNZA included succession planning, communities of practice, knowledge repositories, mentorship, coaching, phased retirement, orientation, job rotation and story-telling. The knowledge retention strategies in Wamundila and Ngulube (2011) concur with the knowledge retention strategies discussed in this study. However, this study did not address job rotation, orientation, phased retirement and coaching as knowledge retention strategies.

2.15.2 Broadcasting corporations

Dewah (2011) investigated the knowledge retention strategies in three Southern Africa Development Community (SADC) public broadcasting organisations: the South African Broadcasting Corporation (SABC) in South Africa, the Department of Broadcasting Services (DBS) in Botswana and the Zimbabwe Broadcasting Corporation (ZBC) in Zimbabwe. The aim of the study was to establish how knowledge is captured and retained at such organisations. In the view of Dewah (2011), knowledge retention in organisations has been discussed as critical knowledge management practices that should be considered by management before the organisation loses important knowledge. Dewah (2011) posits that the objectives of the study were: to find out the types of strategies the three broadcasting organisations employ to capture and retain knowledge; establish how the three broadcasting organisational cultures enable knowledge

acquisition, transfer, sharing and retention; and establish the role of ICTs as tools and enablers of knowledge retention, creation, transfer and sharing in the three broadcasting organisations. In view of Dewah's (2011) objectives, this study has noted that knowledge management in organisations is made possible if the prevailing organisational structure, IT and culture are creating a knowledge sharing, transfer and retention platform. Organisational culture and structure as ICT tools have been discussed as some of the major enablers of knowledge management in the organisation.

Dewah (2011) used the survey method and employed a triangulation design for data gathering from three SADC public broadcasting organisations. The population sample comprised 240 professional staff, including 38 managers, from different sections of the broadcasting organisations and the study was conducted by the administration of a questionnaire to staff, interviews with managers, and observations. The findings from Dewah's (2011) study indicated that knowledge management was regarded as a relatively new concept and that practice had not yet been properly embraced in the public broadcasting organisation system in order to capture and retain knowledge that was acquired and generated in the organisations. There were no measures put in place in the organisations to retain the knowledge to ensure that, once those who hold vital tacit knowledge were gone, the knowledge would still be available and accessible. As pointed out during the discussion on retention strategies, Dewah's (2011) findings concur with this study that many organisations do not have knowledge retention strategies in place or the strategies are ineffective.

Squier and Snyman (2004) indicate that, in the absence of a knowledge sharing and retention culture in the organisation, it will be an uphill task for the organisation to create, share and transfer knowledge accessibility. The second finding in Dewah (2011) established that there was no culture of knowledge sharing. It also emerged that employees were not free to share their knowledge because of government regulations, prevailing political contexts, mistrust and general lack of incentives to share knowledge. Similarly, this study during data collection established that there was no culture of information and knowledge sharing in banks. Divisions operate in silos, which negatively affects the opportunities for sharing, transferring and retention of vital knowledge amongst employees.

Thirdly, Dewah (2011) established that the organisations had no strategies or systems in place to capture the experts' knowledge. In this study, knowledge retention strategies have been identified as communities of practice, story-telling, and mentorship and apprenticeship programmes. The

absence of retention strategies in the three broadcasting corporations is a clear indication that management has not realised and recognised the importance of retaining critical knowledge in the organisation for future use. One of the objectives of this study was to investigate the extent to which banks have implemented KM practices. It emerged during data gathering that organisational culture, IT and leadership (as enablers of KM) play a vital role in the retention of knowledge in the bank. Similarities are drawn between Dewah's (2011) third finding and this study's third objective.

Fourthly, the study revealed that the public broadcasting organisations still lagged behind, not only in collaborative and communicative technologies that facilitate knowledge transfer and sharing of tacit knowledge, but also in the retention of knowledge generally. The study also found that some of the organisations studied did not have internet connectivity and websites were not yet functional, which hampered the acquisition and sharing of knowledge for retention purposes (Dewah, 2011). In the knowledge economy, it is envisaged that ICT tools play a major role in enabling the creation, capturing, storage, transfer and retrieval of knowledge within an organisation. As most business transactions are automated, one wonders how the three broadcasting corporations were able to operate without ICT tools. This study has noted that a company's knowledge stored in databases, documents, files (explicit) and human beings (tacit) should be shared, transferred and retained through face-to-face interactions or by electronic means.

2.15.3 Law firms

Fombad (2009) investigated how Botswana law firms utilised knowledge management as a competitive edge amidst the changing legal environment. Fombad (2009) adopted a survey research design and a census of all the lawyers (Law Society of Botswana, 2007) in Botswana was undertaken. The study adopted a triangulation of qualitative and quantitative methods of data collection and analysis. Open- and closed-ended questions and interview schedules were used to collect data. Out of 217 questionnaires distributed to the 115 firms registered in Botswana, 140 completed questionnaires were returned, giving a response rate of 64.5% (Fombad, 2009). The quantitative data were analysed using the Statistical Package for Social Sciences (SPSS) version 15.0. To complement the findings from the quantitative data, and obtain in-depth information about the experiences of lawyers in knowledge management activities, semi-structured interviews were conducted with 15 lawyers who were selected from different law firms in Gaborone. Gaborone was chosen as the site for the interviews because of its proximity to the researcher's

base and because most of the law firms (84 firms out of 115) were located in Gaborone. The responses in Fombad (2009) study indicate that the sample was willing to participate in the study. Presumably Fombad used the findings to educate the law firms on the importance of knowledge management. Findings from this study will be shared with the participating commercial banks so as to encourage top management to implement the recommendations as a way of improving organisational performance.

The findings from Fombad (2009) indicated that most of the lawyers did not fully understand the concept of knowledge management. One interviewee defined knowledge management as a 'client's affair'. Another remarked that "knowledge management is difficult because clients are not sufficiently rich to pay for this" (Fombad, 2009). Most of the participants (72.9%) did not have a formal knowledge management programme and very few (27.1%) were planning to introduce one. This finding concurs with the second objective of this study that seeks to substantiate the perception that KM is crucial in enhancing organisational performance. One of the survey questions asked respondents about their understanding of knowledge management. During data collection, it was established that employees gave varying answers to this question, as in the case of Fombad (2009). The blame for lack of understanding should be attributed to the leadership of the organisation. If the leadership does not know or understand KM, then it is difficult for the employees to know it as well.

An important finding in Fombad (2009) was that law firms in Botswana were yet to acquire some of the crucial technologies for knowledge management. The common information communication technologies used were telephones (100%), computers (100%), personal networked computers (81.4%), e-mail (71.4%), the internet (69.3%), case management systems (59.3%) and legal information systems (40%). It was not surprising that only 20% used an intranet because most of the law firms consisted of one or two lawyers, where the need for an intranet may not have arisen. Also, few lawyers (16.4%) had invested in crucial technologies for knowledge management such as calendaring, group scheduling and task list software, document management systems (16.4%), record management systems (16.4%), World Wide Web (15.7%), practice management systems (15.0%), publishing systems (13.6%), automated billing assembly (10.7%), indexing tools (7.1%), video and text-based video conferencing (7.1%), electronic bulletin boards (5.7%) and content management systems (2.1%).

The above results indicate that ICT tools are not widely used in law firms and, putting that into perspective, the transfer and retention of knowledge in such organisations is not achieved. It is

assumed, if Fombad (2009) had decided to investigate how records and documents were managed in these firms, she would have been shocked by what was happening. It cannot be overstated that ICT tools are crucial enablers for knowledge retention and capturing in the organisation. The absence of these tools in the organisations indicates that Botswana law firms have challenges to deal with in the changing legal environment.

2.15.4 Military organisations

Military organisations have a unique context in which KM must be deployed and eventually operate. The transition from an industrial era into an information and knowledge era has been significant, and the relevance of acquiring and managing information and knowledge is becoming increasingly critical (Kang and Kim, 2010). KM has been regarded as a strategic approach to achieve defence objectives. Military KM plays a valuable role in leveraging existing knowledge and converting new knowledge into action through the KM cycle (McIntyre, Gauvin and Waruszynski, 2003). KM strategy is the centre of the military's information revolution, which becomes the enabler for mission operations, knowledge generation, information delivery and technology innovation (Kang and Kim, 2010). The applications of KM strategy in military context is extensively applied in the military of major countries like the United States of America, Britain, Canada and Australia, and several Asian countries such as Japan, Korea and Singapore. Based on these developments, it is inevitable for the Malaysian Armed Forces (MAF) to embark on knowledge-based organisation through the KM strategy.

In their study on perceptions of knowledge creation, KM processes, technology and applications in military organisations, Manuri and Yaacob (2011) state that KM application within the military environment requires knowledge processes that are robust and reliable within operational contexts and the knowledge creation and conversion processes must match the pace of the military operations. The aim of the study was to examine the current situation of KM activities in the MAF through the study of officers' perceptions of knowledge creation, KM processes, applications and technology variables. In the context of today's military modernisation and organisational change efforts, the present is set off from the past by the current heavy reliance on knowledge resources and organisational learning. Consequently, McIntyre, Gauvin and Waruszynski (2003) define military KM as "a strategic approach to achieving defence objectives by leveraging the value of collective knowledge through the processes of creating, gathering, organising, sharing and transferring knowledge into action". However, the army defines KM as a discipline that promotes

an integrated approach to identifying, retrieving, evaluating, and sharing an enterprise's tacit and explicit knowledge assets to meet mission objectives (Manuri and Yaacob, 2011).

The development of KM in the military has been accepted and used extensively for thousands of years. The military have been leaders in adopting and advancing KM practices, KM intelligence applications, and decision-making skills over the past decades (Laudon and Laudon, 2013). In today's modern military management, for example, the U.S. army has launched their Army Knowledge Online⁵ (AKO), which enables army personnel to gain quick online access to important army information, news, education and training opportunities, as well as knowledge centres and e-mail. AKO is the army's integrated enterprise portal for accessing information, conducting business and managing operations. Integral to army transformation, AKO crosses the war fighting, business, and intelligence mission areas to support the current and future force (Lord, 2010). For effective KM implementation, the army has produced Army Knowledge Management (AKM) as the strategy to transform itself into a network-centric, knowledge-based force with KM methods and successfully applied them in its workplace (Santamaria and Kesler, 2002).

Manuri and Yaacob (2011) adopted a quantitative research methodology, where a total of 363 military officers were selected for the study. The respondents involved in the study were military officers with ranks equivalent to lieutenant to colonel. The survey instrument was designed to assess and investigate the perceptions (attitude) of MAF officers about KM applications in an ICT environment. The questionnaire consisted of fifty-two (52) item statements and was divided into five parts. The findings from the study indicated that the type of services (navy, army and air force) did not have an influence on knowledge creation, KM processes, KM applications and technology in the MAF. This was further corroborated by the fact that rank structure did not influence KM. Another important finding from the study was the positive relationship between technology and the knowledge creation and KM processes. The findings from Manuri and Yaacob (2011) confirm the importance of KM in organisations.

2.15.5 Local government (municipalities)

Gaffoor and Cloette (2010) conducted a study on KM in local government, presenting the case of Stellenbosch Municipality. The goals of the study were, firstly, to investigate the extent to which Stellenbosch Municipality demonstrated readiness for implementing KM practices in its organisation through the assessment of existing KM enablers present in that organisation and, secondly, to identify general principles demonstrated by Stellenbosch Municipality that could be

used for wider application in the South African local government sphere. The main players in KM in the municipality that were focused on in this case study were the Corporate Services, Strategic Services and Financial Services directorates (Gaffoor and Cloette, 2010:2).

Gaffoor and Cloette (2010) state that theoretical data were obtained through documentary assessment and empirical data were attained by means of interviews with municipal personnel present in the selected departments. The aims were to determine where knowledge in the organisation was captured, who was responsible for capturing knowledge, by whom and how knowledge was utilised, processed and disseminated, and how financial, human and technological resources were employed to facilitate knowledge creation, processing, utilisation and dissemination. Six interviews were conducted on a one-on-one basis with selected interviewees in different positions and departments in the organisation. Interviewees comprised senior managers and line managers from the selected departments within the municipality. The interviews conducted were aimed at acquiring the necessary qualitative data, which primarily focused on the degree of awareness, comprehension and general acuity about KM. What also had to be determined was whether the organisational structure and strategy are conducive to effective KM, whether the organisational composition supports KM and whether the organisation's human and technological resources effectively supported KM. The data analysis findings were firstly categorised into like groups (Gaffoor and Cloette, 2010:2).

Secondly, a comparative analysis was conducted on the data in the various groups to identify commonalities and differences in the responses generated from the interviews. Finally, the data generated from the case studies were evaluated on the basis of the theories and models identified in the literature review, in order to draw the necessary conclusions and make suitable recommendations, according to Brynard and Hanekom (1997:48). The study indicated that organisational culture, human resources, IT, organisational structure, strategy and leadership were the major KM enablers which were also identified in this study as the major KM enablers necessary for the establishment of KM in organisations.

Findings from Gaffoor and Cloette (2010) study showed that the organisational culture showed potential for developing into a thriving culture capable of sustaining the implementation and functioning of KM efforts, according to the interviews that were conducted. By observing the culture present in each of the assessed departments, it was evident that there was a willingness to share information and a proclivity toward the implementation of KM efforts. Knowledge sharing was widespread in the organisation but they still faced the challenge of fully implementing KM.

Stellenbosch Municipality had various contemporary information technology systems in place. However, the municipality utilised various systems in various departments, thus there was no single system spanning the entire municipality. As these systems were not integrated, information sharing was hampered and accessibility to information sources were limited. The municipality had a strong information technology platform and support network.

Gaffoor and Cloette (2010) state that Stellenbosch Municipality adhered to stipulated recruitment and selection procedures, and adequate training and skills development initiatives. All employee appointments were carried out in accordance with a set of predefined requirements regarding skills and competencies. The municipality functioned in a political milieu which also influenced employee placements. The municipality's human resources management was effective and employees were geared toward embracing KM initiatives. Employee capacities were developed via training and development programmes administered by the Skills Development department within the Human Resources department. The incidence of high staff turnover was problematical in terms of KM, in that fundamental organisational knowledge might have been lost when employees retired or were promoted. Stellenbosch Municipality's IDP comprised the organisation's strategy. It was a strategic plan that displayed the organisation's vision and mission and served as a road map to show where the organisation was and where it was headed. It was clear that the municipality did not have a formalised KM strategy in place at that time. The strategic services department was thus far the only department that had created a position for a KM officer within their departmental microstructure (Gaffoor and Cloette, 2010). Efforts were underway to establish a KM unit within the municipality's corporate services directorate (Fourie 2007). The municipality had a top-down, hierarchical organisational structure, which was not the most conducive to KM efforts, as the structure is characterised by a bureaucratic nature and thus it is not very responsive to changes being made. Furthermore, it is also a deterrent to horizontal communication flows. Skyrme (1999:32) claims that the network structure is most suitable to facilitate KM.

In another study conducted by Averweg (2012) to investigate whether or not the intranet augmented knowledge-sharing in the selected organisation of eThekweni Municipality, a qualitative research approach was adopted. Information technology (IT) plays an important role in organisations to make effective the managing and sharing of knowledge. IT supports KM by facilitating quick searching and access to retrieval of information, which in turn encourages co-operation and communication between the employees in an organisation (Yeh, Lai and Ho 2006:799). If IT, such as an intranet, is not effectively managed, knowledge-sharing in an

organisation will not be augmented. However, it should be noted that, in the author's survey, perceived benefit did not explicitly indicate whether or not there was a sharing of tacit knowledge in eThekweni Municipality or if eThekweni Municipality's intranet was effective for knowledge-sharing. The second highest reported perceived benefit was as "an effective way to conduct organisational interaction". Averweg (2012) opines that organisational interaction includes virtual maps, chats and email transactions. When employees engage in collaborative work with fellow employees in different clusters or service units and between different hierarchical levels that share their objectives, the context of knowledge-sharing exists. An intranet should be tailored to suit and enhance an organisation's knowledge-sharing processes through its "alerting" and "retrieving" mechanisms. Because IT plays an important role enabling the effective acquisition, sharing and presentation of knowledge, an intranet must be effectively managed to readily augment knowledge-sharing. In the case of eThekweni Municipality's intranet, whilst there was information sharing, the intranet appeared to augment limited knowledge-sharing (Averweg, 2012).

In a study conducted by Gharehbiglo, Shadiddizaji, Yazdani and Khandehzamin (2012), they evaluated the factors affecting knowledge management in the Municipality of the city of Rasht in Iran. Gharehbiglo et al. (2012) acknowledge that knowledge is recognised as an important source of competitive advantage and value creation. Knowledge management describes the strategies and processes of acquiring, converting, applying and protecting knowledge to improve a firm's competitiveness. According to Gharehbiglo et al. (2012) successful organisations such as municipalities responded rapidly to customer requirements, reduced costs and, ultimately, the quality of investment that firms have more machinery and manpower. The findings from the study show that knowledge management practices were not visible in the Municipality of Rasht; however, the variables of organisational structure, information technology, organisational culture, human resources, training and knowledge management had a significant relationship (Gharehbiglo et al., 2012).

2.15.6 Public service institutions

Knowledge Management (KM) has been adopted by the public sector institutions of the developed countries for a while and the rewards are said to be immense. For a new democracy and a developing country like South Africa, the benefits of KM in the public sector cannot be over-emphasised. Among other things, it is believed that KM can help speed up service delivery which is a top priority for the South African public sector at the moment. However, one wonders if the South African public sector is giving KM the kind of attention it deserves and, if so, whether there

are any noticeable rewards (Mphahlele, 2010:4). In her study, Mphahlele (2010) investigated KM practices in the South African public sector, specifically the national government. “As much as we would like to believe that KM is practiced nationally, some national departments are lagging behind. This happens at different levels, be it strategy or implementation. It is therefore believed that this study can help to expose the challenges and benefits of KM implementation in the South African public sector” (Mphahlele, 2010:12). The study was motivated by the fact it was possible for government departments that had embarked on KM initiatives to share their lessons with those that had not yet embarked on it.

The study was done using an empirical method based on a survey of national government departments that were sampled randomly. A sample size was determined by the availability of information from different sources of information, namely: the internet, the media, colleagues and employees in the different national departments. The researcher also observed and attended professional gatherings and associations in order to obtain as much information about the subjects as possible. A questionnaire consisting of both closed- and open-ended questions was designed and distributed both manually and electronically to KM managers and practitioners to distribute to their colleagues at all levels in various national departments. This was aimed at ensuring that a maximum number of participants were able to receive and participate in the study to ensure the validity of the data. The collected data were analysed through the use of written explanations, graphs and a discussion of results. Tables were also used to accompany the data. The analysis followed the following sequence:

- Results of the fieldwork, which included a report of KM gatherings by the public sector institutions, visits and interviews with different KM champions/practitioners/leaders from different departments or organised groups;
- A look into the Public Service Vacancy Circulars;
- The analysis of responses to the questionnaires.

The findings from the study showed that the departments of public service and administration and communication had initiated KM practices and processes as early as 2000 and the department of communication had been the first to go on a KM promotion drive. The department of public service administration successfully introduced a number of successful KM programmes which include the service delivery journal, a journal for public service managers, the annual Indaba on

KM in public services and a research colloquium. In the next section, a discussion on the synthesis and evaluation of theory is presented.

2.16 Chapter summary

This chapter reviewed literature pertaining to various aspects of knowledge management. The major tenets of this chapter were the role of a literature review, sources of information, KM schools of thought, the SECI model, knowledge versus information and types of knowledge (tacit and explicit). Emphasis was placed on the following areas, which were part of this study's objectives: KM in the organisation, KM practices, KM enablers and the role of KM in organisational performance, benefits of KM, and other empirical studies done in Southern African organisations. The review showed that organisations need knowledge and proper strategies that enable the retention, capturing, storage and transmission of that knowledge for future re-use. Knowledge management in organisations would be possible if the organisations had KM enablers in place. This was supported by the five studies reviewed (Squier and Snyman, 2004; Fombad, 2009; Wamundila and Ngulube, 2011; Manuri and Yaacob, 2011; Dewah, 2011), which showed that preserved organisational knowledge, if properly utilised, can be a competitive advantage in any business environment. The literature review also helped in finding out what methodologies and sampling procedures have been used before, giving insight into how it is possible to come up with a research strategy and to justify the appropriateness of the research strategy for this specific study. This chapter also gave direction on the need to cite as well as the proper referencing style in a discipline. The next chapter describes the methodological framework that was employed to gather data in the South African commercial banks.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

A false balance is an abomination to the Lord, but a just weight is a delight (Proverbs11:1)

3.0 Introduction

In Chapter Two, the concepts and role of knowledge management in enhancing organisational performance, KM practices and retention strategies in South African banks were the most important features discussed. The literature review established that KM is applicable to any organisation. With that background from Chapter Two, this chapter describes the research design and methodology that were followed in the execution of this study. The ethical considerations, target population, sampling technique, and validity and reliability issues are also discussed in this chapter. The chapter also discusses data analysis to determine the role of knowledge management in the selected South African banks (FNB and Nedbank). An embedded case study design, with the aid of survey and interview data collection instruments to establish the role of knowledge management in enhancing organisational performance at selected banks, was used in this study.

Research is the process of undertaking or carrying out original investigation in all its forms: analysis, innovation, experiment, observation, intellectual enquiry, survey, scholarship, creativity, measurement, development, hypothesis, modelling and evaluating with a view to generating new knowledge or novel comprehension (Bushaway, 2003:161). Saunders, Lewis and Thornhill (2007) posit that the basic methods of conducting research can be adopted if the researcher understands what research is all about. Research may be identified as applied or basic. According to Powell and Connaway (2004: 53):

Basic research tends to be theoretical in nature and concerns itself primarily with theory construction, hypothesis testing, and producing new, generalisable knowledge. Applied research tends to be more pragmatic and emphasizes providing information that is immediately useable in the resolution of actual problems, which may or may not have application beyond the immediate study.

Leedy and Omrod (2005) believe that applied and basic research categories complement each other. Sharing similar views, Argyris (1993) suggests that the distinction between basic and applied research be reformulated by showing how basic research contributes to applied research. The roadmap for the research design and methodology for this study is shown in Figure 3.1.

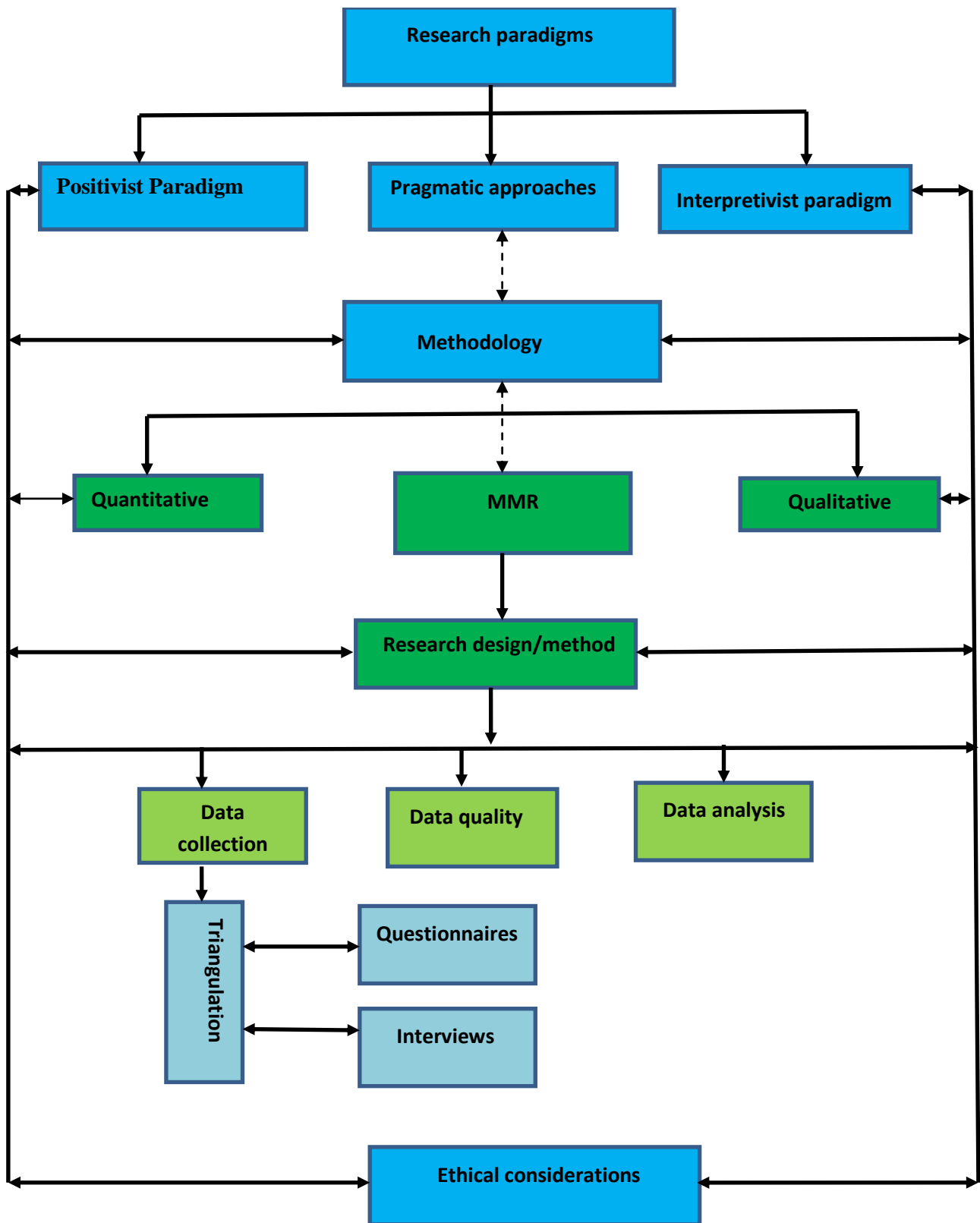


Figure 3.1 Research design and methodology road-map

The study seeks to generate new knowledge on the banks' KM practices (basic research). In this study, quantitative data is used as the primary data collection strategy, supplemented by qualitative data, thus providing the study with a richer set of data whilst promoting the generalisation of the study's findings. Figure 3.1 is a pictorial representation of how Chapter Three is presented. The research design and methodology of this study are informed by the research paradigms, namely positivist, pragmatic and interpretivist. A research paradigm informs the type of methodology a researcher decides upon. In this case, the researcher chose the multi-methods as the research strategy. The use of multi-methods is motivated by the type of questions and the nature of the data desired for this study. Triangulation of methods is achieved in data collection where questionnaires and interviews were used as the main data collection instruments. The last element of the research design and methodology road map relates to ethical considerations. When carrying out research, the UNISA (2007) policy on research recommends that a researcher should get permission from the university and from the phenomena to carry-out the study. More details about Figure 3.1 are discussed in the next section.

3.1 The research paradigm

Creswell (1994) opines that the design of a study begins with the selection of a topic and a paradigm. Paradigms in the human and social sciences help us understand phenomena; they advance assumptions about the social world, how science should be conducted and what constitutes legitimate problems, solutions and criteria of proof (Kuhn, 1970). The two widely discussed paradigms are quantitative and qualitative (Kuhn, 1970). The quantitative paradigm is termed the traditional, positivist, experimental or the empiricist paradigm. The quantitative thinking comes from an empiricist tradition established by such authors as Comte, Mill, Durkheim, Newton and Locke (Creswell, 1994:4). On the other hand, the qualitative is termed the constructivist or naturalistic approach (Lincoln and Guba, 1985). These two paradigms are discussed in sections 3.1.1 and 3.1.2 respectively.

To understand the assumptions of each paradigm, writers such as Guba and Lincoln (1988) and McCracken (1988) have contrasted quantitative and qualitative paradigms on several dimensions. Table 3.1 presents the five (ontological, epistemological, axiological, rhetorical and methodological) assumptions. The left hand column denotes the assumption, followed by the questions, quantitative and qualitative paradigms in the last columns respectively.

Table 3.1 Quantitative and qualitative paradigm assumptions

Assumption	Question	Quantitative	Qualitative
Ontological assumption	What is the nature of reality?	Reality is objective and singular, apart from the researcher.	Reality is subjective and multiple as seen by participants in a study.
Epistemological assumption	What is the relationship of the researcher to that researched	Researcher is independent from that being researched.	Researcher interacts with that being researched.
Axiological assumption	What is the role of values?	Value-free and unbiased.	Value-laden and biased.
Rhetorical assumption	What is the language of research?	Formal, based on set definitions, impersonal voice, use of accepted quantitative words	Informal, evolving decisions, personal voice, accepted qualitative words.
Methodological assumption	What is the process of research?	Deductive process, cause and effect, static design-categories isolated before study. Context free, generalisations leading to prediction, explanation and understanding. Accurate and reliable through validity and reliability.	Inductive process, mutual simultaneous shaping of factors, emerging design-categories identified during research process, context bound, patterns, theories developed for understanding. Accurate and reliable through verification.

Source: (Guba and Lincoln, 1988; McCracken, 1988)

In pursuit of the roadmap that was adopted in the study, the next section presents a discussion on the positivist paradigm.

3.1.1 Positivist (quantitative) paradigm

Creswell (2007) states that a positivist/functionalist/hypothetico-deductive approach is the traditional quantitative approach to social and educational research, whilst Pellissier (2008:15) posits that the research strategies generally fall within a continuum of possibilities between positivist, which is quantitative, scientific experiment, and a traditional approach, which views reality as a concrete structure. From an ontological perspective, the positivist approach views that reality is an objective, singular and it does not depend on the perception of any one individual. Thus, knowledge is located outside any single individual and is something apart from them (Creswell, 2007). During data collection, individual participants voluntarily and freely provide their opinions and perceptions about the KM and the researcher is invisible during the survey. This is in line with the epistemological perspective, which states that the researcher is independent

from that being researched (Guba and Lincoln, 1988 and McCracken, 1988). Creswell and Miller (1997) state that:

Because knowledge is objective and external to individuals, researchers want to make sure that their individual biases do not unduly influence a test. They therefore use standard terms to describe knowledge and remove themselves from the study. Researchers are invisible, in the background, out of sight. Their written study uses an impersonal tone. They define terms precisely in the literature and do not mention themselves.

To study something using the positivist methodology, researchers may experiment with careful controls for bias, use a prior theoretical framework, and carefully delineate specific variables that can be operationally defined according to standards in the scholarly literature. In this case, it was indicated that this study applied a theoretical framework to substantiate the research. The researcher believes that information from a sample can be 'generalised' to the population of respondents in a survey (Creswell and Miller, 1997). In this study, a structured survey instrument was developed to measure variables to make inferences from a sample of middle level managers in selected banks. Deductive processes, generalisations leading to predictions, explanations and understandings of the role of KM in enhancing organisational performance were carried out in this study with respect to the methodological assumption (Guba and Lincoln, 1988 and McCracken, 1988). In view of the above discussion; the positivist paradigm was recommended and applied in this study.

3.1.2 Interpretive (qualitative) paradigm

The interpretive approach views reality as a projection of human imagination (ontological assumption). Creswell and Miller (1997) state that an interpretivist places substantial emphasis on how participants in a study make sense or meaning of a situation. The qualitative researcher visits the 'field', gathering information from interviews with individuals who can tell their stories (epistemological assumption). According to Creswell and Miller (1997), 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' remarks. The investigator does not gain knowledge by espousing a rigid theory but forms it inductively from views and experiences of participants in the research. Hence, qualitative research is called 'interpretive' research that reports participants' views (Creswell and Miller, 1997). Inductive processes, emerging design categories and themes were applied during data collection to verify issues that were not addressed by the survey.

3.1.3 Pragmatic approaches

Increasingly, researchers are combining interpretive or qualitative research approaches with positivist or quantitative approaches. These studies are called mixed-method research (MMR), multi-method, or integrated approaches to research (Creswell, 1997a). Creswell, Fetters and Ivankova (2004:7) offer a definition of MMR as being applicable to ‘a study that involves the collection or analysis of both quantitative and/or qualitative data in a single study in which the data are collected concurrently or sequentially, [both kinds of data] are given a priority, and [interpretations] involve the integration of the data at one or more stages in the process of research’. The researcher starts with a problem that needs to be solved and uses the tools available to understand it. In other words, the researcher views knowledge pragmatically as based on studying ‘problems’ or ‘issues’ by using a variety of research methodologies (Creswell, Goodchild, and Turner, 1996). Pragmatism is a position that argues that the most important determinant of the adopted research philosophy is the research question, arguing that it is possible to work within both positivist and interpretivist positions (Creswell, 2009). This means that a philosophical stance such as the location of knowledge is secondary to the larger question of the problem that needs to be solved. In the next section, a discussion on the research strategy is presented.

3.2 Research methodology

The previous section elucidated the three broad paradigms that are used in research. This section discusses the various methodologies that informed this study.

3.2.1 Quantitative

Though a brief overview of the qualitative methodology is provided, the focal point is on the quantitative methodology which is applied in this study. It was highlighted that the positivist paradigm was adopted, thus effectively informing a quantitative methodology for use in the study. Stangor (2011:15) observes that quantitative research is descriptive research that uses more formal measures of beliefs, attitudes, intentions and behaviour, including questionnaires and systematic observation of behaviour that is subjected to statistical analysis. In most cases quantitative research places emphasis on quantification in the collection and analysis of data and the data can be expressed in numbers, percentages, tables (Babbie, 2010:35). It includes the use of closed survey methods (Myers, 1997). Quantitative research is associated with the deductive approach (Babbie, 2010:36). Quantitative researchers emphasise the need for research to be reliable and

generalisable and the results from the limited sample to apply to the population from which the sample was drawn.

Ngulube (2009) states that one of the strengths of quantitative data analysis is to arrange large amounts of confusing data into graphical form or numerical summaries thus satisfactorily answering research questions posed. Quantitative research is more formalised and controlled than qualitative research and it has the possibility of replication using different groups of subjects (Stangor, 2011; Babbie, 2010; Ngulube, 2009). Quantitative research makes use of experiments yet social processes observed in a laboratory setting may not necessarily occur within natural settings (Weingand, 1993).

3.2.2 Qualitative

Stangor (2011:15) describes qualitative research as descriptive research that is focused on observing and describing events as they occur, with the goal of capturing all of the richness of the everyday behaviour. Qualitative research takes place in a natural setting of the phenomena to be studied (Ngulube, 2009). In quantitative research the questionnaire is the main data collection tool, whereas in qualitative research interviews, document analysis and observation are the main data collection tools. By using their senses, wits and human relations skills rather than instruments to understand phenomena they gather first-hand information. The data forming the basis of qualitative research include field notes, audio or video recordings (Stangor, 2011:15) and is presented in narrative form which tries to capture the flavour of the natural setting (Ngulube, 2009). Qualitative research involves the use of qualitative data such as in-depth interviews, document and participant observation, and ethnography to understand and explain social and cultural phenomena (Myers, 1997; Ngulube, 2009 & 2010). In this study, the researcher conducted interviews and document analysis at the selected banks. Interviews were conducted with a few selected executive managers to clarify issues that were not properly addressed by the questionnaires. The managers who were selected for interviews had neither participated in the pilot study nor the survey. Interviewing selected managers was motivated by the fact that senior managers were cited in the study as enablers of knowledge management. Conducting interviews with the executives enabled the researcher to establish their roles and level of influence in knowledge management. It was highlighted that leadership takes full responsibility for crafting policies and strategies for the organisation, whilst middle level managers are tasked with implementation. As part of the study, it was important to interview the executives to establish their roles in knowledge management.

Qualitative research emphasises words rather than quantification in the collection and analysis of data and the data are expressed in ‘words’ information about feelings, values and attitudes (Babbie, 2010:35). Qualitative research tends to be associated with the idea that social life is the product of social interaction and relationships and actions characterize the social world (Babbie, 2010:36). In fact it often focuses on viewing the experiences from the perspective of those involved. Qualitative data helped the researcher determine the managers sections’ experiences, efforts and perceptions regarding the retention of knowledge that is generated or acquired by their organisations. Dewah (2011:146) states that one of the major weaknesses or drawbacks of qualitative data gathering techniques such as in-depth interviews, observations and content analysis is that it is time consuming. Qualitative research is also associated with researcher bias. The quantitative technique of using questionnaires catered for this weakness of the qualitative research technique. Be that as it may, both quantitative and qualitative research approaches complement each other, and in this study they were used to gather useful data from multiple sources on the role of knowledge management in enhancing organisational performance. In fact Fombad (2009) argues that quantitative and qualitative methods tend to overlap and establishing a clear cut difference between the two is complex.

3.2.3 Multi-methods

Earlier in the chapter it was pointed out that a quantitative paradigm was the dominant data collection strategy in the study with a small component of the overall study being drawn from the qualitative paradigm. The dominant quantitative approach was used in the study to test KM theories whilst the qualitative approach (interviews and document analysis components) were used to collect qualitative data needed to clarify areas that were not adequately covered by the survey in the data collection phase. Both quantitative and qualitative data analyses were kept separate, and then combined into meta-inferences (Creswell and Plano-Clark 2007:118; Tashakkori and Teddlie, 2008). The use of both methods in the study was to improve the reliability and validity of the data collected and this culminated in the collection of a rich set of data (triangulation).

Romm and Ngulube (2014) state that multi-methods research as conceptualised by Campbell and Fiske (1959) was designed to guarantee the reliability and validity of quantitative measures although they may be used in qualitative traditions. Data that were collected quantitatively were analysed quantitatively, resulting in quantitative results. The same was done with the qualitative dimension of it. The use of institutional records, the banks’ websites or interviews alone gave only bits and pieces of information but not the whole story of the two banks. When ‘one’s approach to

address the research problem would be deficient'(Creswell and Plano Clark, 2007:33), such as the case that was being investigated, or 'when more detailed views of select participants can help to explain the quantitative results'(Creswell and Plano Clark, 2007:34) or 'when qualitative research can provide an adequate exploration of a problem, but such an exploration is not enough'(Creswell and Plano Clark, 2007: 34), then the use of the multi-methods strategy becomes appropriate for the study. 'It generally involves the concurrent, sequential but separate, collection and analysis of quantitative and qualitative data so that the researcher may best understand the research problem' (Creswell and Plano Clark, 2007:64). A discussion on triangulation that will be presented in section 3.4.1 shows that corroboration of results from different strategies validates the approach, and makes the results complementary to each other.

3.3 Research design/strategy

A research design is a programme that guides a researcher in collecting, analysing and interpreting data and giving meaning to it (Ngulube, 2009& 2010). Du Plooy (2001) defines design as a plan of how the research will be conducted, indicating who or what is involved and where and when the study will take place. This study used multiple cases to provide more compelling confidence to the findings. Herriot and Firestone (1983) state that evidence from multiple cases is often considered more compelling and the overall study is therefore regarded as more robust. Multiple case studies allow for exploration, description and explanation within each case, as well as across the cases to help provide 'lessons learned' (Creswell, 1994). In this study, the questionnaire recipients were not the same participants who were interviewed.

Traditional research designs and procedures are based around experiments, surveys, or case studies. In all three instances – experiments, surveys, and case studies – the questions to be answered differ. The choice of any research design is influenced by 'three conditions: the type of research questions posed, the extent of control the investigator has over actual behavioural events and the focus on contemporary as opposed to historical events' (Yin, 2003:1). The three major research designs are: an experiment, case study and survey. For the purpose of this study, an embedded case study approach was used, which is presented in the next section.

3.3.1 The embedded case study design

A detailed discussion of the embedded case study design used in this study is presented in this section. For the problem set forth in this study, an embedded case study design offered the opportunity to explore milestones in depth and the role of KM in enhancing organisational performance through an inductive, constructivist lens, while also applying quantitative measures

to objectively assess the selected banks' readiness to implement KM. As suggested by Yin (2003) a carefully established rationale guided the selection of embedded multiple case study design, including the fact that this study (a) required a holistic case study, (b) involved more than one bounded case, (c) qualified as being both explanatory and exploratory in approach and (d) sought to understand the role of KM in the selected banks as a nested, or embedded phenomenon. Embedded case studies are studies in which different levels or sources of data are collected (Yin, 2003). Adopting an embedded multiple case study approach to conducting research allowed for consideration of this nested context during the exploration of the role of KM in enhancing organisational performance (Yin, 2003).

Yin (2003:47) indicates that case study research is appropriate when investigators hope to "(a) define research topics broadly and not narrowly, (b) cover contextual or complex multivariate conditions and not just isolated variables, and (c) rely on multiple and not singular sources of evidence". This study investigated the role of KM in selected banks through multiple lenses rather than simply one isolated characteristic, it looked at how KM enhances organisational performance as being contextually defined and complex, and it required the application of multiple sources of evidence. As such, case study design was optimal for the needs of this study. Merriam (1998) suggests that including multiple cases in a study makes the findings and interpretations more compelling. The logic behind choosing a multiple case study instead of a single case study was driven by the position that studying multiple cases of the same phenomenon might corroborate, qualify, or extend the findings that might occur were there to be only one case (Grünbaum, 2007). This multiple case study consisted of two cases representing the selected banks of South Africa. Both quantitative and qualitative data were collected, but the qualitative data played a supporting role in the interpretation of results.

The embedded case study design allowed the researcher to collect and analyse quantitative and qualitative data within a quantitative research design. When qualitative and quantitative methods are mixed in a single study, one method is usually given priority over the other. In such cases, the aim of the study, the rationale for employing multi methods, and the weighting of each method determine whether and how the empirical findings can be integrated. This is less challenging in sequential mixed methods studies where one approach clearly informs the other; however, guidance on combining qualitative and quantitative data of equal weight, for example, in concurrent mixed methods studies, is rather less clear (Blichfeldt and Andersen, 2006). This is made even more challenging by a common flaw, which is to insufficiently and inexplicitly identify the relationships between the epistemological and methodological concepts in a particular

study and the theoretical propositions about the nature of the phenomena under investigation (Kelle, 2006).

3.3.2 Justifying the research design

This study was done in the context of multiple cases (two banks were selected for the study), both as a unit of analysis, and as a research method. The case study approach places a great premium on objectivity and reliability of findings and encourages replication of results (Saunders et al., 2007:85), thus supporting the assumption that the researcher is independent of and neither affects nor is affected by the subject of the study (ontological and epistemological assumptions- which are synonymous with the quantitative paradigm). Creswell (2007:73) and Tellis (1997a) see a case study as a research methodology, whilst Stake (2005: 438) views it as ‘a choice of what is to be studied’, which fits well with the two banks that were selected in the study. Onwuegbuzie and Leech (2006) define a case study as a qualitative research method. Van Wynsberghe and Khan (2007:9) redefine the case study as: ‘not a method, methodology, or research design... case study could be considered a transparadigmatic and transdisciplinary heuristic that involves the careful delineation of the phenomena for which evidence is being collected (event, concept, program, process, etc.)...’ A case study is not exclusively about the case revealing itself as it is about the unit of analysis being discovered or constructed. The factors that influenced the use of the case study design were: the nature of the research questions; the amount of control the researcher had over the variables under investigation; the desired end product; and the identification of a bounded system as the focus of investigation (Merriam, 1988: 8).

The embedded case study design was suitable for this research because the focus was unique and sought to understand the complexity of issues relating to the role of KM in enhancing organisational performance in the selected banks of South Africa. According to Merriam (1988:12), a case study ‘often builds upon tacit knowledge and provides a thick description of the case under investigation’. The concepts of KM at the two selected commercial banks were in an exploratory stage at the time of this study. Benbasat, Goldstein and Mead (1987), Powell (1997), Powell and Connaway (2004), and Rowley (2002) echo the same view about a case study being suitable at the exploratory stage of knowledge building. O’Sullivan, Rassel and Berner (2008:42) agree that ‘the exploratory case study serves as the basis for establishing new research questions, new hypotheses, theory testing and a continuing research agenda’.

The use of multiple cases was decided upon because they contained some degree of validity as with more positivist approaches, as argued by some major advocates of case research, (Yin, 2003;

Benbasat, Goldstein, and Mead, 1987). The case study employed a number of different approaches (positivist and interpretivist) sequentially when investigating and answering questions, with the intention of enhancing objectivity. Sharing the same view, O'Sullivan, Rassel and Berner (2008:40) indicate that 'one of the hallmarks of a case study is the combination of several different sources of information...'culminating in triangulation. Merriam (1988) also points to 'the case study's unique ability to deal with a full variety of evidence, including documents, artefacts, interviews, and observations'.

The significance of choosing the case study was motivated by the fact that the current study was done by measuring certain concepts, propositions, and characteristics of banks operating in a fast-changing knowledge and information environment; wanting to find out how they operated, or created or shared knowledge, without manipulating any factors; and the implications of any suggestion. As a result, it provided the potential for a richer, more in-depth understanding of the issues being studied (Powell and Connaway, 2004). A case study can be used for such purposes as testing theory, theory development, and organisational problem solving. Besides the fact that it can provide direction for further areas of investigation, Leedy and Omrod (2005) suggest that the case study is also good for generating hypotheses. Unfortunately, this study did not formulate hypotheses; rather, research questions were developed as the main units of analysis.

Due to the limited time scale for this study, the use of the case study approach was appropriate as it allowed for the investigation of particular phenomena to some depth in a short space of time. Indeed, Merriam (1988:27) asserts that 'if the phenomenon...is not bounded, it is not a case', a characteristic that is also highlighted by Van Wynsberghe and Khan (2007) in their emphasis on time and place boundaries of a case study. According to Leedy and Omrod (2005:135), 'A particular individual, program, or event is studied in depth for a defined period of time.' Thus, the study of the role of KM in enhancing organisational performance in selected South African banks had to be done within a specified period of time, not indefinitely. The case study approach answers the questions of 'why' and 'how' (Benbasat, Goldstein and Mead, 1987; Kyburz-Graber, 2004; Rowley, 2002; Yin, 2003) in a study. Benbasat, Goldstein and Mead (1987) list eleven characteristics of case studies which are shown in table 3.2.

Table 3.2 Key characteristics of a case study

Characteristic	Application of characteristic to study
The focus is on contemporary events	The use of KM practices is a contemporary and current concern, and expected to grow rapidly
Case research is useful in the study of ‘why?’ and ‘how?’ questions.	The type of data collected was ‘how?’ and ‘why?’ questions.
Phenomenon is examined in a natural setting	Surveys and interviews with staff at FNB and Nedbank
Data are collected by multiple means	Data collected by interviews, questionnaires and records
One or few entities (person, group or organisation) are examined	Research study carried at FNB and Nedbank
The complexity of the unit is studied intensively	The focus was on banks and KM practices
Case studies more suitable for exploration, classification and hypothesis development stages of the knowledge building process	No definitive hypothesis was tested because the approach was more exploratory. Outcomes can be used as a building process for further research to be conducted.
No experimental controls or manipulation are involved	The study did not involve any experimental controls or manipulations
The investigator may not specify the set of independent and dependent variables in advance	Independent or dependent variables were not identified in advance
The results derived depend heavily on the integrative powers of the investigator	The results from the study were drawn from the questionnaire, records, and interviews. Great care was taken in the construction and planning of interviews and the questionnaire with regard to reliability and validity
Changes in site selection and data collection methods could take place as the investigator develops new hypotheses	Site selection and appropriateness of the environment did not change during the planning stages as the aim of study was clarified and expanded.

Source: (Benbasat, Goldstein and Mead, 1987:371)

3.4 Data collection

The previous section discussed the research design used in this study. In this section, the population, sampling and triangulation will be presented. The first subsection is a discussion of the population of the study, followed by discussions on sampling and triangulation.

3.4.1 Population

Saunders, Lewis and Thornhill (2007) define a population as every possible case that could be included in a study. A population is the entire group of people that the researcher desires to learn about (Stangor, 2011:110), any set of persons or objects that possess at least one common characteristic or a target group who would, in the ideal world, be the subject of the research, and about whom one is trying to say something (Punch, 2005:101). Saunders, Lewis and Thornhill (2007) describe a population as a group of interest to the researcher, the group to which she or he would like the results to be generalised. The population for the selected banks was 46 000 employees and the researcher did not include the whole population in the study for the following reasons: the population was large which would have meant collecting large volumes of data not relevant to the study; it would have been time consuming and costly to collect data from 46000 participants.

According to Powell (1997:66) the population should be selected with great care bearing in mind the selection criteria, the desired size and the parameters of the survey. In light of the above this study selected two commercial banks from the four commercial banking industries (population), but then targeted one hundred and ninety middle managers and purposively selected four senior level managers from the population. The population of the study is that group about whom we want to draw conclusions; in this case it was all middle level managers and purposively selected executive managers (Babbie, 2010:111). The whole population of middle level managers was considered in the study, whilst a sample of senior executives was selected.

3.4.2 Sampling

Babbie and Mouton (2001) define sampling as the process of selecting observations. Kumar (1999) and Leedy and Omrod (2010) state that sampling is done to create a small group from a population that is as similar as possible to the larger population. It should be a little group that is like the big group, so the degree of resemblance and representativeness is very important (Leedy and Omrod, 2010). Ngulube (2005:132) states that 'by studying the sample it is possible to draw valid conclusions about the larger group'. As stated earlier, the whole population of middle managers from both FNB and Nedbank was considered. The few senior executives who participated in this study were purposively selected to participate in the interviews that were conducted.

As pointed out by Diamantopoulos and Schlegelmich (2005) the two types of sampling methods are probability and non-probability sampling. Bryman (2006) posits that probability sampling is

rarely used in qualitative research. In many cases it is not feasible because of the constraints of on-going fieldwork and also because it can be difficult and often impossible to map the population from which a random sample might be taken. Some of the probability sampling techniques include random, stratified and cluster sampling and some of the non-probability sampling techniques include purposive, convenience and judgemental sampling.

3.3.1.1 Purposive sampling

For the purpose of this study purposive sampling was used for qualitative data collection (interviews). Purposive sampling is a non-probability form of sampling (Bryman, 2006:418). The researcher does not seek to sample research participants on a random basis. The goal of purposive sampling is to sample cases/participants in a strategic way so that those sampled are relevant to the research questions that are being posed. The senior managers who were purposively selected in this study had to answer questions related to policy and strategic issues which were not included in the survey. Kumar (2005:179) states that the use of purposive sampling is determined by “the judgement of the researcher as to who can provide the best information to achieve the objectives of the study”. This assertion by Kumar (2005) is corroborated by Leedy and Omrod (2010) as well as by O’Sullivan, Rassel and Berner (2008) who all express the view that the use of purposive sampling depends on the researcher’s judgement of who to include in a sample.

The sample of senior managers was based on the researcher’s knowledge of the population and objectives of the research, as suggested by Powell (1997). The literature reviewed varies when it comes to defining a particular sample size for use in purposive sampling. Tashakkori and Teddlie (2008) suggest anything between 6-24 for case studies, and 6-8 participants per group in focus groups. Onwuegbuzie and Collins (2007) suggest 3-5 participants for case studies, 12 participants for interviewing, and a range of 6-12 (quoting from different sources) for focus groups. In this study, the researcher conducted one-on-one interviews with four senior executives, two from FNB and two from Nedbank. These were selected from the already-delineated sample perceived by the researcher to be key individuals who would give invaluable insight and more detailed answers to the research questions. In the next section, the researcher discusses how triangulation was achieved in this study.

3.4.3 Triangulation

In this section the researcher discusses triangulation. Kelly (2006) defines triangulation as collecting material using as many different ways and from as many diverse sources as possible thus assisting researchers to understand better a phenomenon by approaching it from several

different angles. Denzin and Lincoln (1994:236) define triangulation as a plan of action that will raise sociologists and other social science researchers above personal biases that stem from single methodologies. By combining methods and investigators in the same study, observers can partially overcome the deficiencies that flow from one investigator or method. Social researchers have embraced triangulation, the idea that looking at something from multiple points of view improves accuracy (Stangor, 2011). Hamersley (2008:22) observes that triangulation is a term that is being widely used but has divergent interpretations. Neuman (2006:149-150) identifies the following four types of triangulation: triangulation of measures is when researchers take multiple measures of the same phenomenon in order to see all aspects of it; triangulation of observers is making use of multiple observers in a study thus adding alternative perspectives to reduce limitations, triangulation of theory occurs when the researcher uses multiple theoretical perspectives in planning the research or interpreting data and triangulation of method means mixing qualitative and quantitative styles of research and data. This study engaged triangulation of methods in order to obtain reliable data and valid results.

To gain a better understanding of the role of knowledge management in enhancing organisational performance, the researcher used interviews, questionnaires and studying of institutional documents such as financial reports, annual reports, intranet and policies. The researcher triangulated methods and found both of them (quantitative and qualitative methods) complementing each other. The idea of combining quantitative and qualitative approaches in a single study owes much to the past discussions about mixing methods, linking paradigms to methods and combining research designs in all phases of a study (Creswell, 1994:174). The concept of triangulation was based on the assumption that any bias inherent in particular data sources, investigator and method would be neutralised when used in conjunction with other data sources (Creswell, 1994:174). The researcher obtained quantitative data by administering questionnaires to middle line managers and interviews were carried out with senior executives and/or heads of divisions. The senior managers who were interviewed had not taken part in the pilot study or in the survey; this was done to eliminate bias. The essence of collecting both quantitative and qualitative data was not to compare and contrast results from the questionnaires and interviews but to obtain a rich set of data thus enabling the researcher to develop complete and well-substantiated conclusions about the role of KM in the selected banks. In the next section a discussion on the questionnaire is presented.

3.4.3.1 Questionnaire

Studies quoted in Chapter Two, such as the KM-related case studies of Dewah (2011) and Wamundila and Ngulube (2011) used questionnaires and interviews to collect data. Questionnaires and surveys are sometimes perceived to mean the same thing. According to Powell and Connaway (2004: 83), a ‘survey is a group of research methods commonly used to determine the present status of a given phenomenon’. On the other hand, a questionnaire is a data collection tool (Powell and Connaway, 2004). While a survey closely considers something in a general or very broad way, or is a statistical study of a sample population by asking questions about age, income, opinions, and other aspects of people's lives, a questionnaire is a set of questions used to gather information in a survey. In this study, the questionnaire was used as the main data collection instrument (See Appendix B).

Leedy and Omrod (2005:191) summarise the guidelines for questionnaire construction as: keep it short; use simple, clear, unambiguous language; check for unwarranted assumptions implicit in your questions; word your questions in ways that do not give clues about preferred or more desirable results; check for consistency; determine in advance how you will code the responses; keep the respondents’ task simple; provide clear instruction; give a rationale for any items whose purpose may be unclear; make the questionnaire attractive and professional-looking; conduct a pilot test; scrutinise the almost-final product carefully to make sure it addresses your needs.

There are advantages and disadvantages to using questionnaires. Questionnaires may be online or postal. Fowler (2002), Powell (1997), Powell and Connaway (2004), and Slater (1990) document advantages and disadvantages of questionnaire use. Powell and Connaway (2004) suggest that the administration of online questionnaires facilitates faster gathering of data. The reason is that data is relatively easy to collect and analyse in a short space of time (Fowler, 2002). Powell (1997) suggests that the fixed format of the questionnaire eliminates variation in the questioning process, even when respondents may interpret the same questions differently (Mavodza and Ngulube, 2011).

Powell and Connaway (2004) also mention such disadvantages as the absence of explanations to ambiguous questions, as well as a certain degree of non-responsiveness of respondents. Slater (1990) is concerned with questionnaire design as a possible hindrance to questionnaire effectiveness. This would be due to complicated questions, or questions that are excessively long. Hewitt (1991:167) says that sometimes ‘some are poorly conceived and executed that participation not only wastes the time of the respondent, but contributes to the production of inaccurate and

misleading research'. In this study, questions were simple and clear; the questionnaire was pre-tested by the middle level managers to ensure that questions were well understood by the respondents; the layout was clear, including the use of a font that was easy to read; and there was a cover letter and a stamped response envelope accompanying the questionnaire. Creswell (1994) and Fowler (2002) highlight that response bias caused by low response rate is an issue that a researcher needs to be on the lookout for.

3.4.3.2 Structure of the questionnaire

The questionnaire that was used in the study is shown in Appendix B. The order of the questions can have an impact on the accuracy of responses. Slater (1990) and Powell and Connaway (2004) suggest that questionnaires should start with more general questions, which have the effect of putting the respondent at ease, followed by the more specific ones. The format of the questions used is determined by the information desired (Powell, 1997). These can be open-ended or closed-ended (Powell, 1997; Powell and Connaway, 2004; Slater, 1990). However, for determining which questions were useful and appropriate, there was a need to use an open-ended questionnaire. O'Sullivan, Rassel and Berner (2008:222) suggest that 'open-ended questions are important in the first stages of questionnaire design'.

Data were also gathered by using open-ended interviews. This allowed for an understanding of where questions were vague, irrelevant, useless, inappropriate and unclear before a final research instrument was created. The structure of the final questionnaire used in this study is shown in Appendix B. Powell (1997) views the information needs and the characteristics of participants as essential to the effectiveness of a questionnaire. This determines whether the questions seek to get data about facts, opinions and attitudes, or the self-perception of the interviewees. Slater (1990: 56) points out that 'if the completed survey report will result in useful feedback to the contributors then there is good reason for spending time and effort on completing the questionnaire'. Therefore, the purpose of the questionnaire has to be made clear to the respondents.

3.4.3.2.1 Open-ended questionnaire

The open-ended-questionnaire requires the respondent to use his or her own words in giving responses. Powell and Connaway (2004:128) explain that these 'are designed to permit free responses from participants rather than ones limited to specific alternatives'. This type of questionnaire, according to O'Sullivan, Rassel and Berner (2008), helps avoid biases that a list of responses can introduce, yields rich, detailed comments, helps a researcher identify a range of possible responses, and gives a respondent the chance to elaborate on responses. Vinten (1995:29)

provides the following ideas on what to keep in mind when creating questions for an open-ended questionnaire:

- Open questions should be the means of achieving the advanced knowledge that is a prerequisite for formulating a closed question.
- When one is dealing with a group of people whose level of knowledge is unknown or is highly variable, then the open question is preferable.
- The open question is recommended for sensitive or threatening questions.
- The open format will be suitable if one is discussing organisational change, reorganisation of staff or working procedures, and increasing effectiveness among other applications.

It was, therefore, important to construct a closed-ended questionnaire with the use of information from an open-ended one. This is corroborated by Powell and Connaway (2004) cited in Grant (2008), and Mavodza and Ngulube (2011), who see an open-ended questionnaire as useful for explanatory studies.

3.4.3.3 Length of a questionnaire

There does not seem to be an agreed definite length of a questionnaire. However, Powell (1997:106) states that ‘the general rule is that the questionnaire should be as short as possible to encourage complete responses’. This assertion is supported by a study in the cabinet-making industry by Galesik and Bosnjak (2009:349) who found that ‘the longer the stated length, the fewer respondents started and completed the questionnaire’. According to Adams and Cox (2008:19), ‘People’s attention spans mean that long questionnaires completed less accurately as people rush to finish them’. Additionally, they go on to explain that long questions make respondents avoid reading the questions thoroughly and, as a result, the tendency to give inaccurate responses is high. In making the questions for the questionnaire items in this study, there was a deliberate avoidance of setting questions that would be unnecessarily long, and the questionnaire itself was short. The questionnaire for this study was four pages long, comprising twelve questions.

3.4.3.4 Pre-testing a questionnaire

It is necessary to conduct a pre-test or pilot study of a questionnaire after it has been informally evaluated in order to refine the questions (Powell and Connaway, 2004). The same authors also

point to the fact that, ideally, the pre-test sample should be as scientifically selected, in the same way and as thoroughly, as the sample for the final study. The literature surveyed in this research points to an absence of recommendations about the appropriate number of individuals required for pretesting a questionnaire, although there is consensus about the importance of pretesting. However, Bradburn, Sudman and Wansink (2004:317) suggest that it is important to ‘at least pre-test the questionnaire with ten to twelve colleagues (or better yet) with representatives from the population being surveyed’. This number is confirmed by Simmonds and Andaleeb (2001) as well as Powell, Baker and Mika (2002) who all suggest the number of ten. What this says is that the exact size depends on the aims of the researcher planning a pre-test. Pre-testing the questionnaire to the middle level managers enabled the researcher to incorporate the respondents’ feedback. For instance the respondents indicated that the number of questions were many (16) and should be reduced. The researcher reduced the questions from 16 to 12. Pre-testing the research instrument also enabled the researcher to fine tune the questions in line with the research objectives. The responses that were obtained after pre-testing the research instrument showed that the participants understood the questions and the participants provided relevant answers needed in the study.

From the pre-tested questionnaire, it became less complicated to create a final instrument for the actual investigation. The order of the questions was viewed as important to the way the responses would be obtained. DeMoranville, Bienstock and Judson (2008: 255) suggest that researchers should ‘order questionnaire items differently depending on how the results will be used and which type of measure, specific or global service quality is the focus of a questionnaire’. A systematic but easy administration of the questionnaire was implemented in this study. In the section that follows, the administration of the questionnaire is presented.

3.4.3.5 Questionnaire administration

Questionnaires can be distributed by conventional mail, using the postal system, or electronically, using e-mail. This depends on the available infrastructure surrounding the respondents. Powell (1997), supported by Powell and Connaway (2004), is very clear about the need to include a self-addressed stamped return envelope when distributing a questionnaire by conventional postal methods. This is done to increase the response rate. Slater (1990:53) says that the ‘response rate is very important for the success of any survey and a questionnaire that people will not answer can produce a worthless survey result’. Saunders, Lewis and Thornhill (2007) point out factors that help improve the response rate of postal questionnaires as: having a covering letter that explains the purpose of the questionnaire as well as emphasising the importance of the respondents’

responses to accompany the questionnaire; it is useful to have a letterhead to lend some authority to the study; a second letter signed by a person influential to the study, guaranteeing confidentiality of responses and anonymity of respondents. Fowler (2002: 42) also points out that ‘people who have an interest in the subject matter or the research itself are more likely to return mail questionnaires than those who are less interested’.

There are many online data collection tools available that can be used in the survey process such as Survey Monkey and Zoomerang and Lime Survey which have been widely used in the administration of questionnaires (Hernon and Schwartz, 2009a & 2009b). The researcher distributed the questionnaire using the Survey Monkey tool because every respondent had access to an e-mail address. The use of a web-based online survey platform enabled respondents to complete the questionnaire at times that were convenient to them within the time period specified by the researcher. Powell and Connaway (2004) opine that sources of error for electronic questionnaires include researcher bias, that is, the researcher’s unconsciously developing the questionnaire in a manner that will increase the likelihood of obtaining the desired results; a lack of clarity about the purpose of the questionnaire; differing respondent interpretations; rate of responses may be low, resulting in less than representative data; and the mood of the respondents as they answer the questions.

3.4.4 Interviews

Interviews are an important part of any research project as they provide the opportunity for the researcher to investigate further, to solve problems and to gather data which could not have been obtained in other ways (Cunningham, 1993:93). An interview is a particular type of conversation between two or more people. Usually the interview is controlled by one person who asks questions of the other (Matthews and Ross, 2010:219). The interview is essentially a qualitative data gathering technique that finds the interviewer directing the interaction and inquiry in a very structured or unstructured manner, depending on the purpose of the interview (Denzin and Lincoln, 1994:365). Interviews were carried out with the leadership of the selected banks to assess their opinions and perceptions about the role of KM in their banks. Merton, Fiske and Kendall (1990:135) suggest that the focused interview with a group of people ‘...will yield a more diversified array of responses and afford a more extended basis both for designing systematic research on the situation in hand...’.

According to Creswell (1994; 2007), a protocol for an interview is important, and its components include a heading; instructions to the interviewer; the key research questions; probes to follow key

questions; transition messages for the interviewer; space for recording the interviewer's comments; and space for recording reflective notes. The structured interview protocol with open-ended questions was used in this study (See Appendix C). The questions closely resembled those used in the structured questionnaire, but responses were not provided, allowing interviewees to elaborate on their open responses (Mavodza and Ngulube, 2011:120). Interview questions are a way of translating research questions. Interviews are in several forms. Yin (2003:83) mentions three types: "open-ended", "focused" and "structured" as "an essential source of case study evidence".

3.4.4.1 Semi-structured interviews

Matthews and Ross (2010) state that there are three broad characteristics or structures of interviews, namely: standardised structure, semi-structured and unstructured interviews. This study used semi-structured interviews. Semi-structured interviews are used to collect data in a wide variety of research designs, and are mostly associated with the collection of qualitative social data when the researcher is interested in people's experiences, behaviours and understandings and how and why they experience and understand the social world in this way (Matthews and Ross, 2010:221). The researcher followed a common set of topics for each interview, introduced questions in different ways and allowed the participants to answer the questions in their own ways using their own words. In this study, the researcher generated a set of questions relating to knowledge management practices in selected banks.

3.4.4.2 Advantages and disadvantages of semi-structured interviews

Maxwell (1996:74) points out that in an interview questionnaire "questions will generally be far more specific and diverse than the broad, general research questions that define what you seek to understand in conducting the study". The problems highlighted include bias, poor or inaccurate articulation, and poor recall. However, in controlling researcher bias, face-to-face interviews help because they allow the researcher to get responses to specific questions, rather than trying to speculate on the possible explanations for certain phenomena. The researcher 'hears their explanations of their behaviour' (O'Sullivan, Rassel and Berner 2008:40). Matthews and Ross (2010:219) state that interviews provide the opportunity for direct interaction between the researcher and the study participants. Matthews and Ross (2010:224) identify the following advantages of using semi-structured interviews:

- The use of an informal interview guide will enable the study participants to talk about their experience in their own way.

- The semi-structured interview format allows the researcher to talk to participants in-depth and to explore specific issues related to a study.
- Face-to-face interviews enable the interviewer to be sensitive to the needs of the participant in talking about potentially distressing subjects.

Interviews have their own drawbacks as well. If the researcher fails to establish rapport before and after with the respondents, this can cause the respondents to provide data that is not relevant to the study, because an element of fear may have been cultivated. The interviewer is expected to explain what will happen clearly and check their understanding of the research and the interview. One-to-one interviews can be intimidating and make the interviewee uneasy; the interviewer should make the respondents more comfortable and be able to give their whole attention to the interview.

3.4.4.3 Pre-testing the interview protocol

An interview guide/protocol is designed to help the researcher to conduct semi-structured interviews. Unlike a questionnaire, the interview guide acts as an agenda for the interview with additional notes and features to aid the researcher. In section 3.4.3.4 it was highlighted that the questionnaire was pre-tested to middle level managers. In this case, the interview guide was pre-tested to senior managers. Pre-testing the interview protocol enabled the researcher to increase the number of the questions from six to ten because the respondents felt some issues were not addressed and, therefore, it was necessary to include an additional four in line with the research objectives. The responses obtained after pre-testing the research instrument showed that the participants understood the questions and relevant answers needed in the study were provided. From the pre-tested interview protocol, it became less complicated to create a final instrument for the actual investigation.

3.5 Data quality

This section presents discussions on the validity and reliability of the data collected in this study. This discussion substantiates the discussions presented under triangulation (section 3.4.3) and its importance in this study. The first subsection is premised on validity followed by the discussion on reliability. The extent to which research findings are believable or credible is its validity. The validity of a study refers to the strength of the inferences or conclusions that are made from the research, that is, the degree of accuracy to which a study reflects the concept(s) that the research is measuring. Leedy and Omrod (2005:97) ask two questions: ‘Are there sufficient controls to ensure that the conclusions we have drawn are truly warranted by the data in the study? ...can we use

what we have observed in the research situation to make generalisations about the world beyond that specific situation?’ Ngulube (2005:132) states that the question to consider is: ‘Has the research measured the phenomenon of interest in a manner that accurately reflects its characteristics?’ In the next sections, the types of validity and reliability are discussed to substantiate the use of the case design in this study.

3.5.1 Validity

Researchers classify validity as internal or external (Yin, 2003). In the design of a study, the care taken to conduct measurements and decisions concerning what was and was not measured is its internal validity.

Internal validity: This becomes especially relevant in the data analysis phase in a case study because that is where explanations and rival explanations are examined. The reason is that it determines the degree to which conclusions about causes of relations are likely to be true, in view of the operational measures used, the research setting, and the whole research design. According to Rowley (2002: 20), internal validity is relevant for ‘explanatory or causal studies only, and not for descriptive or exploratory studies’. The correct operational measure for the concepts being studied is the construct validity (Yin, 2003), which is a type of internal validity.

Construct validity: Rowley (2002:20) suggests that construct validity refers to ‘linking data collection questions and measures to research questions and propositions’. In this study, research objectives were formulated first, followed by corresponding research questions linked to the objectives. While doing the research, the researcher has to be sure that the research instrument(s) in use is (are) functioning as intended. In other words, the extent to which the research instrument measures the propositions in question, also known as construct validity, has to be clear. Hernon and Schwartz (2009a:73) point out that construct validity refers to the stage where an ‘instrument measures what it is intended (the construct)’. Yin (2003:34) proposes three remedies to establish this: using multiple sources of evidence, establishing a chain of evidence, and having a draft case study report reviewed by key informants. In a case study, construct validity is particularly important in the data collection phase.

Face validity: This is the extent to which a test is subjectively viewed as covering the concept it purports to measure. It refers to the transparency or relevance of a test as it appears to test participants. In other words, a test can be said to have face validity if it "looks like" it is going to measure what it is supposed to measure (Rowley, 2001). For instance, if you prepare a test to

measure whether students can perform multiplication and the people you show it to all agree that it looks like a good test of multiplication ability; you have shown the face validity of your test. A possible advantage of face validity is that if the respondent knows what information we are looking for, he/she can use that “context” to help interpret the questions and provide more useful, accurate answers, and a possible limitation of face validity is if the respondent knows what information we are looking for, he/she might try to “bend and shape” his/her answers to what he/she thinks we want - “fake good” or “fake bad” (Hermon and Schwartz, 2009a:73).

External validity: Another type of validity is external validity, that is, the possibility of applying the findings to other settings. It is the extent to which inferences about causal relationships can be made or generalised (Yin, 2003). In other words, it is the interaction of causal relationships. Its importance is due to the fact that the same study should produce the same results if redone, or if another individual uses the same method, even in a different bank, industry or organisation. Analytically generalising the results needs to be possible (Tellis, 1997a; Yin, 2003). An appropriate research design results in viable external validity of a study.

3.5.2 Reliability

When the research procedure consistently gives the same results on repeated trials, it means that it is reliable. In other words, the repeatability of the measurement determines its reliability. Yin (2003) posits that, when the operations of a study can be repeated, such as the data collection procedures, producing the same result shows that the design or method is reliable. Tellis (1997b) discusses the importance of reliability which, in a case study, is achieved through the development of the ‘case study protocol’. As ways to estimate reliability, Hernon and Schwartz (2009b) suggest internal consistency (a measure of the precision of the measuring instrument), pre-test (the use of individuals who are not part of the actual sample to test questions to ensure that their meanings are understood), test and retest (whether similar results are obtained when the same participants respond to the same test a second time).

One of the tactics used in the case study protocol is the logic model. In a logic model, the current work situation that is the target of KM is analysed, expected outputs or results are projected, the functions of the individuals involved in the process are examined, and the intended goal of the exercise is clarified. It can be used as a planning tool that allows precise communication with all involved about the purposes of the effort, and the sequence of activities and accomplishments. The results from the case study are part of the action research cycle. This helps to verify the validity of the research findings and in the process minimise the problem that ‘there appears to be general

agreement that there is a crisis of representation in qualitative research' (Onwuegbuzie and Leech, 2006:298).

3.6 Sources of evidence

Data collection techniques determine the success of an investigation. Powell (1997:49) in Grant (2008) suggests the use of 'questionnaires, interviews, observation and the analysis of documents' for data collection for a case study. Benbasat, Goldstein and Mead (1987), Creswell (2003), Creswell and Plano Clark (2007), O'Sullivan, Rassel and Berner (2008), Rowley (2002) and Merriam (1988) list the same sources as well. Evidence was obtained from using both the quantitative and qualitative components. The quantitative data were collected with the use of a web-based online questionnaire, while the qualitative data were collected with the use of the interview protocol. The sources of data were:

- (i) Middle level managers for their personal knowledge, organisational procedures, (for example, training, collections, internet, databases, systems architecture, platforms), and personal advice from colleagues, consultants and experts;
- (ii) Senior executives for their personal knowledge, organisational policies, procedures and perceptions on the quality, reliability and user-friendliness of banking systems because these senior managers gave an indication of the bank's KM strategic intent. An interview protocol was used during data collection;
- (iii) Company reports and intranets for providing archives of selected banks' information and data.

3.7 Data analysis and presentation

Data analysis relates to what is done with the information collected from the research process in order to make sense of it. When dealing with a case study, Yin (2003) suggests that a researcher needs to determine how to analyse evidence before beginning the data collection process. Diamantopoulos and Schlegelmich (2005) propose strategies for data analysis. The first strategy relies on theoretical propositions. It involves the use of literature review and research questions to determine the objectives and design of the case study. Additionally, the data collection methods and data analysis are also determined by the theoretical propositions. The second strategy, used in the absence of theoretical propositions, is a descriptive framework for a case study. This is useful where the researcher has found gaps in the current literature, and used that to formulate the

research questions, so that the data collection methods and research strategies are derived from the research questions and objectives.

Mavodza and Ngulube (2011) and Dewah (2011) suggest four dominant modes of data analysis in a case study, namely, pattern-matching, explanation-building, time series analysis, and programme logic models. Pattern-matching means a comparison of ‘an empirically based pattern with a predicted one’ (Yin, 1994:106). Researches whose results comply closely with the pattern-matching comparison strengthen the internal validity of the research. Explanation-building is a type of pattern-matching which tries to provide an explanation for a case. Its goal is ‘to analyse the case study data by building an explanation about the case’ (Yin, 1994:107). The third mode is time series analysis which is a collection of observations of clearly-defined data items obtained through repeated measurements over time. Lastly, programme logic models are a mixture of pattern-matching and time-series analysis. The focus, from these suggestions by Yin (1994), is on internal and external validity.

Leedy and Omrod (2005) suggest steps for data analysis, namely, the logical arrangement of the details of the case being studied, categorisation of data, the examination of bits of data for their relevance towards the case, analysing the data for underlying themes and patterns and, lastly, the synthesis of results and generalisations arising thereafter. According to Creswell (2009:218), ‘Data analysis in multi-methods research relates to the type of research strategy chosen for the procedure’.

All usable quantitative responses were analysed using Survey Monkey and Microsoft Excel 2010. Although Survey Monkey could create tables successfully, the researcher migrated some of the data into Microsoft 2010 Excel spread-sheets. The reason was that the tables and figures created by Survey Monkey did not always depict the intended picture of the findings. Microsoft Excel 2010 was found to have more templates for data manipulation whilst Survey Monkey has a cross tabulation function that the researcher found useful in making associations between and across questions. The choice for using Microsoft Excel spread-sheets was motivated by its user-friendliness, and the use of charting capabilities such as bar charts and pivotal tables which allowed the researcher to display two or more dimensions of data in a convenient format (Laudon and Laudon, 2012:484).

Saunders (2009:414) states that the analysis of qualitative data should present the researcher with a different set of procedures which reflect, at a fundamental level, the philosophical assumptions which underpin the aims and approach to qualitative research. Qualitative data from the interviews

conducted was derived from meanings expressed through words and the use of conceptualisation. According to Creswell (2009:218), ‘This involves creating codes and themes qualitatively, and then counting the number of times they occur in the text data.’ Using the content analysis method of analysis (Leedy and Omrod, 2005:140-141), the researcher looked for emerging themes and recurring events and categorised them. The themes and patterns emerging from interviews as well as the survey were grouped together and this made it easier to analyse the data. Content analysis allows the study to extract detailed, rich and complex data accounts from the interviews.

3.8 Evaluation of the research methodology

The study used a multi-methods approach where both quantitative and qualitative data were collected. The survey was used to collect quantitative data whilst the interview guide/protocol was used to collect qualitative data. The use of multi-methods enabled the researcher to triangulate methods (quantitative and qualitative) at data collection, resulting in rich data sets and thus improving the reliability and validity of the research findings. Romm and Ngulube (2014) state that multi-methods research as conceptualised by Campbell and Fiske (1959) was designed to guarantee the reliability and validity of quantitative measures although they may be used in qualitative traditions. By using a multi-methods strategy, the researcher was able to collect data from different sources and provided explanations and meanings which would not have been possible had a single source been relied upon. Therefore the use of multi-methods provided the researcher with the possibility of addressing issues from a large number of perspectives. That in turn enriched and enhanced the research findings. Bryman (2006) suggests that a multi-methods approach can allow for the limitations of each approach to be minimised while strengths are built upon, thereby providing stronger and more accurate inferences. This means that data collection and data analysis techniques were in the context of positivist approaches.

Woolley (2009:8) states that ‘quantitative and qualitative methods provide differing perspectives on a subject and this is why the use of both may be viewed as complementary rather than validatory’. In support of Woolley (2008) Ngulube, Mokwatlo and Ndwandwe (2009), and Greene, Caracelli and Graham (1989) posit that triangulation, completeness and complementarity are some of the reasons for using multi-methods approaches. In addition to complementarity, completeness and rich data sets, this study focused on multiple cases which were unique; therefore, the use of multi-methods was ideal to help the researcher understand how FNB and Nedbank had adopted and implemented KM practices in order to gain competitive advantage. The limited time scale for the research made the case study approach appropriate since it allowed for

the investigation of a particular phenomenon to some depth in a short space of time. The final question to focus on was 'how to'.

3.9 Chapter summary

This chapter focused on the research methods and the methodology used in this research. It has been established that an analysis of quantitative data uses quantitative methods and qualitative data uses qualitative methods to produce multi-methods results. The population and sampling strategy used for the study were also discussed using practical examples of the importance of the strategy. Triangulation was revealed to be a multifaceted concept that could be explained from different stages in the research process. The chapter also discussed the data collection instruments used and how the web-administered questionnaire (Survey Monkey) tool was used. Additionally, data were obtained from face-to-face interviews. It was also important to consider the scope and limitations of the study as an acknowledgement that it was open to comment and/or improvements. It was established that the concept of validity research was still under examination by some researchers. The last section of the chapter presented an evaluation of the multi-methods strategy and how it added value to the case study design used in the research study. In chapter four a discussion of data interpretation and findings is presented.

CHAPTER FOUR: FINDINGS AND PRESENTATION OF RESULTS

Science is built up of facts, as a house is built of stones; but an accumulation of facts is no more a science than a heap of stones is a house (Henri Poincare Science and hypothesis (1905) cited in Ngulube (2003:239).

4.0 Introduction

Chapter Three explained how the study was conducted, that is what was done in order to collect data to answer the research questions. The major aim of Chapter Three was to discuss the research paradigms, design and methodology used to collect data in this study. The discussions in Chapter Three were poised to help other researchers to estimate how much confidence could be placed in the study findings. Furthermore, it should be possible for other researchers to use the findings presented in this chapter to compare the procedure with methods used in similar studies and explain the differences in findings among studies on the role of knowledge management in terms of the differences in research methods. It is no use presenting findings which do not convey any meaning to the reader, but the findings should be put to good use- *but an accumulation of facts is no more a science than a heap of stones is a house* (Henri Poincare, 1905).

This chapter analyses the data obtained from the population of the study, while the next chapter is devoted to the interpretation of the results of the study. The objective of this chapter is to transform heaps of raw data into some meaningful facts (information). The findings presented in this chapter originate from the embedded case study design used in the study. In this study quantitative and qualitative approaches were complementary in presenting a comprehensive picture of the role of knowledge management in enhancing organisational performance in the selected banks of South Africa. The statistical part reflects the quantitative findings whilst the descriptive part reflects the qualitative findings. The presentation of findings is guided by some of the research questions that were specified as:

- What is the level of understanding of KM in the selected banks?
- What are the knowledge management policies present in the selected banks?
- To what extent have banks implemented KM practices such as knowledge creation, sharing and retention through the assessment of existing KM enablers?
- What is the role of KM enablers in the implementation of KM strategies in selected banks?
- What are the factors inhibiting knowledge acquisition, creation, sharing and retention in the selected banks?

- What KM strategies are needed to safeguard knowledge in the selected banks?
- What KM systems and solutions are present in the selected banks?

The collected data are presented according to the stated research questions and the presentation of results is in the form of data reduction, data display and data transformation in a manner that simplified it. Wilkinson (2000: 78) states that before analysing data, it must be classified or coded in some way. In this study content analysis was used to examine the categories that the data comprised and condensed the data into fewer categories which were easier to understand. Data with similar meanings or connotations were grouped together, thus enabling the research study to create codes. Content analysis looks for the presence of words/phrases or concepts in a text and endeavours to understand their meanings and relationships to each other (Matthews and Ross, 2010:395). Content analysis enabled the researcher to discover patterns in the data that helps our understanding of the role of knowledge management in enhancing organisational performance in the selected banks. The researcher was particularly interested in patterns of data that were addressing the research questions (units of analysis).

The use of content analysis was important because it led to the discovery of different dimensions, nuances of concepts-the research study was able to uncover and report aspects of knowledge management that would not have been accessible through the more casual/less rigorous use of language (Babbie and Mouton, 2001:100). The survey was used to operationalise the main variables of the study where respondents were asked to give their views. After data codes were created, the researcher converted the questionnaire responses into numeric form as suggested by Wilkinson (2000). In other words, converting data to numeric form is an “organised, compressed assembly of information that permits conclusion, drawing and/or action taking” (Miles and Huberman 1994:429). This was done with the aid of Microsoft Excel 2010. After converting the questionnaire responses into numeric form, the findings were displayed in pie charts, tables, frequency tables and bar graphs. This was also in line with the views of Onwuegbuzie and Teddlie (2002) who posit that analysis refers to reducing quantitative data into tables and graphs and qualitative data into matrices, charts, graphs, rubrics or Venn diagrams. In addition displaying data in diagrammatical, pictorial or tabular format conformed to the suggestions from multi-methods research that data are displayed in diagrammatic, pictorial or visual forms in order to show what those data imply.

The questionnaire was distributed to the participants from the two selected banks by the use of a web-based Survey Monkey tool. The presentation of the results does not necessarily follow the

actual sequence of the questions in the questionnaire, or those of the issues addressed by the interview guide/protocol. Quantitative findings will be presented first followed by qualitative results in section 4.2. Results from the research questions are organised into categories that could appropriately address the research objectives expressed in the research questions. The data are presented in figures, tables and themes.

4.1 Quantitative findings

The questionnaires were distributed on 15 of October 2013 to middle managers from FNB and Nedbank and reminder messages were sent out on the 10th and the 20th day into the data collection period, after 15 responses had been received. The period of data collection was set at two months (15 October -15 December 2013). This was intended to avoid incomplete responses due to the festive season. By 10 December 2013 a total of one hundred and one (101) responses had been received. Of these 101 responses, 58 (57.43%) came from Nedbank and 43 (42.57%) came from FNB. This indicates that Nedbank received more responses than FNB.

The researcher's position as a former banker could have contributed to a low response rate to the questionnaire from the FNB participants; therefore, respondents could have felt that issues asked in the questionnaires did not concern them. Respondents could have felt that the issues asked were sensitive and not applicable to them. A good example was exemplified in twenty instances where individuals from the selected banks deleted the survey message without opening it as reflected in the Microsoft Outlook mail tracking options. Kittleson and Brown (2005:12), suggest that electronic but unsolicited emails can contribute to a low response rate.

The researcher established that some of the managers had left employment when the questionnaire was sent out. This was reflected with the use of the delivery receipt function of the Microsoft Outlook mail box that showed that, when distributing the questionnaire, some mail was re-directed to the alternative bank e-mail address that recipients were not using. Non responses could also be attributable to participants' lack of interest in the subject under investigation. Concurring with the views of Creswell (2003), Baskerville and Dulipovici (2006) and Vasconcelos (2008), the researcher interpreted response and non-response rate patterns as representative of attitudes and interest in the topic being studied by everyone who belonged to the categories represented. An example was that 30% of the questionnaires that were not returned were from FNB, while Nedbank participants responded successfully.

In both instances 95 questionnaires were sent to each bank. It was pointed out that the population (middle level managers) was surveyed. Out of 190 questionnaires distributed, 101 questionnaires were completed representing 53.15% response rate. The reminder message was identical to the first mailing with the addition of a statement indicating that the researcher had not received a response to an earlier request. All participants were sent reminders, with an apology to those who had already responded and thanking those that had already completed the questionnaire, and requesting those who had not done so to complete the survey. After 60 days of data collection, the questionnaire link was closed. That resulted in any potential respondents receiving the message that the questionnaire was no longer available if they clicked on the link after the deadline.

The response rate of 53.15% is consistent with the findings of Greenlaw and Brown-Welty (2009) who found that a response rate of 51.58% from a web-based survey tool was higher than many response rates of that type of survey as reported in literature. The 53.15% response rate is also consistent with the findings of Leysen and Boydston (2009) whose web survey attracted a response rate of 51.7% in a study of catalogue librarians. Kittleson and Brown (2005:11) point out that “a 40-50% response rate may indeed be outstanding when one considers the amount of information overload to which many users are exposed”, and they also suggest that the response rates from web-based surveys continue to decrease. However, one of the weaknesses of a low response rate is that it is difficult to confirm the validity of the conclusions beyond the current study (Leysen and Boydston, 2009). In the next section, a discussion of the characteristics of respondents is presented.

4.1.1 Characteristics of respondents

All FNB and Nedbank employees had email addresses and all respondents either had a laptop or personal computer and access to the internet at the time of this study. The sample for this study comprised middle and senior managers from FNB and Nedbank. The first question sought to establish demographic variables of the respondents, namely: race, gender and age group. The four racial categories of respondents who participated in the study were: African, Coloured, Indian and White. If one racial group had participate in this study, the findings would have been biased, therefore it was important to include all races in the study.

4.1.1.1 Characteristics of Nedbank respondents

From a total of 58 responses received the demographics of Nedbank responses show 14 (24.14%) were African who comprised 10 (17.24%) male and 4 (6.9%) female managers respectively. The

responses from the Coloureds were 12 (20.69%) whose composition was 9 (15.52%) male and 3 (5.17%) female managers respectively. The responses from the Indian category were the same as the responses from the African category, except that the ratios of males and females were different in this instance. A total of 14 (24.14%) were received whose composition was 8 (13.79%) male and 6 (10.35%) female managers. A higher response rate (31.03%) was received from the White category. Twelve (20.69%) were male and 6 (10.34%) were female managers. The results show that there are more White managers at Nedbank than their counterparts from other racial categories. A total of 14 (24.14%) of the managers were between 25-35 years old comprising 8 (13.79%) male and 6 (10.35%) female managers respectively. Nineteen (32.76%) of the managers were between 36-45 years old. Of these 32.76% respondents, 12 (20.69%) of the respondents were male and 7 (12.07%) of the respondents were female managers. The majority (43.1%) of the managers were between 46-64 years old. Of this 45-64 year age cohort, 18 (31.03%) of the respondents were males and 7 (12.07%) of the respondents were females. The results show that more managers were between 36-64 years as shown in Table 4.1.

Table 4.1 Characteristics of Nedbank respondents

Gender	Characteristics of Nedbank respondents								
	African	Coloured	Indian	White	Total	Age group 25-35	Age group 36-45	Age group 46-64	Total
	Male	10	9	8	12	39	8	12	18
Female	4	3	6	6	19	6	7	7	20
Total	14	12	14	18	58	14	19	25	58

4.1.1.2 Characteristics of FNB respondents

The demographics variables for FNB respondents were similar to those of Nedbank. A total of 43 (42.57%) responses were received who comprised Africans, Coloureds, Indians and Whites. Ten (23.56%) of the respondents were received from African managers, whose composition was 6 (13.95%) male and 4 (9.61%) female managers. The number of responses from the Coloured category was one respondent lower than the African and Indian categories respectively. Nine (20.93%) responses were received from the Coloured category, comprising 5(11.63%) male and 4

(9.3%) female managers. Ten (23.56%) of the respondents were Indian, of whom 7 (16.28%) were males and 3 (7.28%) were females. 14 (32.56%) of the respondents were White, who comprised 9 (20.93%) males and 5 (11.63%) females. 9 (20.93%) of the respondents were between 25-35 years old. Of these 20.93% respondents, 6 (13.95%) were males and 3(6.98%) were females. 14 (32.56%) of the respondents were between 36-45 years old, of whom 9 (20.93%) were males and 5 (11.63%) were females. The last category (45-64 years old) received the highest (46.51%) rate of respondents whose age fell within that age cohort. 13 (30.23%) of the respondents were males and 7(16.28%) were females. The results are shown in Table 4.2.

Table 4.2 Characteristics of FNB respondents

Gender	Characteristics of FNB respondents								
	African	Coloured	Indian	White	Total	Age group 25-35	Age group 36-45	Age group 46-64	Total
	Male	6	5	7	9	27	6	9	13
Female	4	4	3	5	16	3	5	7	15
Total	10	9	10	14	43	9	14	20	43

A comparison of the data presented in Table 4.1 and Table 4.2 shows that more responses were received from Nedbank. This is explained by the high response rates in each racial category. 14 (13.86%) of the Nedbank respondents were African compared to 10 (9.9%) of the FNB respondents of the same race. Nedbank had 3.96% more responses than FNB of African respondents. From the Coloured category, a total of 12 (11.88%) responses were received compared to FNB's 9 (8.91%) responses. FNB had 2.97% of the respondents less than Nedbank. A total of 10 (9.9%) of the FNB respondents were Indian whilst 14 (13.86%) of Nedbank's respondents were Indian, indicating a 3.96% difference between the two banks in favour of Nedbank. The results show that Nedbank employed 17.82% of White managers compared to FNB (13.86%), indicating a 3.96% difference in favour of Nedbank.

The overall results showed that both FNB and Nedbank employed more (65.35%) male managers than female managers (34.65%). Of the 101 respondents, 23 (22.77%) managers were between 25 and 35 years old. Of the 22.77%, the majority (13.86%) were males and 9 (8.91%) were females.

A total of 33 (32.67%) were between 36 and 45 years old, comprising 21 (20.79%) males and 12 (11.88%) females. The majority (44.55%) of the managers were between 45 and 64 years old. This group comprised 31 (30.69%) male managers and 14 (13.86%) female managers. The results are depicted in Table 4.3.

Table 4.3 Characteristics of all respondents (N=101)

Gender	Characteristics of all respondents								
	African	Coloured	Indian	White	Total	Age group 25-35	Age group 36-45	Age group 46-64	Total
Male	16	14	15	21	66	14	21	31	66
Female	8	7	9	11	35	9	12	14	35
Total	24	21	24	32	101	23	33	45	101

4.1.2 Understanding of knowledge management at selected banks

The first question posed to the respondents was to establish their understanding of knowledge management. The responses are presented in the next section.

4.1.2.1 Understanding of knowledge management at Nedbank

From a total of 58 (57.43%) of the respondents from Nedbank, 29 (28.71%) of the respondents stated that they understood the concept of knowledge management, whilst 15 (14.86%) of the respondents stated that they were not sure and 14 (13.86%) of the respondents stated that they did not understand the concept of knowledge management. The concept of knowledge management was well understood at Nedbank. The results are shown in Table 4.4.

Table 4.4 Understanding of KM at Nedbank (N=58)

Understanding of the concept of knowledge management	Frequency	Percentage
The concept of knowledge management is understood	29	28.71
Not sure if the concept is understood	15	14.86
The concept of knowledge management is not understood	14	13.86
TOTAL	58	57.43

4.1.2.2 Understanding of knowledge management at FNB

43 (42.57%) responses were received from FNB and 21 (20.79%) of the respondents indicated that they understood the concept of knowledge management, whilst 11(10.88%) of the respondents were not quite sure. 11 (10.9%) of the respondents pointed out that they did not understand the concept of knowledge management. As with the results presented in Table 4.4, the concept of knowledge management was also understood at FNB. The results are shown in Table 4.5.

Table 4.5 Understanding of knowledge management at FNB (N=43)

Understanding of the concept of knowledge management	Frequency	Percentage
The concept of knowledge management is understood	21	20.79
Not sure if the concept is understood	11	10.88
The concept of knowledge management is not understood	11	10.9
TOTAL	43	42.57

Results presented in Table 4.4 and Table 4.5 show that a total of fifty (49.5%) of the respondents understood what knowledge management meant. Nedbank received a higher response rate of 28.71% compared to FNB (20.79%) of respondents, while 26 (25.74%) were not quite sure if they understood the concept of knowledge management. In this case 11 (10.88%) responses were received from FNB against 15 (14.86%) responses from Nedbank. A higher response rate of 13.86% of responses was received from Nedbank whilst 10.9% of respondents came from FNB representing 25 (24.76%) of respondents who stated their lack of understanding of the concept of knowledge management. The results shown in Figure 4.1 indicate that the concept of knowledge

management was understood in both banks. The understanding of knowledge management largely depends on the programmes put in place to educate and bring awareness to employees on the importance of knowledge management.

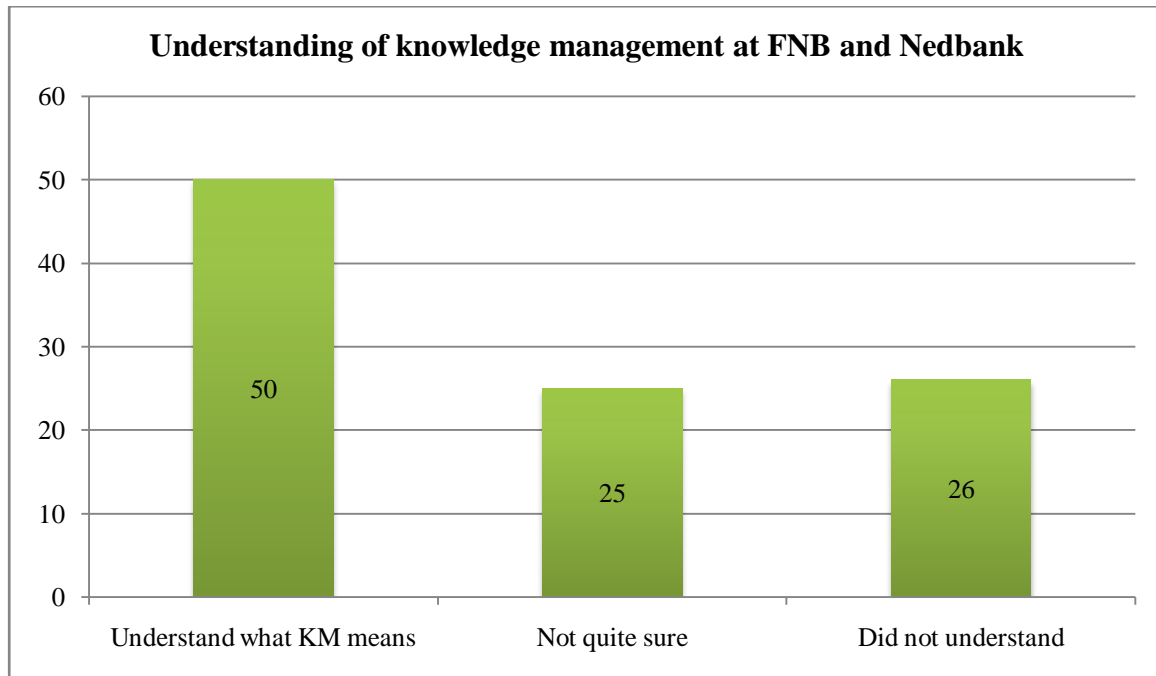


Figure 4.1 Understanding of knowledge management at selected banks (N=101)

4.1.2.3 Distinguishing knowledge management from information management

As a follow-up, the question was asked if the respondents distinguished knowledge from information. The results are presented as follows:

4.1.2.3.1 Distinguishing KM from information management at Nedbank

58 respondents gave varying responses of whom 35 (34.65%) of the respondents stated that knowledge management was different from information management. 12 (11.88%) of the respondents pointed out that knowledge management and information management were the same, while 11 (10.9%) of the respondents stated that knowledge was a subset of information. The results are shown in Table 4.6.

Table 4.6 Distinguishing KM from information management at Nedbank (N=58)

Distinguishing knowledge management from information management	Frequency	Percentage
Knowledge management is not the same as information management	35	34.65
Knowledge management is the same as information management	12	11.88
Knowledge is a subset of information	11	10.9
TOTAL	58	57.43

4.1.2.3.2 Distinguishing KM from Information management at FNB

As was pointed out in section 4.1.1, FNB received a total of 43 (42.57%) responses compared to Nedbank's 58 (57.43%). 26 (25.74%) of the respondents stated that there was a difference between KM and information management, while 9 (8.91%) of the respondents said that KM was the same as information management and 8(7.92%) pointed out that knowledge was a subset of information. The results (25.74%) showed that KM was not the same as information management and these results are shown in Table 4.7.

Table 4.7 Distinguishing KM from information management at FNB (N=43)

Distinguishing knowledge management from information management	Frequency	Percentage
Knowledge management is not the same as information management	26	25.74
Knowledge management is the same as information management	9	8.91
Knowledge is a subset of information	8	7.92
TOTAL	43	42.57

From all the respondents, 61 (60.39%) stated that knowledge management was not the same as information management. 21 (20.79%) of the respondents believed that knowledge was a subset of information and 19 (18.82%) stated that knowledge and information were the same. One of the respondents indicated on the questionnaire that the terms 'information' and 'knowledge' were used interchangeably. The results are depicted in Figure 4.2. The higher the level of understanding

of KM in the selected banks, the more respondents distinguished KM from information management.

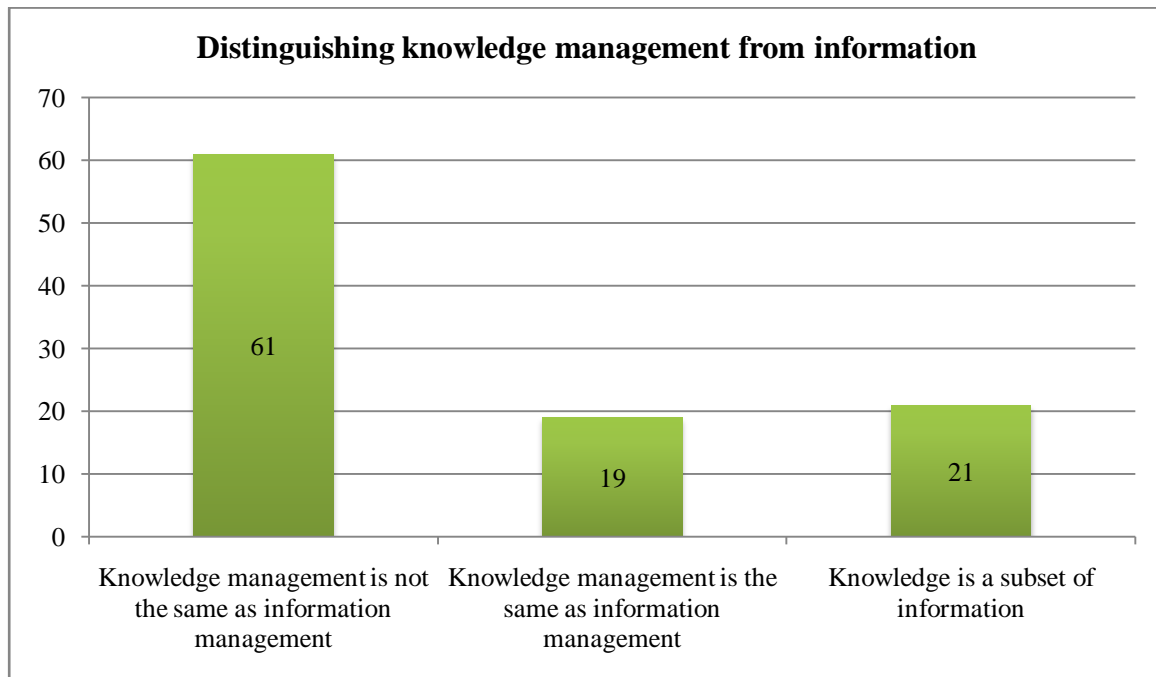


Figure 4.2 Distinguishing knowledge management from information management (N=101)

4.1.2.4 Categories of knowledge available at selected banks

Respondents were asked to identify the type(s) of knowledge present in their bank. Results from the selected banks were presented as follows: The first section relates to findings from Nedbank followed by findings from FNB.

4.1.2.4.1 Categories of knowledge at Nedbank

30 (29.7%) of the respondents indicated that tacit knowledge was present at Nedbank, whilst 20(19.81%) of the respondents said both tacit and explicit knowledge were present at Nedbank and only 8 (7.92%) of the respondents stated that explicit knowledge was present at Nedbank. The results (29.7%) show that more tacit knowledge than explicit knowledge was present at Nedbank as illustrated in Table 4.8.

Table 4.8 Distinguishing knowledge management from information management (N=101)

Categories of knowledge at Nedbank	Frequency	Percentage
Tacit knowledge	30	29.7
Tacit and explicit knowledge	20	19.81
Explicit knowledge	8	7.92
TOTAL	58	57.43

4.1.2.4.2 Categories of knowledge at FNB

22 (21.79%) of the respondents mentioned that tacit knowledge was present at FNB, whilst 15 (14.84%) of the respondents stated that both tacit and explicit knowledge were present at FNB and only 6(5.94%) of the respondents pointed out that explicit knowledge was present at FNB. The type of knowledge that was more present at FNB is tacit knowledge as evidenced by 21.79% of the respondents. The results are shown in Table 4.9.

Table 4.9 Categories of knowledge at FNB (N=43)

Categories of knowledge at FNB	Frequency	Percentage
Tacit knowledge	22	21.79
Tacit and explicit knowledge	15	14.84
Explicit knowledge	6	5.94
TOTAL	43	42.57

The results presented in Table 4.8 and Table 4.9 from the selected banks show that 51.49% of respondents indicated that tacit knowledge was more important than explicit knowledge and tacit knowledge was available in the banks.35 (34.65%) of respondents pointed that both tacit and explicit knowledge were present, whilst 14 (13.86%) of the respondents stated that explicit knowledge was prevalent in their bank.Nonaka and Takeuchi (1995) and Tiwana (2008) are of the view that tacit knowledge is the most important type of knowledge that exists in organisations

because it can be put to action and used in innovation and creative practices, thus adding value to goods and services. The results are shown in Figure 4.3.

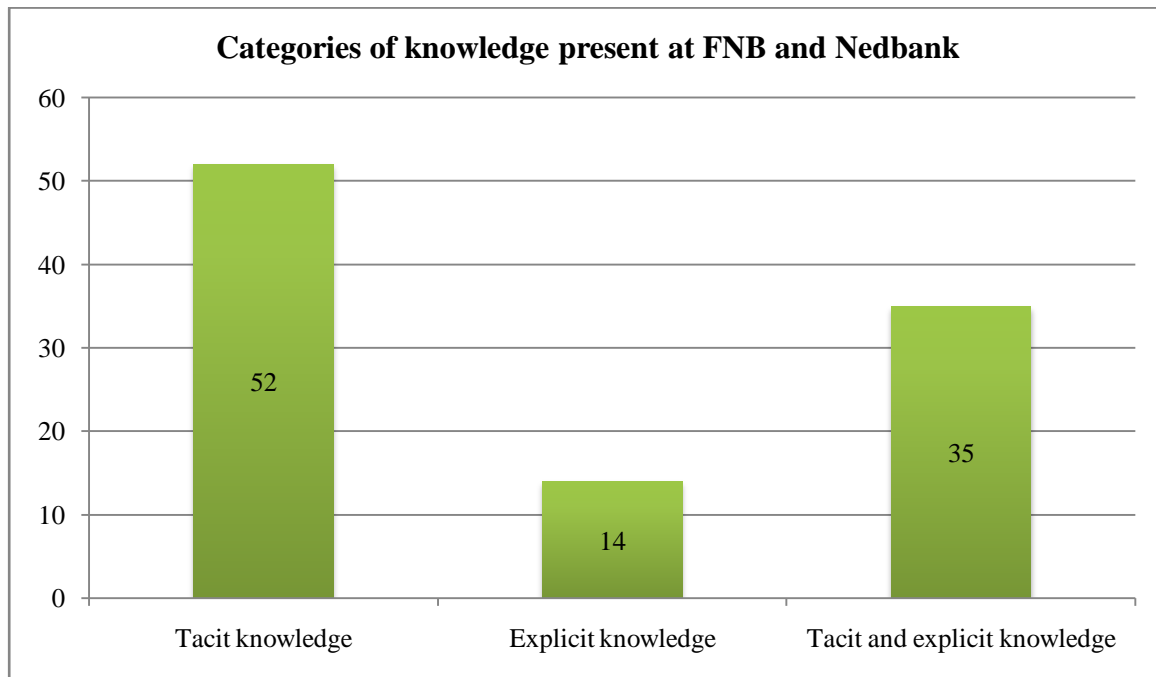


Figure 4.3 Categories of knowledge present at selected banks (N=101)

4.1.3 Knowledge management policies at selected banks

The study sought to determine if there were KM policies present in the selected banks. Policies aimed at creating an inventory of organisational intellectual assets and avoiding their loss can be a part of best practices in organisations such as banks. These assets include both tacit and explicit knowledge (Nonaka and Takeuchi, 1995; Nonaka and Teece, 2001; Takeuchi, 2001). The creation of knowledge is likely to happen if there were policies that enabled it. The responses from the selected banks are presented in the sections that follow.

4.1.3.1 Knowledge management policies at Nedbank

Respondents were asked to indicate if there were KM policies at Nedbank and 28 (27.73%) of the respondents indicated that Nedbank had KM policies in place, while 24 (23.76%) of the respondents stated that KM policies did not exist at Nedbank. Only 6 (5.94%) of the respondents were of the view that KM policies were not clear. As shown in Table 4.10, there were KM policies at Nedbank.

Table 4.10 KM policies at Nedbank (N=58)

Respondents' opinions on policies	Frequency	Percentage
Knowledge management policies are available	28	27.73
Knowledge management policies are not available	24	23.76
Knowledge management policies are not clear	6	5.94
TOTAL	58	57.43

In relation to the results illustrated in Table 4.10, the researcher asked the study participants to indicate if KM rewards/incentive policies were present at Nedbank. 11 (10.9%) of the respondents stated that there were rewards/incentives for creating re-usable knowledge resources, while 41.58% of the respondents disagreed and only 4.95% of the respondents stated that rewards and incentives were only awarded for product and service innovation. The results shown in Table 4.11 indicate that Nedbank did not have rewards and incentives schemes for KM initiatives.

Table 4.11 Rewards and incentive policies at Nedbank (N=58)

Rewards/incentive policies at Nedbank	Frequency	Percentage
KM rewards/incentives are available	11	10.9
There are no KM rewards/incentives in the bank	42	41.58
Rewards/incentives are awarded for product/service innovation	5	4.95
TOTAL	58	57.43

A follow-up question was posed in order to determine respondents' opinion about the introduction of incentives/rewards and an overwhelming response rate of 41.58% of the respondents stated that Nedbank should put in place rewards and incentives schemes for KM initiatives, while 8.91% of the respondents viewed rewards/incentive schemes as grounds for breeding favouritism. 7 (6.94%) of the respondents felt the introduction of rewards/incentives were a way of forcing employees to work hard whilst earning little. As shown in Table 4.12, 41.58% of the respondents unanimously agreed that rewards/incentives schemes for KM initiatives should be put in place.

Table 4.12 Nedbank should put in place rewards/incentives (N=58)

Rewards/incentives should be in place	Frequency	Percentage
KM rewards and incentives schemes should be put in place	42	41.58
Rewards/incentives will breed favouritism	9	8.91
Rewards and incentives will force employees to work hard but earning little	7	6.94
TOTAL	58	57.43

4.1.3.2 Knowledge management policies at FNB

20 (19.79%) of the respondents indicated that there were KM policies at FNB, whilst 17.82% disagreed and only 5 (4.96%) of the respondents stated that if there were any KM policies at FNB, then the policies were not clear. The results are shown in Table 4.13.

Table 4.13 KM policies at FNB (N=43)

Respondents' opinions on policies	Frequency	Percentage
Knowledge management policies are available	20	19.79
Knowledge management policies are not available	18	17.82
Knowledge management policies are not clear	5	4.96
TOTAL	43	42.57

The respondents were asked to indicate specific policies present and 8.91% of the respondents pointed out that there were rewards and incentives for KM initiatives at FNB, while 31 (30.69%) disagreed and only 3 (2.97%) mentioned that rewards/incentives were awarded for product and service innovation. The results are shown in Table 4.14.

Table 4.14 Rewards and incentives at FNB (N=43)

Rewards/incentive policies at FNB	Frequency	Percentage
KM rewards/incentives are available	9	8.91
There are no KM rewards/incentives in the bank	31	30.69
Rewards/incentives are awarded for product/service innovation	3	2.97
TOTAL	43	42.57

Asked to indicate their opinion about the introduction of rewards/incentives schemes, 32 (31.68%) of the respondents were of the view that FNB should put in place rewards/incentive schemes for KM initiatives, whilst 6 (5.94%) of the respondents felt the introduction of rewards/incentives would breed favouritism and 5 (4.95%) of the respondents believed the introduction of rewards/incentives was a way to force employees to work very hard. The results are depicted in Table 4.15.

Table 4.15 FNB should put in place rewards/incentives (N=43)

Rewards/incentives should be in place	Frequency	Percentage
KM rewards and incentives schemes should be put in place	32	31.68
Rewards/incentives will breed favouritism	6	5.94
Rewards and incentives will force employees to work hard but earning little	5	4.95
TOTAL	43	42.57

As shown in Tables 4.10 and 4.13 a total of 48 (47.52%) respondents stated that there were KM policies in either of the selected banks, 42 (41.58%) of the respondents pointed out that their banks did not have KM policies while 11 (10.9%) of the respondents pointed out that if there were KM policies, then the policies were not clear. Tables 4.11 and 4.14 showed a total of 73 (72.28%) of the respondents stating that there were no rewards/incentives for KM initiatives in their banks, whilst a total of 20 (19.8%) of the respondents stated that there were rewards/incentives schemes in their banks and a total of 8 (7.92%) of the respondents believed that rewards and incentives were awarded for product or service innovation. Results depicted in Tables 4.12 and 4.15 indicate that a total of 74 (73.27%) of the respondents believed rewards/incentives schemes for re-using

existing knowledge resources should be put in place, while a total of 15 (14.85%) of the respondents felt rewards and incentives were grounds for favouritism and therefore they disagreed with the idea of having rewards/incentives schemes. A total of 12 (11.88%) of the respondents felt rewards/incentives schemes would force employees to work hard but earn little. Respondents from the selected banks stated that their banks had put in place tight policies on privacy and confidentiality (dismissible offence).The results are depicted in Table 4.16.

Table 4.16 Knowledge management policies at selected banks (N=101)

1	Respondents' opinions on KM policies	Frequency	Percentage
	Knowledge management policies are available	48	47.52
	Knowledge management policies are not available	42	41.58
	Knowledge management policies are not clear	11	10.9
TOTAL		101	100
2	Rewards/incentive policies		
	KM rewards/incentives are available	73	72.28
	There are no KM rewards/incentives in the bank	20	19.8
	Rewards/incentives are awarded for product/service innovation	8	7.92
TOTAL		101	100
3	Rewards/incentives should be put in place		
	KM rewards and incentive schemes should be put in place	74	73.27
	Rewards/incentives will breed favouritism	15	14.85
	Rewards and incentives will force employees to work hard but earning little	12	11.88
TOTAL		101	100

4.1.4 Knowledge management champions at selected banks

Successful knowledge management requires individuals who play a key role to make the KM systems and processes an integral part of regular daily work. Organisations are appointing individuals such as Chief Knowledge Officers (CKO), Best Practice Managers, Director of Information Systems, Chief Information Officers (CIO) or Knowledge Managers. Wiig (2004)

posits that some organisations are appointing Knowledge Management Officers (KMOs) specifically responsible for formulating a knowledge vision and policy (and not to govern the effective use of knowledge). Asked to indicate who the KM champions were at Nedbank, 30 (29.71%) of the respondents stated the Director of Information Systems, 9 (8.91%) of the respondents mentioned the Chief Knowledge Officer, 7 (6.93%) of the respondents viewed the Best Practice Manager as the KM champion, 6 (5.94%) of the respondents believed the Chief Information Officer and another 6 (5.94%) of the respondents stated that Knowledge Managers were the KM champions at Nedbank.

22 (21.77%) of the respondents from FNB stated that the Director of Information Systems was the knowledge champion in their bank. 16 (15.84%) said that the CKO was championing KM, whilst 12 (11.88%) of the participants felt that Best Practice Managers were in-charge of KM, 10 (9.9%) of the respondents believed the CIO was the KM champion and 11 (10.9%) of the respondents pointed out Knowledge Managers were responsible for KM initiatives. The results (51.48%) showed that Directors of Information Systems were in charge of knowledge management in the selected banks. The results are shown in Table 4.17.

Table 4.17 Knowledge management champions at selected banks (N=101)

Knowledge champion	Nedbank frequency	FNB frequency	Total number of respondents
Director of Information Systems	30 (29.71%)	22 (21.77%)	52 (51.48%)
Chief Knowledge Officer	9 (8.91%)	7 (6.93%)	16 (15.84%)
Best Practice Manager	7 (6.93%)	5 (4.95%)	12 (11.88%)
Chief Information Officer	6 (5.94%)	4 (3.96%)	10 (9.9%)
Knowledge Managers	6 (5.94%)	5 (4.96%)	11 (10.9%)
TOTAL	58 (57.43%)	43 (42.57%)	101 (100%)

4.1.5 Knowledge management practices at selected banks

The respondents were asked to indicate KM practices and to what extent their banks had implemented the KM practices. All the respondents indicated that their banks had knowledge

acquisition, creation, and sharing and retention practices in place. The findings from the respondents are presented as follows:

4.1.5.1 Knowledge management practices at Nedbank

It has been mentioned in section 4.1.5 that respondents of this study indicated the same KM practices. The results will be presented as follows:

4.1.5.1.1 Knowledge acquisition

When discussing issues related to knowledge acquisition, it is important to bear in mind that a vast amount of knowledge is in the heads of experts (Davenport and Prusak, 1998; Rao, 2004). Knowledge could remain unused if not tapped. Nedbank employs experts such as business analysts, systems engineers, chartered accountants, and process flow engineers to name just a few of the experts. For knowledge to be acquired, willingness and ability of a recipient to acquire and use knowledge are crucial elements (Alavi and Leidner, 2001; Gupta and Govindarajan, 2000) as evidenced by 36 (35.65%) of the respondents who believed that their knowledge was always needed for use in their bank, whilst 14 (13.86%) of the respondents believed that both knowledge and information were needed for use in their bank and only 8 (7.92%) of the respondents disagreed that their knowledge was needed for use in their bank. Regarding relevance of knowledge, 35 (34.65%) of the respondents stated that knowledge is relevant for a limited period of time and should be used when knowledge becomes available, 19 (18.82%) of the respondents pointed out that the relevance of knowledge was determined by the category of knowledge present and 4 (3.96%) of the respondents felt that the relevance of knowledge was not determined by limited time.

4.1.5.1.2 Knowledge creation

The creation of new knowledge and effectively exploiting the existing knowledge is an important process in knowledge management practice (Nonaka and Takeuchi, 1995; Takeuchi, 2001; Ngulube and Lwoga, 2007). One of the ways to achieve that is through information use. 29 (28.71%) of the respondents stated that information use led to knowledge creation, while 16 (15.85%) of the respondents did not agree that information use led to knowledge creation and 13 (12.87%) of the respondents believed information sharing led to knowledge creation.

4.1.5.1.3 Knowledge sharing

The researcher was interested in establishing the knowledge sharing and knowledge transfer culture at Nedbank. This question sought to highlight the knowledge gaps of the Nedbank community, according to the perceptions of respondents. 32 (31.69%) of the respondents stated that Nedbank had a culture of knowledge sharing and that knowledge sharing enabled quick accomplishment of tasks, whilst 21 (20.79%) of the respondents stated that there was no culture of knowledge sharing at Nedbank. 5 (4.95%) of the respondents stated that knowledge sharing depended on the type and importance of the knowledge. The majority (31.69%) of the respondents indicated the presence of a knowledge sharing culture at Nedbank.

The respondents were further asked to indicate if knowledge sharing improved their job performance. 36 (35.64%) of the respondents felt that knowledge sharing helped improve their job performance, whilst 17 (16.84%) of the respondents were of the view that knowledge sharing did not influence/impact on their job performance and only 5 (4.95%) of the respondents stated that their jobs were different and therefore not all job performances were influenced by knowledge sharing. A comment that was provided by one of the respondents indicated that where there is a culture of knowledge sharing, individuals/employees react more quickly to change and knowledge sharing helped improve employees' jobs.

4.1.5.1.4 Knowledge retention

Knowledge at Nedbank was believed to exist in databases, procedure manuals and job descriptions as evidenced by 22 (21.79%) of the respondents who felt that they always found sufficient knowledge within the bank's database to enable them do their tasks. 8 (7.92%) of the respondents felt knowledge from the procedure manuals was sufficient. 5 (4.95%) of the respondents stated that sharing knowledge with their colleagues was sufficient for knowledge retention, while 8 (7.92%) of the respondents said that knowledge was easily accessible to all employees, thus enabling knowledge retention. 6 (5.94%) of the respondents felt that knowledge was not easily accessible to everyone; therefore, it was not possible to retain knowledge, while 4 (3.96%) of the respondents felt knowledge was resident with experts and 5 (4.95%) of the respondents stated that as part of knowledge retention, Nedbank's archival systems served the purpose. The findings for the knowledge management practices at Nedbank are shown in Table 4.18.

Table 4.18 KM practices at Nedbank (N=58)

KM practices	Respondents' opinions on KM practices	Frequency	Percentage
Knowledge acquisition	Knowledge is needed for use in the bank	36	35.65
	Knowledge is not needed	8	7.92
	Knowledge and information are needed	14	13.86
	TOTAL	58	57.43
	Relevance of knowledge is determined by limited time	35	34.65
	Relevance of knowledge is not determined by limited time	4	3.96
	Relevance of knowledge is determined by type of knowledge	19	18.82
	TOTAL	58	57.43
Knowledge creation	Information use leads to knowledge creation	29	28.71
	Information use does not lead to knowledge creation	16	15.85
	Information sharing leads knowledge creation	13	12.87
	TOTAL	58	57.43
Knowledge sharing	Culture of knowledge sharing available	32	31.69
	No culture of knowledge sharing	21	20.79
	Knowledge sharing is dependent is on the type of knowledge	5	4.95
	TOTAL	58	57.43
	Knowledge sharing improves job performance	36	35.64
	Knowledge sharing does not impact on job performance	17	16.84
	Not all jobs are impacted by knowledge sharing	5	4.95
	TOTAL	58	57.43
Knowledge retention	Knowledge is kept in the database	22	21.79
	Knowledge is kept in procedure manuals	8	7.92
	Knowledge sharing amongst employees	5	4.95
	Every employee has access to knowledge	8	7.92
	Knowledge is not easily accessible	6	5.94
	Knowledge is found in experts	4	3.96
	Knowledge is found in archival systems	5	4.95
	TOTAL	58	57.43

4.1.5.2 Knowledge acquisition, creation, sharing and retention at Nedbank

A need to share knowledge and a realisation of existing knowledge gaps are likely to drive KM practices. 12 (11.89%) of the respondents were of the view that departmental meetings and team building sessions provided platforms for knowledge acquisition, creation and retention. 7 (6.93%) of the respondents believed that succession planning was the ideal platform for knowledge

retention. The use of the intranet and internet was viewed as one of the effective ways where knowledge was acquired, created or shared as evidenced by 8.91% of the respondents. 4 (3.96%) of the respondents believed that road shows exposed staff to knowledge sharing. 5 (4.95%) of the respondents took advantage of smoke, tea or lunch breaks to acquire, create or share information and knowledge, 3 (2.97%) of the respondents believed that seminars (training and development) were ideal platforms for knowledge acquisition, creation and sharing.

The use of interactive communication channels such as Wikis, Blogs, Facebook and WhatsApp were identified as tools for acquiring, creating, storing and sharing knowledge as evidenced by 6 (5.94%) of the respondents. 3 (2.97%) of the respondents believed that staff secondment and promotions played a major role in knowledge retention, while 5(4.95%) of the respondents felt project teams were ideal platforms where knowledge was acquired, created or shared. The findings are presented in Table 4.19.

Table 4.19 Knowledge acquisition, creation, sharing and retention at Nedbank (N=58)

Knowledge acquisition, creation, sharing and retention at Nedbank	Frequency	Percentage
Departmental meetings and team building sessions	12	11.89
Succession planning	7	6.93
Use of the Intranet and Internet	9	8.91
Road-shows	4	3.96
Tea or lunch breaks	5	4.95
Seminars	3	2.97
Facebook, Wikis, Blogs and Twitter	6	5.94
Staff promotions/secondment	3	2.97
Mentorship	4	3.96
Project Teams	5	4.95
TOTAL	58	57.43

4.1.5.3 Knowledge management practices at FNB

Respondents from FNB provided varying responses relating to KM practices present at the bank and the findings are presented in the following sections.

4.1.5.3.1 Knowledge acquisition

The knowledge of experts is needed to be used for the advantage of the bank. This implies that knowledge is sometimes relevant for limited periods of time, beyond which it becomes common or irrelevant. Among many considerations for an expert knowledge system is the identification of experts or individuals with expert skills that justifies the need for such a system to be in place.²⁷ (26.73%) of the respondents stated that knowledge was widely used at FNB, while, 6 (5.94%) of the respondents disagreed and 10 (9.9%) of the respondents stated that both knowledge and information were needed at FNB. The researcher asked respondents to indicate the relevance of knowledge they were using at FNB and 26 (25.74%) of the respondents stated that limited time determined the relevance of knowledge, 3 (2.97%) of the respondents disagreed and 14 (13.86%) of the respondents stated that the relevance of knowledge was determined by the type of knowledge.

4.1.5.3.2 Knowledge creation

Respondents were asked if the use of information led to knowledge creation and their responses varied with 21 (20.79%) of the respondents stating that information use led to knowledge creation, 11 (10.88%) of the respondents disagreed and 10 (9.9%) of the respondents had a different view- they stated that information sharing (not information use) led to knowledge creation.

4.1.5.3.3 Knowledge sharing

To have an idea of the extent of knowledge sharing, questions were directed at finding out if indeed an environment for doing so existed and what impact individuals felt it had on their organisational effectiveness. Top management is required to create an environment that encourages and supports knowledge sharing and knock down the cultural barriers that exist in organisations today. 23 (22.77%) of the respondents stated that the culture at FNB allowed knowledge sharing, 15 (14.85%) of the respondents disagreed and only 5 (4.95%) of the respondents pointed out that knowledge sharing at FNB was dependent upon the type of knowledge needed or available at any specific time. The researcher probed the respondents if knowledge sharing improved job performance and 26 (25.74%) of the respondents believed that their job performance was improved when they shared knowledge, 12 (11.88%) of the respondents stated that their job performances were not influenced by sharing knowledge. Only 5 (4.95%) of the respondents stated that not all jobs were impacted knowledge sharing because jobs differed from one department to others.

4.1.5.3.4 Knowledge retention

Banks lose knowledge through several ways such as resignations, retirements or deaths. Knowledge should be retained in the organisation for future use. Retention of knowledge from knowledgeable employees is a critical resource and a core element for an organisation to achieve a significant competitive advantage (Grant and Grant, 2008). Unlike responses from Nedbank where the majority (21.79%) of the respondents stated that knowledge was kept in the databases, respondents provided several responses in this instance. 8 (7.92%) of the respondents stated that as part of knowledge retention the use of FNB databases was ideal, while 7(6.93%) of the respondents felt that procedure manuals retained most organisational knowledge. 3 (2.97%) of the respondents believed sharing knowledge amongst employees enabled FNB to retain knowledge, 8 (7.92%) of the respondents pointed out that because every employee was accessible to knowledge, that made it easier for FNB to retain knowledge. 6 (5.94%) of the respondents disagreed that knowledge was not easily accessible to everyone at FNB, 4 (3.96%) of the respondents believed knowledge retention was possible at FNB because of the experts working at the bank and 7 (6.93%) of the respondents said that archival systems were used to retain knowledge at FNB. The results for all KM practices at FNB are presented in Table 4.20.

Table 4.20 KM practices present at FNB (N=43)

KM practices	Respondents' opinions on KM practices	Frequency	Percentage
Knowledge acquisition	Knowledge is needed for use in the bank	27	26.73
	Knowledge is not needed	6	5.94
	Knowledge and information are needed	10	9.9
	TOTAL	43	42.57
	Relevance of knowledge is determined by limited time	26	25.74
	Relevance of knowledge is not determined by limited time	3	2.97
	Relevance of knowledge is determined by type of knowledge	14	13.86
	TOTAL	43	42.57
Knowledge creation	Information use leads to knowledge creation	21	20.79
	Information use does not lead to knowledge creation	11	10.88
	Information sharing leads knowledge creation	10	9.9
	TOTAL	43	42.57
Knowledge sharing	Culture of knowledge sharing available	23	22.77
	No culture of knowledge sharing	15	14.85
	Knowledge sharing is dependent is on the type of knowledge	5	4.95
	TOTAL	43	42.57
	Knowledge sharing improves job performance	26	25.74
	Knowledge sharing does not impact on job performance	12	11.88
	Not all jobs are impacted by knowledge sharing	5	4.95
	TOTAL	43	42.57
Knowledge retention	Knowledge is kept in the database	8	7.92
	Knowledge is kept in procedure manuals	7	6.93
	Knowledge sharing amongst employees	3	2.97
	Every employee has access to knowledge	8	7.92
	Knowledge is not easily accessible	6	5.94
	Knowledge is found in experts	4	3.96
	Knowledge is found in archival systems	7	6.93
TOTAL	43	42.57	

4.1.5.4 Knowledge acquisition, creation, sharing and retention at FNB

The knowledge acquisition, creation, sharing and retention practices at FNB provided by responses are not very similar to the ones at Nedbank.6 (5.94%) of the respondents were of the view that departmental meetings and team building sessions provided platforms for knowledge acquisition, creation and retention. 4 (3.96%) of the respondents believed that succession planning

was the ideal platform for knowledge retention, while 6 (5.94%) of the respondents stated that the use of intranets/internet enabled the creation and sharing of information and knowledge. 7 (6.93%) of the respondents believed that the campaigning of innovators played a key role in the acquisition, creation and sharing of knowledge, whilst 5 (4.95%) of the respondents believed the FNB training centre provided platforms for knowledge acquisition, sharing and creation.

Three (2.97%) of the respondents said that the retirement age at FNB had been extended as part of the bank’s efforts to retain knowledge. Only 2 (1.98%) of the respondents pointed out that the use of interactive communication channels (social media) facilitated knowledge acquisition, creation and information sharing. FNB has created knowledge portals where employees and customers meet to discuss trends in the banking industry as evidenced by 2.97% of the respondents. FNB has installed suggestion boxes allowing customers to complain, compliment and make suggestions about the bank’s products as shown by 3.96% of the respondents. 3 (2.97%) of the respondents stated that FNB is a project based/learning organisation. The results are shown in Table 4.21.

Table 4.21 Knowledge acquisition, creation, sharing and retention at FNB (N=43)

Knowledge acquisition, creation, sharing and retention at FNB	Frequency	Percentage
Departmental meetings and team building sessions	6	5.94
Succession planning	4	3.96
Use of the Intranet and Internet	6	5.94
Innovators Campaign	7	6.93
Training Centre	5	4.95
Extension of retirement age	3	2.97
Facebook, Wikis, Blogs and Twitter	2	1.98
Knowledge portals	3	2.97
Suggestion boxes for knowledge	4	3.96
Project management teams	3	2.97
TOTAL	43	42.57

4.1.5.5 Factors inhibiting knowledge acquisition at selected banks

To motivate a recipient’s acquisition, knowledge content and a knowledge source should be perceived as a valued knowledge source (Desouza et al., 2006; Ford and Staples, 2006). The acquisition of knowledge can be inhibited by a myriad of barriers in an organisation. The respondents identified six major factors that inhibit the acquisition of knowledge in their banks as

shown by a total of 13 (12.88%) of which 7 (6.93%) were from Nedbank and 6 (5.95%) from FNB. According to them, the knowledge sources in their banks did not show value in the knowledge they may be sharing and the recipients did not pay attention to acquire the knowledge. To acquire knowledge from others requires interaction between a recipient and a source as pointed out by a total of 12 (11.88%) of whom 7 (6.93%) of the respondents were from Nedbank and 5 (4.95%) of the respondents were from FNB. They felt that there were no interaction platforms between employees; hence it was difficult to acquire new knowledge. Nonaka and Takeuchi's (1995) organisational knowledge conversion theory views the interaction processes of tacit and explicit knowledge as an essential feature in knowledge management in an organisation such as a bank.

A total of 7 (6.93%) responses were received, of whom 4 (3.96%) responses were from Nedbank and 2.97% of responses were from FNB who believed knowledge acquisition was inhibited by lack of KM plans, policies, projections and objectives in their banks. The majority (37.62%) of the respondents felt that their banks did not provide an enabling environment for knowledge acquisition. Of the 37.62%, 22.77% of the respondents were from Nedbank whilst 14.85% responses were received from FNB. An environment that promotes knowledge acquisition provides employees with spaces for emerging relationships, which might be physical, virtual, or mental, providing a platform for advancing individual and/or collective knowledge. Nonaka (1995) refers to this space as *ba*. A total of 10.89% of the respondents stated that lack of structural ties in an organisation inhibited the acquisition of knowledge. Out of the 10.89% of respondents, a higher response rate of 5.94% was received from Nedbank whilst 4.95% of the respondents were from FNB. From the 20 (19.8%) responses received, 11 (10.9%) of the respondents were from Nedbank and 9 (8.9%) of the respondents were from FNB believed lack of knowledge management enablers hindered knowledge acquisition. The results are presented in Table 4.22.

Table 4.22 Factors inhibiting knowledge acquisition at selected banks (N=101)

Knowledge acquisition Inhibitors	Nedbank frequency	FNB frequency	Total number of respondents
Salience of value	7(6.93%)	6(5.95%)	13 (12.88%)
Lack of employee interaction	7 (6.93%)	5(4.95%)	12 (11.88%)
Lack of KM plans and policies	4(3.96%)	3(2.97%)	7 (6.93%)
Environment not conducive	23(22.77%)	15(14.85%)	38 (37.62%)
Lack of structural ties	6(5.94%)	5(4.95%)	11 (10.89%)
Lack of KM enablers	11(10.9%)	9(8.9%)	20 (19.8%)
TOTAL	58 (57.43%)	43 (42.57%)	101 (100%)

4.1.5.6 Factors inhibiting knowledge creation at selected banks

Nonaka (1991) and Nonaka and Takeuchi (1995) state that the SECI and *ba* models play a crucial role in the creation or acquisition of new knowledge and/or finding new knowledge through interactions and collaborations with other individual systems. Respondents were asked to indicate the factors that were inhibiting knowledge creation in their banks. 18 (17.83%) of the respondents stated that lack of leadership support for KM initiatives was inhibiting knowledge creation. Of the 17.83%, 12 (11.89%) responses were received from Nedbank and 6 (5.94%) were from FNB. A total of 7 (6.93%) of the respondents, comprising 3.96% (Nedbank) and 2.97% (FNB) of the respondents felt mistrust amongst employees was an inhibitor of knowledge creation, while 12.87%, 6.93% from Nedbank and 5.94% from FNB, of the respondents stated that lack of interactions amongst employees was disadvantageous to knowledge creation.

Knowledge creation was affected by lack of incentives and rewards schemes for KM initiatives as evidenced by 15.84% of the respondents, of whom 8.91% were from Nedbank and 6.93% were from FNB. 11 (10.89%) of the respondents said that lack of KM policies and plans were a stumbling block to knowledge creation. Of these 10.89%, 6 (5.94%) responses were received from Nedbank whilst 5 (4.95%) were from FNB. From the 10 (9.9%) responses, 5 (4.95%) from Nedbank and another 5 (4.95%) from FNB of the responses stated that employees were reluctant to create knowledge. 13.86% of the respondents comprising 7(6.93%) of respondents from either bank indicated that employees had negative attitudes towards learning and that negative attitude was an inhibitor of knowledge creation. A total of 11.88% of respondents, or 7.92% from Nedbank and 3.96% from FNB respectively, stated that the cost/benefit of sharing/creating knowledge was not known and therefore it was difficult to create knowledge under those circumstances. The results are presented in Table 4.23.

Table 4.23 Factors inhibiting knowledge creation at selected banks (N=101)

Knowledge creation Inhibitors	Nedbank frequency	FNB frequency	Total number of respondents
Lack of leadership support	12(11.89%)	6(5.94%)	18(17.83%)
Mistrust amongst employees	4(3.96%)	3(2.97%)	7(6.93%)
Lack of employee interactions	7(6.93%)	6(5.94%)	13(12.87%)
Absence of rewards/incentives	9(8.91%)	7(6.93%)	16(15.84%)
Lack of KM policies and plans	6(5.94%)	5(4.95%)	11(10.89%)
Employees' reluctance to create knowledge	5(4.95%)	5(4.95%)	10(9.9%)
Negative attitudes towards learning	7(6.93%)	7(6.93%)	14(13.86%)
Cost and benefit of knowledge creation	8(7.92%)	4(3.96%)	12(11.88%)
TOTAL	58(57.43%)	43(42.57%)	101(100%)

4.1.5.7 Factors inhibiting knowledge sharing at selected banks

Respondents were asked to indicate the factors that inhibited knowledge sharing in their bank and a total of 18 (17.83%) responses were received (11.89% from Nedbank and 5.94% from FNB) with these respondents stating that fear to make mistakes in front of peers impeded employees from sharing knowledge. 8 (7.92%) of the respondents stated that mistrust amongst staff members hindered knowledge sharing. Of these 7.92%, an equal number (3.96%) of the responses came from both banks. The other factors that were highlighted by the respondents were: lack of interactions and collaboration between departments (14.84%) of whom 7 (6.93%) were from Nedbank and 8 (7.91%) were from FNB, and lack of incentives and rewards for KM initiatives; here a total of 15.84% responses were received, 9 (8.91%) of respondents were from Nedbank and 7 (6.93%) were from FNB. A total of 11 (10.89%) of the respondents stated that lack of KM policies and plans was inhibiting knowledge sharing. Of the 10.89% respondents, 5.94% responses were from Nedbank and 4.95% from FNB. It was pointed out that employees were reluctant to share knowledge as evidenced by 9.9% of the respondents of whom 4.95% were from either bank. Employees' attitudes towards learning and sharing knowledge were highlighted as inhibitors by 13.86% who comprised 6.93% from either bank, whilst a higher response rate (7.92%) was received from Nedbank and 1% from FNB; these respondents stated that strict bank policies were inhibiting knowledge sharing. The results are presented in Table 4.24.

Table 4.24 Factors inhibiting knowledge sharing at selected banks (N=101)

Knowledge sharing Inhibitors	Nedbank frequency	FNB frequency	Total number of respondents
Fearing to make mistakes in front of peers	12(11.89%)	6 (5.94%)	18(17.83%)
Mistrust amongst employees	4(3.96%)	4(3.96%)	8(7.92%)
Lack of employee interactions	7(6.93%)	8(7.91%)	15(14.84%)
Absence of rewards/incentives	9(8.91%)	7(6.93%)	16(15.84%)
Lack of KM policies and plans	6(5.94%)	5(4.95%)	11(10.89%)
Employees' reluctance to share knowledge	5(4.95%)	5(4.95%)	10(9.9%)
Negative attitudes towards learning	7(6.93%)	7(6.93%)	14(13.86%)
Strict bank policies on confidentiality	8(7.92%)	1(1%)	9 (8.92%)
TOTAL	58 (57.43%)	43(42.57%)	101 (100%)

4.1.5.8 Factors inhibiting knowledge retention at selected banks

The knowledge and expertise from employees should be retained before they leave the organisation. In the absence of knowledge retention strategies, organisations lose tacit knowledge when employees leave for other organisations and due to other forms of attrition. Knowledge retention challenges exist in the form of retirements, resignations and deaths of employees (Wamundila and Ngulube, 2011). For 18 (17.82%) of the respondents death of employees was a major barrier to knowledge retention in the selected banks. Of the 17.82%, 11 (10.89%) were from Nedbank and 7(6.93%) of the respondents were from FNB. A total of 11.88% of responses received, 6.93% were from Nedbank and 4.95% were from FNB, believed that retirement of the older generation of experts significantly inhibited knowledge retention. A different view was provided by 16 (15.84) of the respondents who stated that resignations within banks were a major challenge that affected the retention of knowledge. Of the 16, 7 (6.93%) responses came from FNB and 9 (8.92%) were from Nedbank. Wamundila and Ngulube (2011) posit 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 use of advanced technology to capture work processes. Of the 17 (16.83%) respondents who pointed out that banks lacked employee mentoring and succession plans to safeguard possible knowledge losses, 9.9% responses were from Nedbank and 6.93% responses were received from FNB.

Inadequate strategies and plans to capture knowledge were other barriers pointed out by 10.89% of the respondents, of whom 5.94% and 4.95% were from Nedbank and FNB respectively. 13 (12.88%) of the respondents, comprising 6.93% of Nedbank respondents and 5.94% FNB respondents, stated that lack of documentation and archival or database management systems in the selected banks was a major hindrance to knowledge retention. Lack of ICT tools for knowledge retention was raised by 14 (13.86%) respondents of whom 7.92% were from Nedbank and 5.94% were from FNB. These results are shown in Table 4.25.

Table 4.25 Factors inhibiting knowledge retention at selected banks (N=101)

Knowledge retention Inhibitors	Nedbank frequency	FNB frequency	Total number of respondents
Deaths	11(10.89%)	7(6.93%)	18 (17.82%)
Retirements	7(6.93%)	5(4.95%)	12 (11.88%)
Resignations	9(8.92%)	7(6.93%)	16 (15.85%)
Lack of succession planning	10(9.9%)	7(6.93%)	17 (16.83%)
Inadequate KM strategies and plans	6(5.94%)	5(4.95%)	11 (10.89%)
Lack of archival/database management systems	7(6.93%)	6(5.94%)	13 (12.87%)
Lack of ICT tools for knowledge retention	8(7.92%)	6(5.94%)	14 (13.86%)
TOTAL	58 (57.43%)	43 (42.57%)	101 (100%)

4.1.6 Knowledge management enablers at selected banks

Mostert and Synman (2007) posit that KM can provide significant advantages to the organisation if it is supported by organisational processes, suitable structure, strategy and favourable working environments. One of the objectives of this study was to determine the KM enablers at FNB and Nedbank and the respondents indicated that leadership and strategy, IT, organisational structure, culture and human capital were the main enablers needed for knowledge management.

4.1.6.1 Leadership and strategy

Top management is responsible for crafting policies and strategies. Committed and effective leadership enhance organisational performance. Rylatt (2003) suggests that a successful KM strategy is attributable to exemplary leadership that values trial and error and shows a commitment to innovation and continuous improvement as evidenced by 61 (60.4%) of the respondents who felt leadership was an important enabler of KM. Of the 60.4% respondents, 35 (34.65%) responses

were from Nedbank and 26 (25.74%) were from FNB. The twenty-five (24.75%) respondents who stated that leadership was not an important enabler for knowledge management comprised 14.36% responses from Nedbank and 10.39% responses from FNB. Fifteen (14.85%) of the respondents pointed out that the success of KM initiatives was attributable to leadership, management and employees. Of the 14.85% of respondents, 9 (8.92%) were from Nedbank and 6 (5.93%) were from FNB. The results showed that leadership and strategy were KM enablers. A summary of the findings is shown in Figure 4.4.

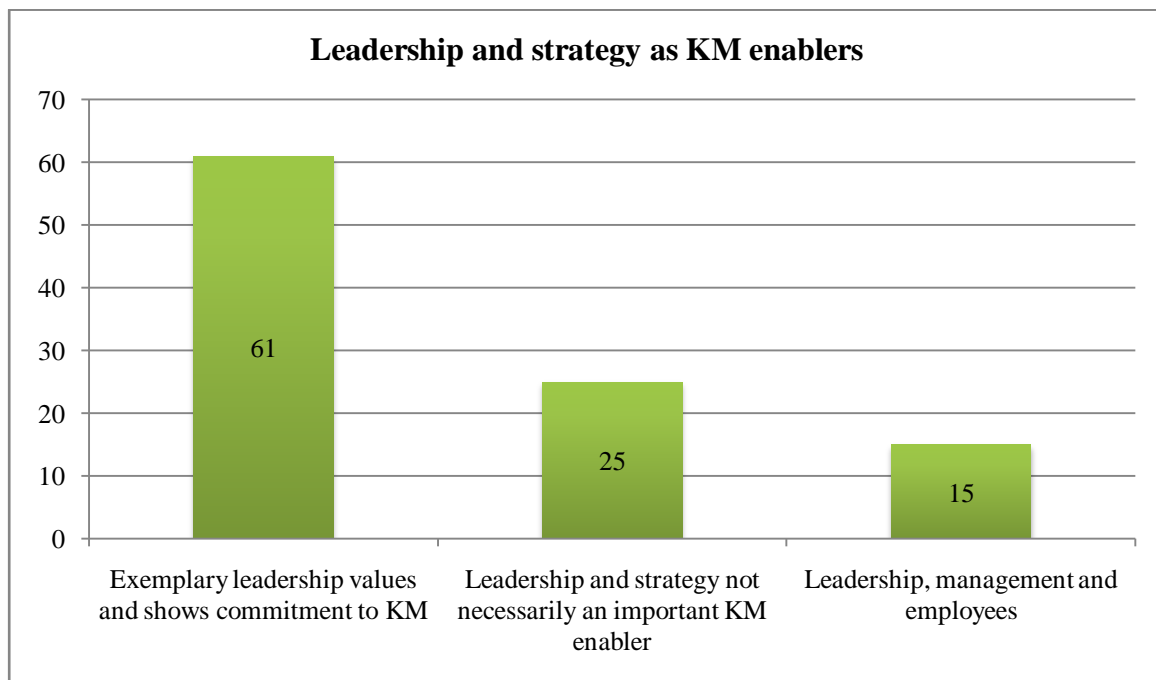


Figure 4.4 Leadership and strategy as KM enablers (N=101)

Squier and Synman (2004) posit that leaders should have specific knowledge and skills to champion the concept of knowledge management and spearhead the enormous challenges to overcome inherent obstacles to the free flow of knowledge within an organisation. As a follow-up question on leadership as an enabler, respondents were asked to provide their opinions about leadership skills expected. 16 (15.84%) of the respondents felt that leaders should be democratic, that is leaders should empower and consult employees in decision-making processes. Of the 15.84%, 8.91% responses were received from Nedbank whilst 6.93% responses were from FNB. A total of 12(11.88%) of the respondents stated that leaders should be fair-minded in their approach to business decisions, of whom 7 (6.93%) were Nedbank responses and 5 (4.95%) were responses from FNB. 14 (13.86%) of the respondents stated that leaders should be exemplary by exhibiting ethical conduct. The 13.86% response rate comprised 8(7.92%) Nedbank and 6 (5.94%)

were FNB respondents. A total of 18 (17.83%) responses were received comprising 10(9.9%) Nedbank respondents and 8 (7.93%) FNB respondents believed that KM initiatives succeeded when leaders were committed and supportive. A different view was posed when 13 (12.87%) of the participants stated that understanding of KM efforts and business strategies should be an integral part of leaders. Of the 13 responses received, 8(7.92%) responses were from Nedbank and 5(4.95%) responses were from FNB. 10 (9.9%) of the respondents were of the view that leaders should possess people, communication and conflict management skills as the workplace exposed staff and employees to potential conflicts. The 10 (9.9%) comprised 6(5.94%) Nedbank respondents and 4 (3.96%) were FNB respondents. Flexibility was viewed as another quality leaders were expected to possess as evidenced by a total of 7 (6.93%) respondents of whom 4(3.96%) came from Nedbank and 3 (2.97%) responses were from FNB. 11 (10.89%) of the respondents felt leaders should possess power to reward/incentivise KM initiatives. Of the 11 respondents, 6 (5.94%) were Nedbank participants and 5 (4.95%) were FNB participants. The findings are depicted in Table 4.26.

Table 4.26 Leadership qualities and skills (N=101)

Leadership qualities and skills	Nedbank frequency	FNB frequency	Total number of respondents
Democratic leadership style	9(8.91%)	7(6.93%)	16 (15.84%)
Fair minded approach	7(6.93%)	5(4.95%)	12 (11.88%)
Ethical conduct	8(7.92%)	6(5.94%)	14 (13.86%)
Commitment and supportive	10(9.9%)	8(7.93%)	18 (17.83%)
Leaders should understand KM	8(7.92%)	5(4.95%)	13 (12.87%)
Business management skills	6(5.94%)	4(3.96%)	10 (9.9%)
Flexibility	4(3.96%)	3(2.97%)	7 (6.93%)
Reward power	6(5.94%)	5(4.95%)	11 (10.89%)
TOTAL	58 (57.43%)	43 (42.57%)	101 (100%)

4.1.6.2 Information technology

Information technology is often misconstrued to mean knowledge. Dewah (2011) posits that technology comprising collaborative computing tools, knowledge servers, enterprise knowledge portals, electronic document management systems, knowledge harvesting tools and search engines are critical enablers of knowledge management. In this regard, respondents were asked to indicate their opinions about the role of IT in KM. From a total of 45 (44.55%) responses received, 26 (25.74%) were from Nedbank and 19 (18.81%) respondents were from FNB. The 45 (44.55%) respondents felt that IT was the same as knowledge management, whilst 38 (37.62%) of the respondents viewed IT as an enabler of KM. Out of 38 responses, 21.82% were Nedbank

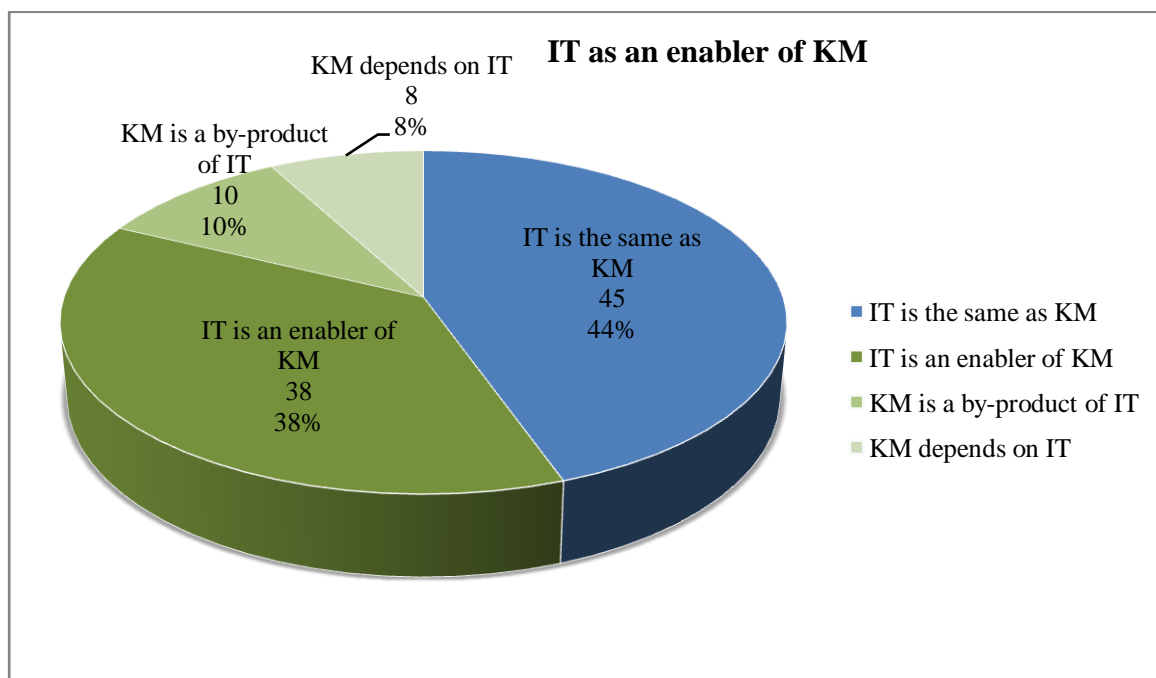
respondents and 15.8% were FNB respondents. Of the 10 (9.9%) respondents who said KM was a by-product of IT, 6 (5.94%) were from Nedbank and 4 (3.96%) were from FNB. A total 8 (7.93%) of the respondents believed that KM depended on IT. The 7.93% comprised 5 (4.95%) Nedbank respondents and 3 (2.97%) were FNB respondents. The findings in this instance showed that 44.55% of respondents felt that IT and KM were the same. Albers(2009) states that virtual organisations use networking technologies, chat rooms, video-conferencing, discussion forums and wikis as collaborative tools that enable knowledge sharing, transfer and retention in the organisation. The findings are presented in Table 4.27.

Table 4.27 Respondents' views on IT (N=101)

IT as a KM enabler	Nedbank frequency	FNB frequency	Total number of respondents
IT is the same as KM	26 (25.74%)	19 (18.81%)	45(44.55%)
IT is a KM enabler	22 (21.82%)	16 (15.8%)	38(37.62%)
KM is a by-product of IT	6(5.94%)	4(3.96%)	10(9.9%)
KM is dependent on IT	5 (4.95%)	3(2.97%)	8(7.92%)
TOTAL	58 (57.43%)	43(42.57%)	101(100%)

The results presented in Table 4.27 are also depicted in Figure 4.5.

Figure 4.5 IT as an enabler of KM at selected banks (N=101)



4.1.6.3 Organisational structure

Nonaka (1994) and Kok (2003) point out that bureaucratic structures are not conducive to the process of creating knowledge within the organisation, as only top management has the power and ability to create information. From a total of 43 (42.57%) respondents who stated that organisational structures in their banks were ideal for knowledge management, 25 (24.75%) responses were from Nedbank and 18 (17.82%) responses were from FNB. Organisational structures at the selected banks were regarded not conducive for knowledge management as evidenced by 34 (33.66%) of the respondents of whom 20(19.81%) were Nedbank respondents and 14 (13.85%) were FNB respondents. The remaining 24 (23.77%) respondents pointed out that there were dual reporting structures in the banks, a situation which was not ideal for knowledge management. The 24 responses received comprised 13 (12.87%) participants from Nedbank and 11 (10.9%) participants from FNB. The 42.57% responses confirm that organisational structures were important knowledge management enablers. The results are shown in Table 4.28 and summarised in Figure 4.6.

Table 4.28 Respondents' views on organisational structures at selected banks (N=101)

Organisational structure as a KM enabler	Nedbank frequency	FNB frequency	Total number of respondents
Organisational structure promotes KM initiatives	25(24.75%)	18(17.82%)	43(42.57%)
Organisational structure not conducive for KM initiatives	20(19.81%)	14(13.85%)	34(33.66%)
Dual reporting structures	13(12.87%)	11(10.9%)	24(23.77%)
TOTAL	58(57.43%)	43(42.57%)	101(100%)

The results presented in Table 4.28 are summarised and shown in Figure 4.6.

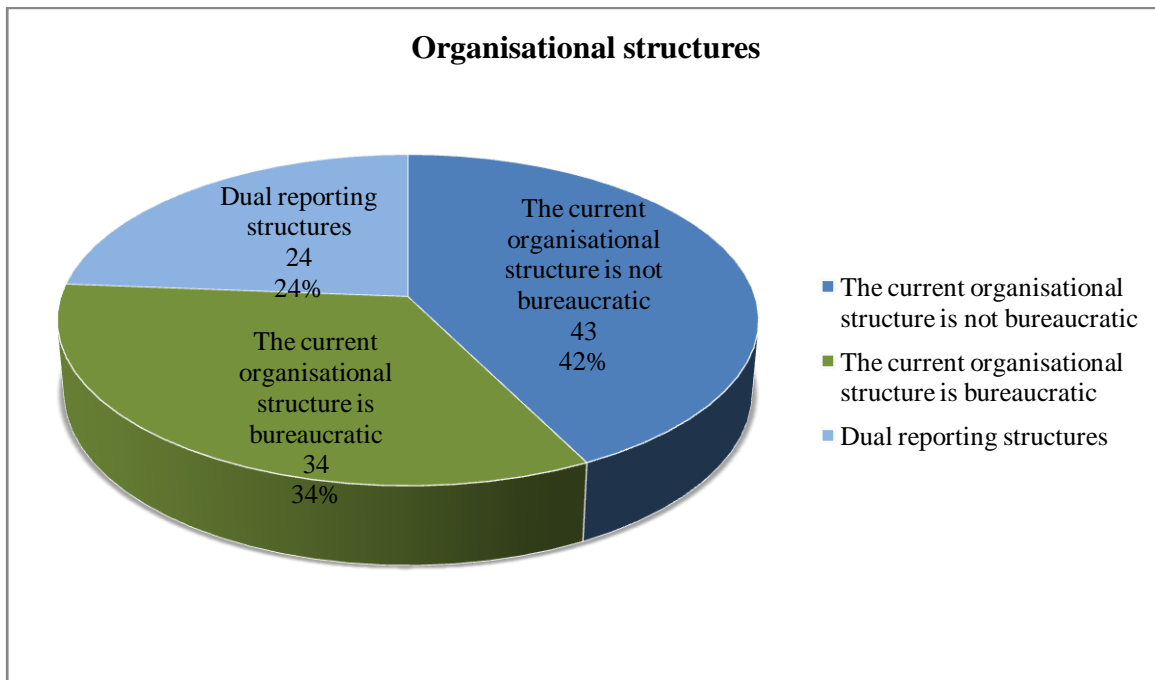


Figure 4.6 Organisational structure as a KM enabler at selected banks (N=101)

4.1.6.4 Organisational culture at selected banks

A culture that promotes the creation of new knowledge in the organisation is vital because this allows banks to create new knowledge from shared and existing knowledge. Mustaq and Bokhari (2011) posit that organisational culture and transformational leadership had an influence on knowledge sharing.

4.1.6.4.1 Organisational culture at Nedbank

Asked if there was a knowledge sharing culture in their respective organisation, 26 (25.74%) of the respondents stated that Nedbank provided a culture of KM initiatives, 18 (17.83%) of the respondents said that a culture of knowledge management did not exist at Nedbank and 14 (13.86%) of the participants pointed out that strict banking policies superseded KM initiatives and they were not sure if there was any KM culture. The results are shown in Table 4.29.

Table 4.29 Organisational culture at Nedbank (N=101)

Organisational culture at Nedbank	Frequency	Percentage
A culture of knowledge management exists	26	25.74
There is no KM culture	18	17.83
Strict banking policies superseded KM initiatives	14	13.86
TOTAL	58	57.43

4.1.6.4.2 Organisational culture at FNB

Unlike responses received from Nedbank, FNB respondents provided answers that portrayed a different perception of organisational culture. Of the 43 (42.57%) responses, 18 (17.82%) of the respondents stated that a culture of knowledge management existed at FNB, whilst 8 (7.92%) of the respondents pointed out that a KM culture did not exist. Instead of being an inhibitor, 8(7.92%) of the respondents emulated the existence of strict banking policies as a way of enhancing knowledge preservation, which contrasts the views posed by 13.86% of Nedbank respondents. 9(8.91%) of the respondents stated that the existence of knowledge portals was part of FNB’s KM culture. The findings shown in Table 4.30 indicated that there was a KM culture at FNB.

Table 4.30 Organisational culture at FNB (N=43)

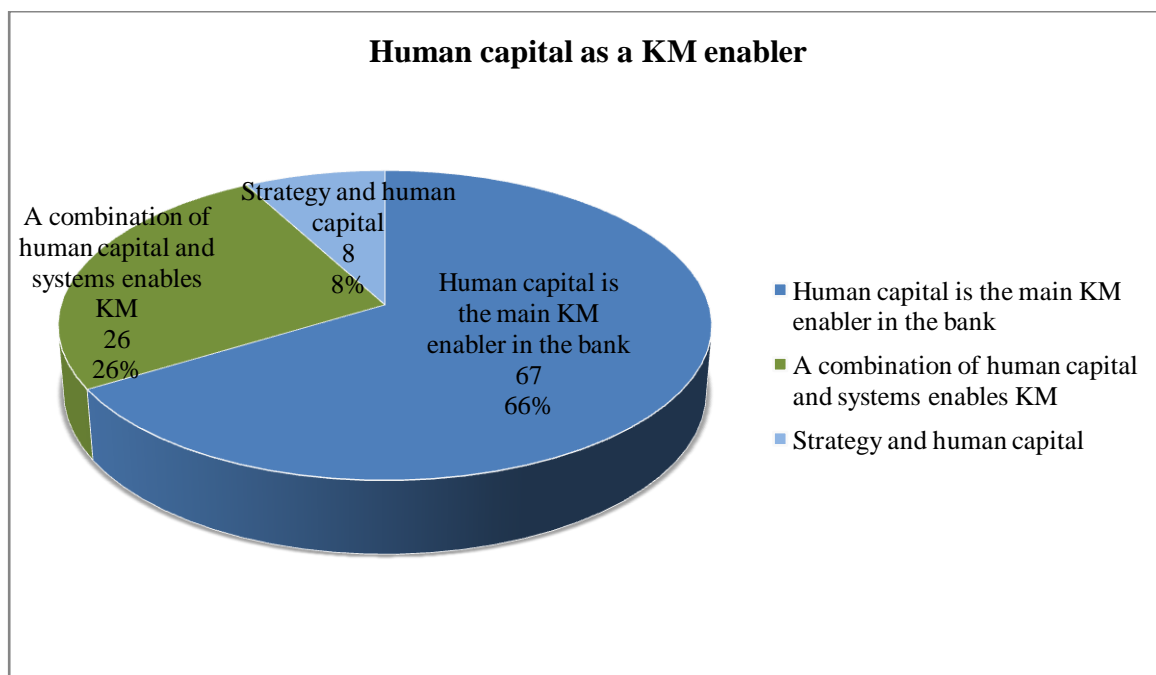
Organisational culture at FNB	Frequency	Percentage
A culture of knowledge management exists	18	17.82
There is no KM culture	8	7.92
Strict banking policies enhanced knowledge preservation	8	7.92
Existence of knowledge portals	9	8.91
TOTAL	43	42.57

4.1.6.5 Human capital

Tiwana (2008) also points out that “the departure of some employees reduces collective firm-wide competence (tacit knowledge walk-outs). High staff turnover is attributable to factors such as management style, remuneration, working conditions, retirement or dismissal. The departure of key staff causes loss of tacit knowledge and respondents were asked to give their opinion as to how human capital was a KM enabler in their bank. Of the 67 (66.33%) respondents who pointed out that human capital was the main driver/enabler of knowledge in their bank, 38(37.62%) of the respondents were from Nedbank and 29 (28.71%) of the respondents were from FNB. A total of 26 (25.74%) felt it was a combination of human capital and systems that enabled the creation, acquisition, storage and retrieval of knowledge in an organisation. Of the 25.74% responses received, 15 (14.85%) of the respondents were from Nedbank and 11 (10.89%) respondents were from FNB.

8 (7.93%) respondents who stated that human capital alone was not sufficient said that by adding strategy to human capital, then KM initiatives were likely to succeed. 5 (4.95%) of these responses were from Nedbank and 3 (2.97%) were from FNB. Tiwana (2008:20) is of the opinion that an employee’s contribution to the internal knowledge repository should be regarded as an essential evaluation criterion for promotion. Though different viewpoints were provided in this instance, 66.33% of the respondents felt human capital was an important KM enabler in the selected banks. Figure 4.7 shows the results.

Figure 4.7 Human capital as a KM enabler (N=101)



4.1.7 Knowledge management and organisational performance at selected banks

Fombad (2009) states that KM results in better employee performance, employee satisfaction and teamwork whilst Cong and Pandya (2003) point out that KM provides increased performance through more efficient, productive, innovative and quality processes. Tiwana (2008) states that “KM addresses problems related to the business – whether it is creating and delivering innovative products or services; managing and enhancing relationships with customers, partners, suppliers and/or improving work processes”. When asked to provide their views on the role of KM on organisational performance, a total of 22(21.78%) of the respondents believed that KM enhanced organisational performance. The 22 responses received comprised 13 (12.87%) Nedbank and 9 (8.91%) FNB responses. 19 (18.81%) of the respondents disagreed that KM enhanced organisational performance of whom 11 (10.89%) responses came from Nedbank participants and 8 (7.92%) were FNB participants. 18 (17.83%) of the respondents stated that organisational performance was enhanced by KM supported by business strategies. Of the 17.83%, 10(9.91%) responses were received from Nedbank and 8 (7.92%) responses were from FNB.

A total of 14 (13.86%) of the respondents viewed KM as a solution to business problems, of whom 8 (7.92%) were Nedbank respondents and 6 (5.94%) were FNB respondents. Out of the 12 (11.88%) respondents who felt KM enhanced customer relationships, 7 (6.93%) came from Nedbank and 5 (4.95%) were from FNB. 9 (8.91%) of the respondents said that KM improved work processes. Of the 9 (8.91%), 5 (4.95%) were Nedbank respondents and FNB had 4 (3.96%) respondents. There were views that KM enhanced product/services development as evidenced by 7 (6.93%) of the respondents, comprising 4 (3.96%) Nedbank respondents and 3 (2.97%) FNB respondents. The overall results (21.78%) show that KM played an important role in enhancing organisational performance. The results shown in Table 4.31 confirm the respondents’ views about KM.

Table 4.31 KM and organisational performance at selected banks (N=101)

Role of KM on organisational performance	Nedbank frequency	FNB frequency	Total number of respondents
KM enhances organisational performance	13(12.87%)	9(8.91%)	22(21.78%)
KM does not increase organisational performance	11(10.89%)	8(7.92%)	19(18.81%)
KM and other strategies are needed for organisational performance	10(9.91%)	8(7.92%)	18(17.83%)
KM addresses problems related to the business	8(7.92%)	6(5.94%)	14(13.86%)
KM enhances customer relationships	7(6.93%)	5(4.95%)	12(11.88%)
KM improves work processes	5(4.95%)	4(3.96%)	9(8.91%)
KM enhances product and services development	4(3.96%)	3(2.97%)	7(6.93%)
TOTAL	58(57.43%)	43(42.57%)	101(100%)

4.1.7.1 Knowledge work

Wiig (2004) views knowledge work as the use of personalised and codified knowledge to execute duties and responsibilities at work. Effective organisational performance is achieved through the use of personal knowledge, understanding and judgments. Workers on all levels –managers, experts, unskilled and skilled workers – are required to think independently to act effectively. The researcher followed up with a question to ascertain the role of knowledge work and 54 (53.46%) of the respondents stated that their bank required all categories of employees and managers to think independently and be highly productive in their workstations. Of the 53 (46%) responses received, the majority (30.69%) were received from Nedbank and 23 (22.77%) responses were received from FNB. A total of 40 (39.6%) responses were received, of whom 23 (22.77%) were Nedbank respondents and 17 (16.83%) were FNB respondents, who stated that knowledge was not key in their tasks. Of the 7(6.94%) respondents who stated that KM was partially important, 4(3.96%) responses were received from Nedbank and 3 (2.97%) were from FNB. The overall results (53.46%) supported knowledge work as important to the accomplishment of tasks in the selected banks. Figure 4.8 depicts the results.

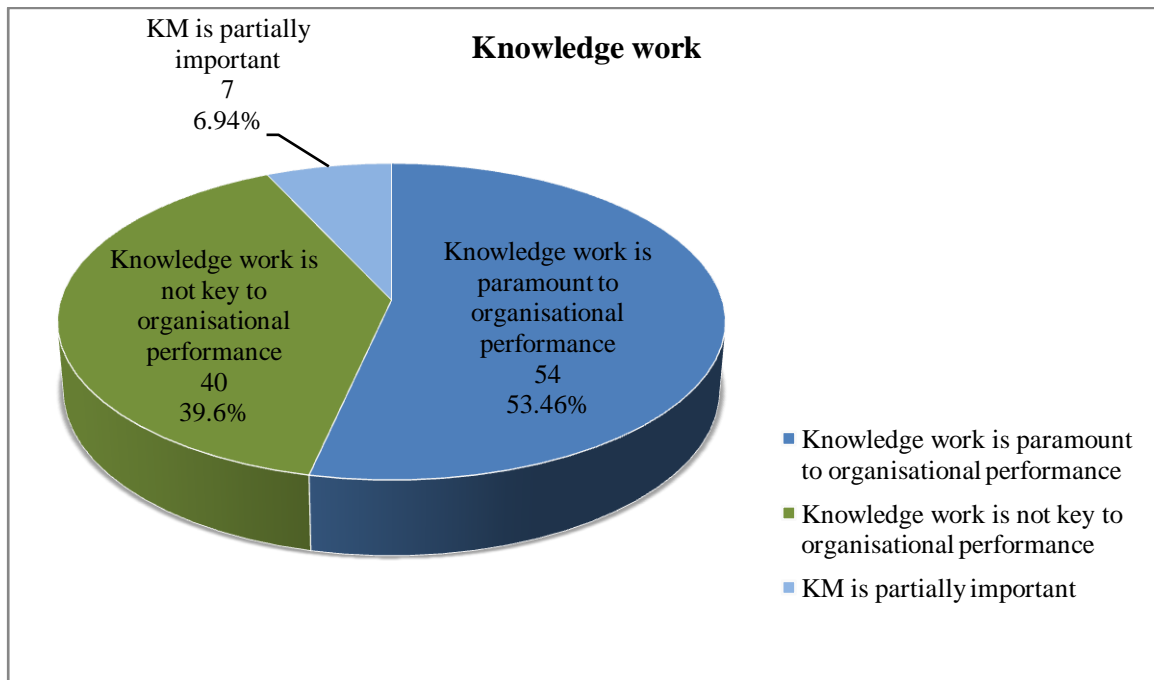


Figure 4.8 Knowledge work at selected banks (N=101)

4.1.7.2 Learning organisation

A learning organisation equips employees with operational knowledge which benefits the organisation if the knowledge is retained. Knowledge is closely linked to learning and, as such, a learning organisation is all about knowledge acquisition. Nonaka and Takeuchi's (1995) tacit knowledge transfer through the socialisation process is also closely linked to learning by imitation, copying and on-the-job training. Holbeche (2005) observes that learning organisations use learning as leverage to reach their goals and the resulting benefit of learning is the retention of key personnel to provide organisational knowledge. Asked to determine if knowledge was linked to learning, 51(50.5%) of the respondents who agreed comprised 29 (28.71%) respondents from Nedbank and 22 (21.79%) respondents from FNB. 28 (27.72%) of the participants stated that learning produced knowledge. Of the 28 responses received, 16 (15.84%) were Nedbank participants and 12 (11.88%) were FNB participants. A total of 22 (21.78%) felt that knowledge was not linked to learning, of whom 13 (12.87%) were Nedbank respondents and 9 (8.91%) were FNB respondents. The results (50.5%) shown in Figure 4.9 indicate that organisational knowledge was all about knowledge acquisition.

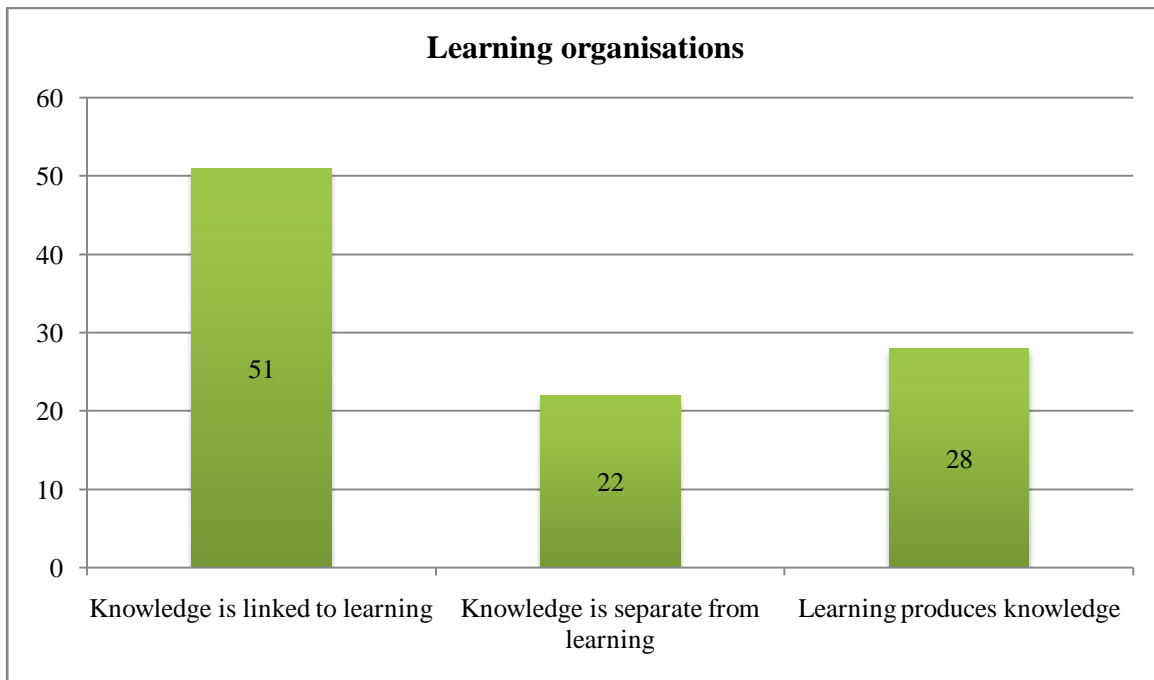


Figure 4.9 Learning organisations (N=101)

4.1.8 Risks of losing knowledge

Workforce attrition can cause organisational knowledge loss, and can negatively affect the operations and performance of the organisation. If the expertise of senior or experienced people is not shared or transferred to the next employee, the potential to innovate is eroded and the risk of unavoidable mistakes becoming a regular occurrence increases. Respondents were asked to give their views about the risks of losing organisational knowledge and 55 (54.45%) said that organisational knowledge loss was prevalent in their organisations and some departments failed to function properly because of loss of key staff. Of the 54.45% responses received, 32 (31.68%) respondents were from Nedbank and 23 (22.77%) respondents were from FNB. From a total of 42 (41.58%) respondents who said that the risk of losing organisation knowledge did not affect the operations and performance of the organisation, 24 (23.76%) responses came from Nedbank and 18 (17.82%) responses came from FNB. Only 4 (3.97%) of the respondents stated that the risk of knowledge loss was difficult to assess, therefore it was difficult to assess the impact of knowledge loss on task performance. The 4 responses comprised 3 (2.97%) responses from Nedbank and 1 (1%) response from FNB. The consensus (54.45%) from the respondents was that the risk of losing organisational knowledge was detrimental to the bank's operations and performance. Figure 4.10 illustrates the results.

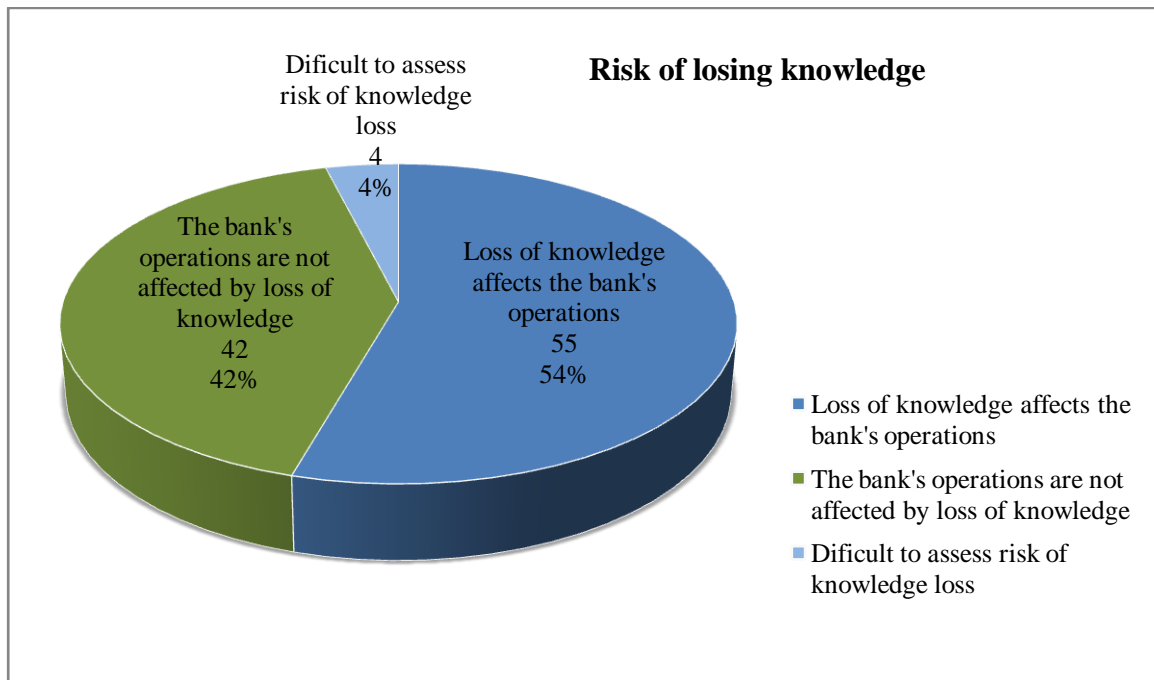


Figure 4.10 Risks of losing knowledge at selected banks (N=101)

4.1.9 Plans for capturing knowledge of experts leaving the selected banks

In this study, individuals at FNB and Nedbank were viewed as having been placed where they were because they had the knowledge and expertise to accomplish the given tasks. Respondents were asked to indicate if they were lateral thinkers or not. Asked to indicate how knowledge of experts would be captured, a total of 9 (8.91%) of the respondents stated that mentorship and apprenticeship programmes were ideal plans to capture knowledge of experts. Of the 8.91% of respondents, 5 (4.95%) respondents were from Nedbank and 4 (3.96%) respondents were from FNB. A total of 7 (6.93%) respondents who felt that experts could impart their knowledge through training and development programmes comprised 4 (3.96%) responses from Nedbank and 3 (2.97%) responses from FNB. 11 (10.89%) of the respondents said that coaching less experienced and junior employees would enable the bank to capture knowledge of experts leaving the bank. Of the 11, six (5.94%) were Nedbank respondents and 5 (4.95%) were FNB respondents. 15(14.85%) of the respondents felt experts could provide career guidance and counselling to less experienced and junior employees as a way of sharing knowledge. Out of the 15 (14.85%) the majority (8.91%) of the responses were from Nedbank and 5.94% were from FNB.

Succession planning was suggested as the best strategy to harness expert knowledge leaving the banks as evidenced by 20.79% of the respondents, of whom 12 (11.88%) were Nedbank respondents and 9 (8.91%) of the respondents were from FNB. Nine (8.91%) of the respondents

were of the opinion that expert knowledge could be captured if less experienced/junior employees worked in project teams led by experienced counterparts. The 9 (8.91%) comprised 5 (4.95%) respondents from Nedbank and 4 (3.96%) respondents from FNB. A total of 10 (9.9%) responses were received, of whom 6 (5.94%) were Nedbank respondents and 4 (3.96%) were FNB respondents, who believed that work-back contracts tie employees to the organisation for a certain period of time, thus providing the organisation with an opportunity to tap into the knowledge employees possess. Expert knowledge can be harnessed by introducing and awarding attractive rewards, salaries and benefits to attract and retain expert knowledge as pointed out by 13 (12.87%) of the respondents. Of the 12.87% respondents, Nedbank provided a higher response rate of 7.92% against FNB's response rate of 4.95%. Extending the retirement age of experts was an ideal plan for harnessing knowledge as suggested by 5.94% of the respondents. Both banks had a similar response rate (2.97%). The findings are reflected in Table 4.32.

Table 4.32 Capturing of expert knowledge leaving the selected banks (N=101)

Plans for capturing expert knowledge at selected banks	Nedbank frequency	FNB frequency	Total number of respondents
Mentorship and apprenticeship	5(4.95%)	4(3.96%)	9(8.91%)
Training and development	4(3.96%)	3(2.97%)	7(6.93%)
Coaching	6(5.94%)	5(4.95%)	11(10.89%)
Career guidance and counselling	9(8.91%)	6(5.94%)	15(14.85%)
Succession planning	12(11.88%)	9(8.91%)	21(20.79%)
Project management teams	5(4.95%)	4(3.96%)	9(8.91%)
Work-back contracts	6(5.94%)	4(3.96%)	10(9.9%)
Rewards/incentives schemes	8(7.92%)	5(4.95%)	13(12.87%)
Extension of retirement age	3(2.97%)	3(2.97%)	6(5.94%)
TOTAL	58(57.43%)	43(42.57%)	101(100%)

4.1.10 Strategies for safeguarding knowledge at selected banks

Organisations such banks can reduce the loss of knowledge if appropriate acquisition, retention, creation and sharing strategies such as communities of practice, mentoring and apprenticeship, subject matter experts, leveraging retirees and story-telling are adopted. Responses were envisaged from the participants to provide their opinions on which strategies were used in safeguarding knowledge in their banks. Of the responses received, 24 (23.76%) felt that communities of practice helped transfer knowledge from the experienced, skilled, talented old employees to the new employees. Out of the 24 responses received, 14 (13.86%) responses were

received from Nedbank and 10 (9.9%) responses were received from FNB. 19 (18.81%) respondents, of whom 11(10.89%) were from Nedbank and 8 (7.92%) were from FNB; felt that mentoring programmes were more prevalent in their banks. Mentorship allows senior or experienced managers to transfer their knowledge, wisdom, specific insights and skills to their juniors or less experienced colleagues within a short space of time. 29 (28.72%) of the respondents said subject matter experts played a crucial part in their organisations by demonstrating a mastery of a particular topic and impart their knowledge to less experienced colleagues. 17 (16.83%) and 12 (11.89%) respondents were received from Nedbank and FNB respectively.

The use of retirees as consultants who provide critical skills and experience to junior mentors was perceived as one of the strategies a bank can adopt, as evidenced by 17 (16.83%) of the participants. Of the 17 responses received, 9 (8.91%) respondents were from Nedbank and 8(7.92%) were from FNB. Poole and Sheehan (2009) are of the view that retirees should return to work as consultants because of their knowledge of the organisation. Holbeche (2005) believes that story-telling in an organisation maintains cohesion and provides guidelines for people to follow. A total of 12 (11.88%) responses were received comprising 7 (6.93%) respondents from Nedbank and 5 (4.95%) respondents from FNB claiming that story-telling was an effective strategy for safeguarding knowledge in their banks. The overall results show that the use of subject matter experts was the most favoured strategy for safeguarding knowledge as evidenced by 28.72% of the respondents. The results are shown in Table 4.33.

Table 4.33 Strategies for safeguarding knowledge at selected banks (N=101)

Strategies for safeguarding knowledge at selected banks	Nedbank frequency	FNB frequency	Total number of respondents
Communities of practice	14(13.86%)	10(9.9%)	24(23.76%)
Mentoring and apprenticeship	11(10.89%)	8(7.92%)	29(18.81%)
Subject matter experts	17(16.83%)	12(11.89%)	29(28.72%)
Leveraging retirees	9(8.91%)	8(7.92%)	17(16.83%)
Story-telling	7(6.93%)	5(4.95%)	12(11.88%)
TOTAL	58(57.43%)	43(42.57%)	101(100%)

4.1.11 Knowledge management solutions at selected banks

Knowledge sharing technologies can add great value to enterprises, especially when the tools are used as knowledge management enablers. Dewah (2011) posits that ICT tools provide an enabling platform for knowledge management in organisations. Respondents were asked to indicate KM systems/solutions available in the selected banks and 23 (22.77%) of the respondents stated that business intelligent tools such as customer relationship management (CRM) systems were present in their banks. Of the 23 responses received, the majority (12.87%) of the respondents were from Nedbank and 9.9% of the respondents were from FNB. 15 (14.85%) of the respondents felt their bank possessed knowledge sharing technologies. From the 15, 9 (8.91%) were Nedbank respondents and 6 (5.94%) were FNB respondents. A total of 45 (44.55%) responses received, 26(25.74%) Nedbank respondents and 19 (18.81%) FNB respondents stated that collaboration technologies designed to support virtual meetings such as subject expert repositories, wireless web services and e-mail management were prevalent in the selected banks. Of the 8 (7.93%) respondents who mentioned business process management tools, 5 (4.95%) responses were received from Nedbank and three (2.97%) responses were from FNB. 10 (9.9%) of the respondents stated that expert systems such as artificial intelligence (AI) existed in the selected banks. From the 10 responses received, 6 (5.94%) responses were received from Nedbank and 4 (3.96%) responses were received from FNB. The results (44.55%) show that collaboration technologies were widely used in the selected banks. Expert and knowledge-based systems provide the framework for handling the exchange and integration of knowledge from various sources (Barnes, 2002).The results are shown in Figure 4.11.

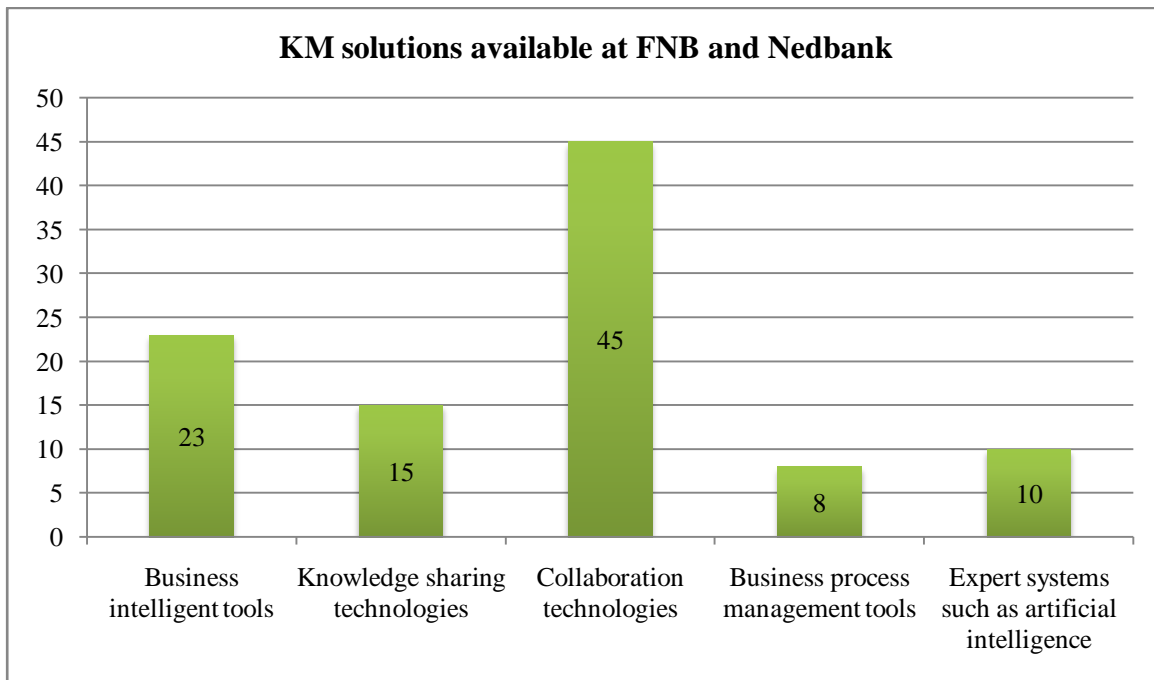


Figure 4.11 KM solutions available at selected banks (N=101)

Respondents were asked to describe how the KM solutions helped the selected banks. Banks use technology to process most of the transactions as evidenced by 61 (60.4%) of the respondents who confirmed that the huge volumes of transactions motivate banks to automate most of the bank's processes. Of the 60.4% responses received, the majority (34.65%) of the respondents were from Nedbank and a 25.74% response rate was received from FNB. 30 (29.7%) of the respondents felt that IT was strategically installed to curb fraud in the cumbersome banking processes, of whom 17 (16.83%) were Nedbank respondents and 12.87% were FNB respondents. A total of 10 (9.9%) of the respondents felt that banks have to flow with the IT trends. Of the 10 (9.9%), 6 (5.94%) responses were from Nedbank and 4 (3.96%) were FNB responses. The majority (60.4%) of the respondents favoured automated banking processes and the results are depicted in Figure 4.12.

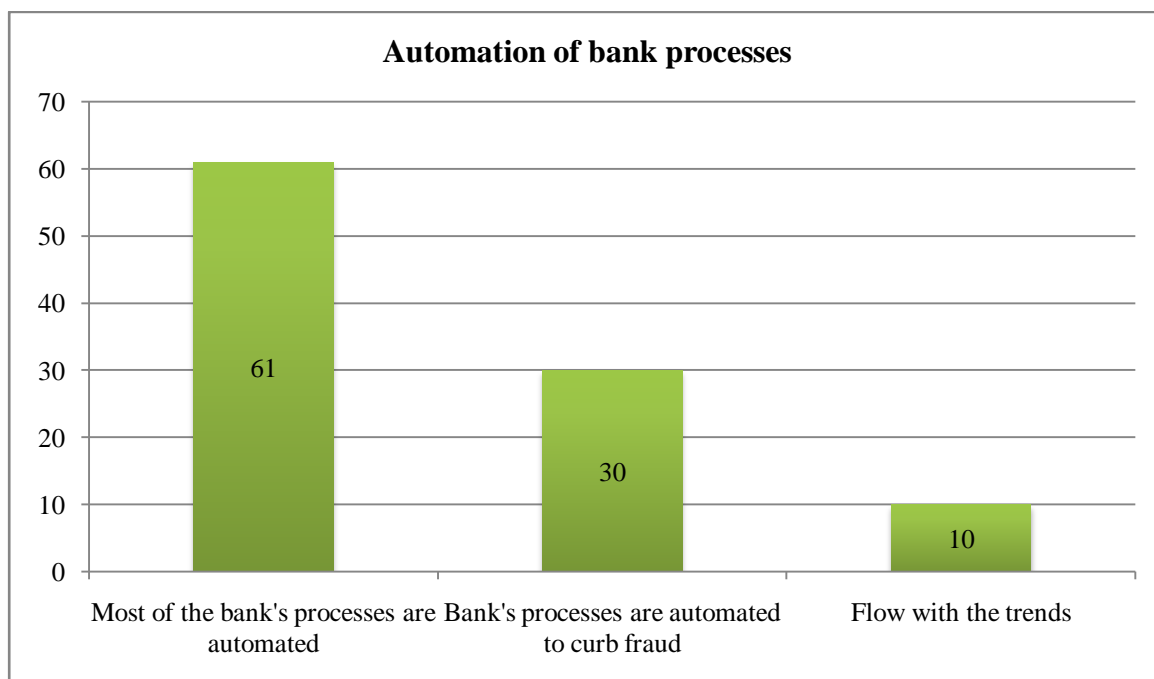


Figure 4.12 Automation of bank processes (N=101)

4.2 Qualitative findings

Qualitative findings will be presented in two sections, namely company records and interviews. Face-to-face interviews were conducted with purposively selected four managers who were not part of the survey. Before the commencement of each interview, the researcher ensured that the interview environment was conducive and that no interference was present. The interview questions were asked in a chronological order as illustrated in Appendix C. Two managers were selected from each bank and after the interviews the researcher was provided with two sets (one from each bank) of institutional documents as part of the data collection exercise. As pointed out, the names of the interviewees will not be published. Conducting interviews and reviewing company records produced important qualitative data to arrive at qualitative results.

The demographics of the interviewees comprised two males and two females. The interviews were conducted at FNB Bank City and Nedbank Head Offices respectively but on different dates and times in January 2014. The interviewees were classified as follows:

- Interviewee A: Director of Information Systems
- Interviewee B: Chief Information Officer
- Interviewee C: Group Human Resources Executive
- Interviewee D: Group Strategy and Planning Executive

4.2.1 Company records

To determine the need for and role of KM in South African banking industry one has to know what knowledge assets exist and bring out the gaps so as to find a solution that best fits the working environment of the banking industry. Knowledge assets were found in places like databases, filing cabinets, internet, intranet, extranets and peoples' heads. The company documents studied included the policies, FNB and Nedbank annual reports of 2011 and 2012, intranets, and archives for the origins of the two commercial banks.

4.2.1.1 Knowledge acquisition

The use of the intranet exposed staff to regular information in order to acquire as much new knowledge as possible. Consequently, some relevant knowledge was acquired through bulletins posted on the intranet, but the veracity of the relevance some of the knowledge needed to be proven beyond doubt. At the same time, knowledge, if considered as a part of knowledge assessment, its purpose would be for nurturing the knowledge asset. That involved the development and performance appraisal and evaluation of staff. That way it could be used to assess the readiness of banks for the knowledge economy. From reading the selected banks' documents, it was not clear if management of both banks formally considered knowledge as a strategic asset.

The banks' reports did not feature the KM concepts in their mission statements or core philosophies. However, the FNB self-study of 2011 revealed that KM principles were in fact resident within the Information Technology Department; this was also complemented by Nedbank's self-study of 2011 which stated that the Group Technology Shared Services (GTSS) was the custodian of knowledge practices. Both banks stated in their reports that the use of IT was the cornerstone of their successes. From this information it was clear that banks misconstrued IT to be knowledge, which was highlighted in the first chapter of this study: the dominance of IT has led organisations to believe and misconstrue IT to be knowledge. Table 4.3 showed that 51.48% of the respondents stated that the Director of Information Systems was the KM champion.

4.2.1.2 Knowledge sharing

Commercial banks in South Africa rely heavily on IT for their operations. FNB is regarded as being at the fore-front of innovative banking technology in South Africa (Moneyweb, 2012). Both FNB and Nedbank have a global presence on iTunes, U Blogs, and social networking with the use

of Facebook, Twitter, and YouTube, WhatsApp and Blackberry Messaging (BBM). It was evident that both banks encourage information flow and use of modern technologies such as the freely available Web 2.0 tools. In that environment the banks were also creating podcasts and tutorials for inclusion in the iTunes account in order to reach out to as many customers as possible. The use of Web 2.0 tools clearly demonstrated the intensity of rivalry and competition that existed in the banking environment. This was an effort by the banks to encourage customers to use the banking technology resources for knowledge transfer/sharing. However, an interesting revelation was that these technologies were created for customers but employees had limited access to the use of such (Moneyweb, 2012). Patrick and Dotsika (2007) view knowledge sharing as the social interaction that involves sharing of both the goal and the favourable outcome centred on problem solving. In that environment, after reading the banks' reports, it seems that FNB and Nedbank were not creating a level and fair knowledge sharing platform.

4.2.1.3 Knowledge retention

The process of keeping useful knowledge inside the banks and building of organizational memory (OM) was documented in the selected banks' reports. The use of institutional documents for the purposes of this study meant that FNB and Nedbank kept some knowledge assets. The archival records on Nedbank revealed the bank's history and how it came to be known as Nedbank (Nedbank, 2012). The researcher also discovered interesting information stored within FNB's records that it was one of the oldest (175 years old) banks. This knowledge was preserved and kept in very safe places to ensure knowledge retention. From institutional documents readily available, the researcher found that KM awareness was limited as there did not appear to be a documented inventory of the banks' skills base, or evident records of succession planning, even if the banks' annual reports suggested that there were career development practices (FNB, 2011 and Nedbank, 2012). In other words, it appeared that there was a limited knowledge retention culture at FNB and Nedbank. This would have made it possible to anticipate remedial action if there was a threat of loss of staff – and their tacit knowledge.

4.2.1.4 Knowledge organisation

In the context of FNB and Nedbank the information provision practices included the existence of archives that contained historical documents about the two banks. However, the historical documents were partially indexed, thus rendering the retrieval of un-indexed information very complicated. The few printed documents and artefacts available were indexed but did not make much sense to someone who did not have an understanding of knowledge management. The

existence of those archives signified that the concept of KM might possibly be understood at FNB and Nedbank, but it was not clear yet how to put the practices into use. Coincidentally, during document review, both banks used Metrofile-a filing and document management company established in 1983 due to growing demands for storage facilities in the commercial sector. Metrofile was the first company in South Africa to offer off-site storage solutions to businesses across the country, and Metrofile takes pride in the fact that it was and it is still at the forefront of the storage facilities industry. Record management as well as information management became an integral part of Metrofile's business offerings, and assisted the company in growing into the empire they are today (FNB, 2012 and Nedbank, 2012). This instance reflected a good place for managing the knowledge assets of both banks.

4.2.2 Interviews

A structured interview protocol (Appendix C) with open-ended questions was used in this study, based on the research questions. Before the actual interviews were conducted, the researcher explained to the participants the aim of the interviews. Participants from Nedbank were advised that all the interviews would be held in the main boardroom situated at Nedbank Head Office, in Rivonia Road, Sandton, whilst interviews with participants from FNB would be held at FNB Bank City in Johannesburg Central Business District (CBD). The researcher avoided the use of respondents' offices because of unforeseen disturbances that could emanate. The names or other personal details of participants were not recorded in order to assure, maintain and respect their anonymity. Additionally, none were quoted or identified specifically with any responses but only their ideas and opinions were recorded. The interview responses were used to better explore nuances in some of the patterns unfolding in the closed-ended data in the questionnaire. Recording of interviews would have provided exact responses and opinions of participants, but would still have entailed the researcher interpreting the recordings. Interview results are expressed in the sections that follow.

4.2.2.1 Understanding of the concept of knowledge management at selected banks

The first question was asked to extrapolate respondents' knowledge about the concept of knowledge management. Respondents who were clear about the distinction between knowledge and information, as well as between KM and information management, expressed that:

Interviewee A

KM has the, control of knowledge and information, and knowledge is used for competitive advantage. As such, when adopted and applied the whole business organisation, KM transforms the performance of the organisation.

Interviewee B

KM is different from information management; however the two are dependent on each other. Banks need information to create knowledge and in turn knowledge is needed to create information for informed decision-making.

Interviewee C

Knowledge management is the same as information management.

Interviewee D

Knowledge management is a strategic tool for competitive advantage. KM encompasses information technology, information and ICT tools.

Except for interviewee C, other respondents showed some understanding of the concept of knowledge management. Interviewee D gave a precise and relevant response that would have been expected of interviewee B, a senior executive working in the knowledge and information environment.

4.2.2.2 Organising knowledge as a strategic asset at selected banks

In the knowledge-based economy, managers focus on issues of knowledge capital over more traditional assets and on the capability of their organisations to harness these knowledge assets. The intense competition in the banking industry compels banks to embrace the knowledge management (KM) philosophy as a strategic asset central to product and process innovation, executive decision-making and organisational adaptation and renewal. Interviewees gave varying responses such as:

Interviewee A

Information management is a well understood in business circles and is mostly used and applied in many instances. The belief in our bank is that the use of information for decision

making is viewed as using knowledge. When organising information, employees and managers are of the view that they will be organising knowledge.

Interviewee B

As a relatively new concept, our bank has made progress in bringing awareness to its employees regarding the importance of knowledge and information. Knowledge is recognised as an important strategic asset, hence efforts to establish the office of the chief information officer.

Interviewee C

Knowledge is recognised as a strategic asset.

Interviewee D

With intense competition in the banking industry, our bank seeks to be at the forefront of product and services innovation. The bank is leveraging on tacit and explicit knowledge.

The overall response shows that knowledge is recognised and organised as a strategic asset. This is supported by Hyypia and Parjanen (2008:225) who posit that knowledge is the most valuable resource because it embodies intangible assets, routines and creative processes that are difficult to imitate.

4.2.2.3 Knowledge management policies at selected banks

If policies, procedures and processes of an organisation such as a bank are not properly documented, that presents an opportunity for losing knowledge. The researcher was interested to establish what policies and rewards/incentive systems were available with regards to re-using knowledge, preservation of knowledge, and assigning responsibilities to retain knowledge.

Interviewee A

The policy entails recalling retirees as consultants to mentor junior and less experienced employees. Oblivious to KM policies and systems, it should be noted security issues are a major priority in banks and employees cannot be allowed to expose private and confidential information of the bank.

Interviewee B

There is a policy of rewarding innovativeness.

Interviewee C

Retirees are recalled as consultants, knowledge is also extracted from archives-databases, intranet and other electronic records and document management systems.

Interviewee D

The bank's leadership is promoted within the ranks of the bank because of the employees' knowledge of the bank's culture and systems. All promoted employees receive salary increases and other incentives that make it difficult for them to leave the bank. This policy enables the bank to retain knowledge.

The four respondents agreed that there were rewards/incentives and policies in their banks. Recalling retirees as consultants was pointed out as one of the most common policies available in the selected banks, whilst incentives/rewards were awarded for innovativeness or promotion. Though efforts were developed to attract and retain knowledge, security concerns in the banks were a priority.

4.2.2.4 Knowledge management champions at selected banks

Appointing senior personnel to drive knowledge management initiatives enables an organisation to acquire, create, share and retain knowledge for re-use. The researcher acknowledged that some of the respondents were already occupying such positions and that was a commendable step in the right direction of KM adoption. The results were:

Interviewee A

This is dependent upon the structure of the bank. The director of information systems is the KM champion in our bank. However the Director of information systems reports to the Group Executive: Information Technology.

Interviewee B

The Chief Information Officer was championing KM initiatives in the bank.

Interviewee C

Currently the IT department is mandated to champion KM initiatives.

Interviewee D

The Chief Information Officer is the KM champion. There are plans to change the title of the knowledge champion to that of Chief Knowledge Officer in line with the importance and value attributable to knowledge management.

From the responses, both banks (FNB and Nedbank) have individuals championing KM initiatives. Responses from interviewee A and C suggest that the IT departmental heads are responsible for managing organisational knowledge, whilst responses from interviewee B and D are clear that the Chief Information Officer has been appointed to manage all KM initiatives which was in line with the suggestion by Cong and Pandya (2003) who are of the view that the appointment of CKOs or CIOs will enable an organisation adopt the KM philosophy.

4.2.2.5 Capturing knowledge of experts who are leaving the selected bank

The researcher wanted to establish how the selected banks captured the knowledge of experts leaving the banks and the responses were:

Interviewee A

There are mentorship programmes in our bank. The bank identifies potential leaders from a pool of junior but less experienced employees and then assigns a senior and experienced employee to mentor, coach and impart knowledge during project execution.

Interviewee B

Knowledge policies on knowledge acquisition, creation, sharing and retention are being established. Incentives and rewards are awarded to experts who are leaving the organisation and are prepared to impart knowledge to junior employees.

Interviewee C

Our bank has developed a culture of knowledge sharing through knowledge portals such as blogs, wiki, intranet and mentorship.

Interviewee D

There are no proper strategies in our bank but efforts to capture expert knowledge are done through employee exchange programmes, staff rotation, lateral transfers and training.

The responses received suggested varying opinions and there was no clear strategy except mentorship was the main strategy used to capture expert knowledge before it left the organisation. The other responses indicated that the loss of knowledge through experts leaving the banks was still a big concern for the selected banks.

4.2.2.6 Frequency of information sharing with people from other departments in the bank

The sharing of inter-departmental information was a prerogative of departmental heads. If information is not shared at the right time, one department may make wrong decisions using inaccurate information. Persistent and unplanned information sharing can lead to information overload which can be misinterpreted and used to make decisions; therefore, the frequency of information sharing was the main issue that was being investigated in this question. The respondents said that:

Interviewee A

Information is shared when there is a new product, service offering or new policy. Employees cannot discuss or share private and confidential information at any given time if the employees are not authorised to do so. Violation of bank policies on secrecy is dismissible.

Interviewee B

Information is shared daily because of the use of ICT tools available in the bank.

Interviewee C

There is no frequency of information (sharing) but employees use the intranet, internet and other interactive communication tools such as Blogs, Wikis, Facebook and Twitter to share information any time.

Interviewee D

It depends with the type of information at hand, can one department determine when, how to share the information. The sensitivity of the information determines the frequency of sharing. Most of the information is available on the intranet, bank bulletins and sensitive information is kept under lock and key and this is only shared amongst senior executives.

The answers pointed out that information was readily available to every department in the selected banks. Interviewee A pointed out those employees could not share or discuss business-related

issues without authority, lest this was regarded as violation of bank policies on secrecy. However, the response from interviewee D was very clear as to what type of information is readily available and can be shared easily, whilst sensitive information was a preserve of the senior executives. The overall results indicate that information is easily shared within departments at any time, but not between departments.

4.2.2.7 *The challenges of knowledge sharing with people from other departments in the bank*

Employees do not easily share information or knowledge with their peers due to a number of reasons best known to the employees. The respondents, being senior executives in their organisations, highlighted that:

Interviewee A

Banks have strict privacy and confidentiality policies in places and violation of such is a dismissible offence. With such policies, employees cannot freely discuss issues happening in their departments with their peers in other departments.

Interviewee B

The organisational structure of the bank is bureaucratic and that does not allow departments to share knowledge. In fact departments have structured to operate independently.

Interviewee C

Stiff competition between departments inhibits knowledge sharing.

Interview D

There are no KM policies for knowledge sharing and employees do not see the value of sharing the knowledge.

The results show that mistrust, lack of KM policies, competition and bureaucratic organisational structure were the major challenges that inhibited knowledge sharing between employees in other departments of the bank. Strict bank policies on privacy and confidentiality were highlighted as big challenges which impeded knowledge sharing. Nonaka and Konno (1998) state that knowledge is shared within a contextualised space called *ba*, meaning ‘place’; this designates a specific time and place where interactions between individuals take place. Banks are not creating platforms for knowledge creation.

4.2.2.8 Respondents' suggestions/recommendations to management of the selected banks

At the end of the questionnaire and the interview protocol the respondents were asked to make some suggestions, recommendations or comments regarding knowledge management in the selected banks under investigation. A summary of respondents' suggestions is hereby presented.

Respondents suggested that there is need for each of the two banks' management to first acknowledge that knowledge management is crucial, set up a section and appoint a CKO to deal with knowledge management.

Respondents suggested that there is need to acquire state of the art knowledge management systems and ICTs to improve knowledge acquisition, sharing and retention. Respondents recommended that their banks broaden the use of the internet and intranet services to facilitate access to knowledge and encourage knowledge exchange. They also suggested that their banks should facilitate the increase of formal and informal group interactions and discussions through email, team building sessions and lateral employee transfers to encourage knowledge sharing.

It was also suggested that the banks need to establish strategies for leveraging expert knowledge before it leaves the bank. This, it was suggested, could be achieved by developing highly computerised recording and archiving systems to enable storage, retrieval and accessibility of knowledge by every employee. It was recommended that knowledge should be readily accessed through the creation of a database of documents. Respondents suggested hiring of experts, retirees and other specialists to train junior staff, provide coaching and mentoring services for a reward so that knowledge will be captured and retained in the public banks. Retirees may be recalled when need arises. Respondents suggested that the banks should draft KM policies to allow the use of experts to mentor new employees; retirees to do consultancy work and be recalled to assist when the need arises. Deliberate policies should be established to encourage knowledge sharing.

Respondents charged that there must be manager-subordinates openness, frequent meetings, formal and informal gatherings, training, refresher courses, seminars, workshops, and joint interaction with managers outside the working environment to improve socialisation, externalisation, combination and internalisation of knowledge sharing. It was also suggested that holding more seminars, training and workshops for knowledge dissemination so that when the knowledgeable experts leave the selected banks, those who remain will still remain with operational knowledge.

Respondents suggested that the selected banks may give incentives, rewards to the experienced, skilled and talented employees to gain staff co-operation, motivate and encourage them to share knowledge and mentor other employees. They also suggested that the two selected banks should create a supportive knowledge sharing environment to ensure that knowledge is retained in databases, libraries and technical training manuals. Respondents implored the managers of the two selected banks to promote and encourage trust between workers. Respondents encouraged the selected banks to join with other regional and international banks in exchange programmes so as to exchange knowledge and embrace aspects of advanced technology in other countries.

4.3 Chapter Summary

This chapter dealt with the presentation of the data collected from the two categories of managers at FNB and Nedbank. A summary of the major findings was organized according to the themes raised by the research questions of the study. The results presented in this chapter, emanated from questionnaires, document review and interview findings. In reporting the questionnaire findings, the use of Microsoft Excel 2010 enabled the presentation of results in graphical and tabular forms. The first section of the chapter focused on quantitative findings whilst the second section focused on document analysis followed by a presentation of interview findings. An interview protocol was used to collect data from a sample of purposively selected managers. Whenever appropriate, the actual words of interview participants were used to emphasize or express certain ideas as they were said. The main trends and patterns in the data were discussed with reference to the research questions outlined in section 1.9 of Chapter One. Chapter Five analyses and interprets the data that were presented in this chapter.

CHAPTER FIVE: ANALYSIS AND INTERPRETATION OF RESULTS

I keep six honest serving-men (They taught me all I knew): Their names are What, Why, When, How, Where and Who (Kipling 1902:87) cited in Ngulube (2003).

5.0 Introduction

The previous chapter provided data about the units of analysis being studied. In this chapter an analysis and interpretation of the study's results will be discussed. As a typical descriptive study, the results can only describe the "who, what, when, where and how" of the situation, not what caused it (Ngulube, 2003:282). In that regard, one of Kipling's (1903:87) "honest serving men", namely "why" cited in Ngulube (2003:282) was ignored in the interpretation of results of the present study. This chapter shows us what the units of analysis shared in common, and what made them distinctive from one another. According Neuman (2006:473), Ngulube (2003) and Mavodza and Ngulube (2011) the discussion chapter should be separated from the results so that readers can examine the data and arrive at their own interpretations.

The findings are presented according to the themes of the objectives of the study highlighted in section 1.8 of Chapter One. The general purpose of this study was to investigate the role of KM in enhancing organisational performance in selected banks of South Africa, namely FNB and Nedbank. The study also sought to investigate and recommend KM practices and strategies that could be adopted by selected banks in South Africa to create, capture and retain knowledge as a competitive advantage and for future use. The specific objectives were to:

- assess the level of understanding of KM at selected banks;
- investigate the knowledge management policies present in the selected banks;
- investigate the extent to which banks have implemented KM practices such as knowledge creation, sharing and retention through the assessment of existing KM enablers;
- investigate the role of KM enablers in the implementation of KM strategies in selected banks;
- establish the factors inhibiting knowledge acquisition, creation, sharing and retention in selected banks;
- determine the KM strategies of safeguarding knowledge in selected banks;

- assess KM systems and solutions in selected banks; and
- make recommendations to management on how to improve knowledge management.

5.1 Data analysis

Wilson (2000:77) states that the role of analysis is to bring data together in a meaningful way and enable the researcher to interpret or make sense of the data. The discussion of salient points is based on the questionnaire analysis and interviews with the respondents from the selected banks and the review of literature related to the role of knowledge management in enhancing organisational performance. After data were cleaned, that is, “reviewed for valid responses, methodological soundness, and indicators of variability and range” (Greene, 2007:144), they were reduced to more descriptive information. According to Bazeley (2009), integration during analysis is the key to unfolding the complex relationships in the topic of study. Woolley (2009:7) suggests that:

Quantitative and qualitative components can be considered “integrated” to the extent that these components are explicitly related to each other within a single study and in such a way as to be mutually illuminating, thereby producing findings that are greater than the sum of parts. While transformed quantitative and qualitative data were integrated and compared, Onwuegbuzie and Leech (2006) emphasize the importance of linking research questions to data analysis in order for the results to make sense.

5.1.1 Data consolidation

The data in this study came from the questionnaire, institutional documents, and interviews, therefore the researcher felt it was important to consolidate them if meaningful interpretations were to be made (Greene, 2007). By consolidating various pieces of data, a holistic overview of the research findings enhanced the meaning and interpretation of data. The researcher was aware that triangulating multiple data sources could result in convergent, inconsistent, and contradictory evidence (Mathison, 1988:13).

5.1.2 Data combination and integration: qualitative and quantitative results

The researcher compared and contrasted the differences and similarities between qualitative and quantitative as suggested by Greene (2007). After data comparison, the researcher integrated data

to address the research questions. The integration enhanced the depth and clarity of research findings. This combination of approaches was necessary because of the wide range of data needed to discover and develop suggestions for KM practice in the selected banks. It was highlighted in section 3.2.4 of Chapter Three of the study, that a quantitative paradigm was the dominant data collection strategy in the study with a small component of the overall study being drawn from the qualitative paradigm (dominant-less dominant design). To ensure triangulation had been achieved, the researcher integrated qualitative and quantitative data. The integration also affirmed the reliability and validity of the data collected.

5.2 Interpretation of findings

Banks' failure to establish KM systems and appoint knowledge management champions motivated this study. In addition to failure to establish KM systems and platforms, many people misconstrued KM to be IT thus impeding KM initiatives in selected banks. Being a highly competitive industry, South African banks are compelled to shift their focus from products to knowledge and value added services, knowledge creating and knowledge utilising activities. However, no documented study or survey at selected banks had investigated why that was so and what needed to be done to improve it. The literature review revealed that there were knowledge management theories that had not comprehensively articulated the impact of the current knowledge management practices in selected banks. Examples were the resource-based theory, the adaptive structuration theory and the organisational conversion discussed in section 2.5 of Chapter Two.

The fact that questionnaire respondents were all FNB and Nedbank employees, had working computers, were using a network that was never out of order during the time of this research, and had bank e-mail addresses may have led one to believe that the response rate of the questionnaire would be much higher than 55%. This was not a correct assumption because some of the participants did not respond. The researcher noted that all interviewees were very helpful and keen to give as much information as possible, allowing more insight to be provided about certain practices that were relevant to the topic of the study. The researcher believed that face-to-face communication was more effective than an online survey because of the participants' positive in the data collection stage.

The map of research literature created in Chapter Two, Figure 2.1 was a handy guide that demonstrated that knowledge management was relevant to banking situations. A look at KM theories helped understand how and where their frameworks are applicable in an environment that recognises KM as a possible significant way of enhancing organisational performance. With the data obtained, interpretation happened around the KM concepts of knowledge capture and retention, acquisition, classification/organization, creation, and sharing as they applied to selected banks because they were the basis for the research objectives and questions. In the next section KM theories that were used in this study will be presented.

5.3 Theories of knowledge management

Theories give researchers different perspectives through which to look at complex aspects and social issues, focusing their attention on different aspects of the data and providing a framework within which to conduct their analysis. The quoted KM theories that informed this study include: resource-based, adaptive structuration and organisational conversion theories. Nonaka and Takeuchi's (1995) organisational knowledge conversion theory is a well-known theory of knowledge management. Nonaka and Takeuchi's (1995) organisational knowledge conversion and Giddens' (1979&1984) adaptive structuration theories complemented each other in providing the theoretical framework for the research model. To make meaning of the findings in this study both theories were used for organising and analysing the vast amount of information collected through the respondents' questionnaires, interview narratives and the researcher's document reviews.

5.3.1 The adaptive structuration theory

The Adaptive Structuration theory is attributed to Giddens (1979& 1984). It describes the interaction of human groups and organisations with information technology utilization (Sedera and Zakaria, 2008). This theory was partially relevant in that it focused on the behaviour of humans as they interacted with technology. Human capital was identified as one of the KM enablers in the selected banks. The selected banks now rely on the use of information and communication technologies for communication, information and knowledge acquisition, creation, sharing and retention. The study established that most of processes and transactions were automated and that each employee had access to a computer. Employees were using these computers to store knowledge in the form of documents and databases. In cases where the computers were networked employees could share knowledge, thus improving on efficiency and work. The study established that there was group interaction with technology since all employees

use computers, internet, intranet, groupware, videoconferencing, and mobile phones for communication. The adaptive structuration theory was applicable in this study because selected banks' employees were constantly interacting/using ICT to accomplish tasks. The AST caters for the technology such as computers that have been embraced by many organizations as enablers of knowledge management. The organizational knowledge conversion theory covers both tacit and explicit knowledge conversion from one form to another in the popularized SECI model. Knowledge is retained in the organization through these four activities which are discussed in the next section.

5.3.2 Organizational knowledge conversion theory/SECI Model

The organizational knowledge conversion rests on the premise that knowledge is converted from one state to another (Nonaka and Takeuchi, 1995) and in that way critical knowledge can be retained in the organisation either by sharing it or preserving it in the archives, thus forming part of the organisational memory. Organizational knowledge conversion deals with the conversion of knowledge from tacit to tacit (socialization), from tacit to explicit (externalization), from explicit to tacit (internalization) and from explicit to explicit (combination).

Socialization: this is the process of sharing knowledge between the experts, mentors and retirees from whom juniors and new entrants at work can learn and in the process create tacit knowledge such as technical skills that may be obtained through observation, imitation and practice (Nonaka and Takeuchi, 1995). In the selected banks, socialisation (originating *ba*) occurred when banking employees came in direct physical face-to-face experiences with banking clients. Much of the interaction was in the banking halls specifically with tellers and enquiries counters. The selected banks also supported the use of technology by providing personal computers for their customers with online access, as well as guidance on the effective use of technology and resources. It was where the knowledge creation process could be viewed as beginning. In that sense it was a technique for knowledge retention or capture. It was, therefore, important for selected banks to find a way of collaborating KM initiatives with other departments. Sharing of tacit knowledge also manifested itself in the card and IT divisions of the selected banks. The study also established that tacit knowledge was transferred to fellow employees in the Card Division regarding trends in credit card payment industry, asset finance and personal loans. Through emails, intranet, electronic bulletin boards, training and brainstorming activities tacit knowledge was transferred from one employee to other employees. Computer technology makes it possible for the organisational knowledge to be spread across the entire organisation (Nemani, 2010).

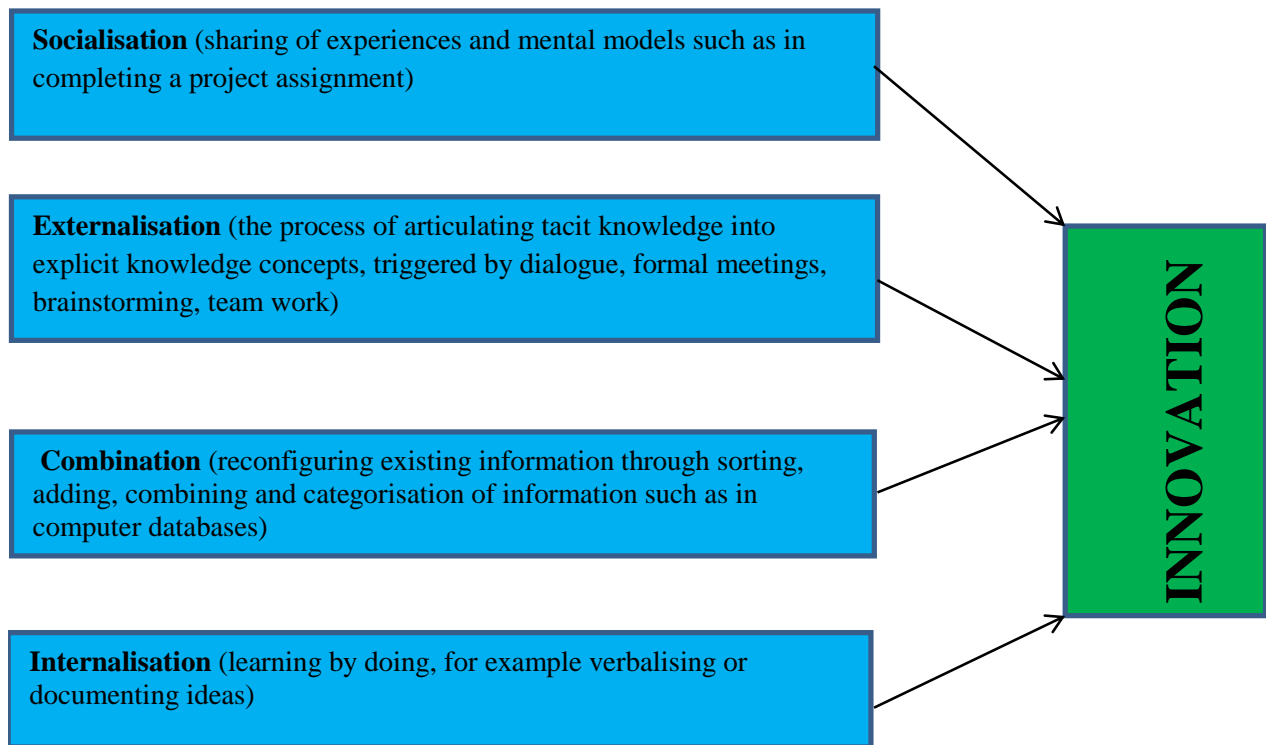
Externalisation: this is the process of articulating tacit knowledge in the form of explicit concepts such as metaphors and analogies (Nonaka and Takeuchi, 1995). The study established that selected banks used automated processes as well as manual systems to externalise tacit knowledge into paper records (organisational memory and archival repositories) that are accessed by the employees for use (codification). Externalisation (interacting *ba* explained in section 2.5.4.2 of Chapter Two) in the selected banks was expressed through the building and management of a collection of knowledge that came in a variety of formats and their associated technologies. This required creative teams with different specialisations triggered by dialogue, regular formal meetings, brainstorming sessions (*dashi kai*), and continued monitoring of problem areas, that is, success through interaction and dialoguing. During the course of this study, it was established that the websites of selected banks were user-friendly and informative. The combination mode (cyber *ba* explained in section 2.5.4.3 of Chapter Two) was expressed by selected banks' attempts to anticipate user needs. This was augmented by selected banks' IT departments' development of interactive communication channels aimed at improving customer relationships which were facilitated by the use of information technologies.

Combination: this is the process of combining bodies of explicit knowledge. In combination explicit knowledge is systemised and refined, for example, utilising information and communication technologies and databases (Nonaka and Takeuchi, 1995; Lwoga, Ngulube and Stilwell, 2010). In the selected banks explicit knowledge was transferred through e-mail, documents, meetings and conversations, and such knowledge led to the generation of new knowledge (Nonaka and Takeuchi, 1995). Because of strict policies on security, employees in selected banks shared their explicit knowledge with fellow professionals during departmental and general meetings, through business cell phones and via e-mails.

Internalisation: is the process of converting explicit knowledge to tacit knowledge and is closely related to learning by doing (Nonaka and Takeuchi, 1995). In this study, archives and procedure manuals were identified as sources of technical knowledge that were acquired by employees and then used to solve some work-related problems. The Card Divisions of selected banks referred to merchant profiles to determine the levels of fraudulent transactions and other queries. Although the organisational knowledge conversion theory was appropriate for this study, some limitations were identified. In their theory Nonaka and Takeuchi (1995) do not mention the role of ICTs as enablers in knowledge management. Internalisation (internalising *ba* explained in section 2.5.4.4

of Chapter Two) occurred when bank employees and management acquired experience from the work they did in the bank and documented this as user manuals, guides and procedure manuals. Innovation by bank staff who worked in a modern information environment was subsequently reflected in the enhanced quality of service and innovative products provided- reference is specifically made to the innovative technologies in the selected banks. The SECI process which culminates in innovation is demonstrated in Figure 5.1.

Figure 5.1 Innovation in the selected banks' performance



Source: (Daud, Rahim and Alimun, 2008:76)

5.4 Patterns of data for each research objective

The survey questionnaire, document reviews and interviews that were carried out confirmed that the selected banks were deeply committed to implementing knowledge management practices and strategies to acquire, create, share and retain knowledge for current and future use. The evidence provided in Table 4.33 shows that communities of practice, subject matter experts, leveraging retirees and mentoring were among the top priority strategies for safe guarding knowledge in the selected banks. Despite this evidence of interest to adopt KM and safeguard the loss of knowledge

in the selected banks, the research identified indicators that point to KM challenges facing banks in South Africa which are discussed in the ensuing sections.

The characteristics of research participants did not form part of the research study objectives but it was worth noting that both FNB and Nedbank had more white male managers in their ranks as evidenced by results (20.79%) shown in Table 4.3. In addition, the results in Table 4.3 showed that an equal number of African managers (23.76%) and Indian managers (23.76%) were employed in selected banks. Age was considered to classify the respondents and, as shown in Table 4.3, a total of 23 (22.77%) of the managers were between 25-35 years, 33(32.67%) were between 36-45 years and the majority (44.55%) were above 45 years.

5.4.1 Understanding of knowledge management at the selected banks

The collection of data proceeded after respondents' indication of their understanding of the concept of knowledge management. Had this understanding not been confirmed, it would have been difficult to proceed with the study. Though there was no specific level/rate of understanding that could be stated, the evidence provided in Figure 4.1 shows that knowledge management was generally understood at Nedbank as evidenced by 49.5% of the respondents who agreed. During the interviews it was clear that knowledge management was not well known in the selected banks because respondents revealed that knowledge management was a new field which envisaged proper training and education to employees and managers. The understanding of knowledge management depends on the programmes put in place to educate and bring awareness to employees on the importance of knowledge management. This is consistent with the findings of Nguyen, Neck and Nguyen (2009) that KM can be the deciding factor if leadership takes responsibility in how knowledge is created, retained, shared, stored, recognised or retrieved in the organisation.

5.4.2 Distinguishing knowledge management from information management at the selected banks

Understanding of and distinguishing knowledge from information management might positively influence the adoption of knowledge management in the selected banks where staff start recognising and treating knowledge as a strategic business asset. Results shown in Figure 4.2 indicate that 60.39% of the respondents were able to distinguish knowledge management from information management, which is consistent with Abraham (1999) whose view is that information is a tangible representation of data, usually in some end-user-oriented product like a

car, book, or article, while knowledge management is information in context of an individual's role, learning behaviour or experience. The results in Figure 4.2 showed that 18.82% of the respondents used knowledge management and information interchangeably, which aptly affirms that KM training/educational programmes were not addressing the differences between the two concepts.

Knowledge management was regarded as a subset of information by 20.79% of the respondents which could better be explained by the fact that the field was relatively new or that the awareness of KM in the selected banks was not widely spread. Nguyen, Neck and Nguyen (2009) state that leadership needs to take responsibility in knowledge management initiatives. By taking initiatives, this entails development of education, training, communication, policies or workshops for discussing knowledge management issues. Results shown in Table 4.6 and Table 4.7 indicate that more responses were received from Nedbank in line with factors highlighted in section 4.1 of Chapter Four.

5.4.3 Categories of knowledge available at the selected banks

To show a further level of understanding, it was important to establish which category of knowledge was present and important in the selected banks. Thirty (29.7%) of respondents from Nedbank indicated that tacit knowledge was present in their bank whilst 22 (21.79%) of the FNB respondents concurred with their counterparts from Nedbank, showing an overall 51.49% of respondents as shown in Figure 4.3. The results (51.49%) are consistent with Tiwana (2008) and Nonaka and Takeuchi (1995) whose view is that tacit knowledge is a more important type of knowledge that exists in an organisation because it can be put to action and used in innovation and creative practices, thus adding value to goods and services. Fombad (2009) concurs with Tiwana (2008) and Nonaka and Takeuchi (1995) that tacit knowledge is generally of a higher value than explicit knowledge because of its fast-changing nature, since it can determine to what extent companies will be competitive in a turbulent market. Though it has been argued by Nonaka and Takeuchi (1995), Tiwana (2008) and Fombad (2009) that tacit knowledge is more important, organisations need both tacit and explicit knowledge for competitive advantage as shown by 34.65% of the respondents. The need for both tacit and explicit knowledge is consistent with Stafford and Mearns (2009) who are of the view that organisational knowledge is both explicit and tacit. In this information era, one can imagine a situation where an organisation such as a bank does not have routine records, electronic archival systems (databases), e-mails and policies on the

banks' intranets (websites). That would result in massive fraudulent activities and the banking services would be rendered valueless; therefore, both tacit and explicit knowledge are needed in a bank as they complement each other.

Though the results showed that tacit knowledge was the more prevalent type of knowledge in the selected banks, it should be noted that explicit knowledge was present and was transmitted to individuals formally and systematically as noted by Takeuchi and Nonaka (2004). It was established during data collection that explicit knowledge was codified and e-mails, intranets, interactive communication channels (Short Messages Services (SMS)) were used to transmit explicit knowledge at selected banks. It could be that 51.49% of respondents who stated that tacit knowledge was more prevalent in their bank could actually have been referring to both types of knowledge if the findings of Nonaka and Takeuchi (2004) were considered. In this study, this was an example of the inaccuracy of the assumption that participants could distinguish between the two categories of knowledge.

5.4.4 Knowledge management policies at the selected banks

The creation of knowledge is likely to happen if there are policies and procedures that enable it (Jain, 2007; Stankosky, 2005). Wen (2005), Sharma and Chowdhury (2007) and Weddell (2008) suggest that the existence or absence of a reward and/or incentives system can encourage or discourage individuals to contribute towards knowledge creation.

The findings (27.73%) as shown in Table 4.10 indicate that Nedbank has put in place knowledge management policies whilst 19.79% of FNB respondents as shown in Table 4.13 indicated that FNB has put in place knowledge management policies. Though the results presented in Table 4.10 show that 27.73% responses confirmed the existence of KM policies and incentive systems in the selected banks and these results (19.79%) are presented in Table 4.13, this does not confirm whether there were *de facto* policies or written policies. During data collection, it was not possible to establish if the policies were *de facto* or written policies. However, Ngulube (2003:286) states that the problem with *de facto* policies is that they tend to be conservative and uphold the *status quo* rather than provide “public intent of transforming practice according to ideal values”. Codified and stipulated or prescriptive policies facilitate a creative allocation of funds and staff, and specify other aspects of implementation and monitoring (Ngulube, 2003:286).

If there were no policies in place (such as risk and security) employees would easily share private and confidential information that would expose their bank to risk or competitors would access information and strategies for their competitive advantage. From a security and risk perspective, it is highly appreciated that banking policies on risk and security preserve organisational knowledge. Irrespective of different response rates between Nedbank and FNB, the consensus was that knowledge management policies were in place. Nine (8.91% of the respondents from Nedbank indicated that rewards and incentives schemes were in place, which was disputed by 31 (30.69%) of the respondents from FNB who stated that rewards and incentives were not considered as stimulants for knowledge management. Thirty-two (31.68%) of the respondents from FNB then suggested the introduction of rewards and incentives, a suggestion which was also echoed by 41.58% of the respondents at Nedbank. Respondents from the selected banks indicated that rewards and incentives were a strategy to force employees to work hard as evidenced by seven (6.94%) of respondents from Nedbank and five (4.95%) of the respondents from FNB which is in line with what was suggested by Sharma and Chowdhury (2007) and Weddell (2008) that the existence of rewards and incentives will act as stimulants for knowledge creation.

5.4.4.1 Importance of written knowledge management policies

Ngulube (2003:286) states that written policies serve as binding contracts between individuals, the organisation and the stakeholders. Written policies help to set standards and can also be used as tools for staff motivation to create, share and retain knowledge. A study by Wamundila and Ngulube (2011) carried out at the University of Zambia (UNZA) discovered that 17 (13.7%) of the 124 respondents mentioned the availability of teaching practice manuals. Mention of manuals for functions such as consultancy, recruitment and training of staff was limited. Thus, the survey findings revealed that none of the known documented processes, policies, work manuals and procedures covered core academic functions such as curriculum development, research and academic citizenship. “The state of affairs at UNZA with regard to records, policies and documentation management reflected an institution in dire need of business process reengineering”. Considering the number of specialised units and tasks available at UNZA, the existing documented processes, policies, work manuals and procedures were not sufficiently representative of what could, potentially, be documented, thus seriously breaching the principles of knowledge retention (Wamundila and Ngulube, 2011).

As shown in Table 4.16, forty-eight (47.52%) respondents acknowledged the presence of KM policies and incentive systems in their organisation, while 42 (41.58%) pointed out that their organisations did not have KM policies and procedures. These results show that KM policies and incentives systems have not received the attention they deserve. The importance of documented processes, policies, work manuals and procedures is in line with the advocacy for the creation of knowledge repositories for operational benefit by Kruse (2003) and Rothwell (2004). When there are strict and stringent security conditions in place, employees develop fear and are likely to misinterpret knowledge management policies. Incentives and rewards are given to employees in exceptional cases of innovation. In the event that an employee has a dispute related to incentives, one does not have a recourse or point of reference because the incentives or rewards are not documented. Work is still underway to formally recognise and create knowledge management departments (centres of memory) and to determine what functions will be performed and at what level. The researcher of the current study is optimistic that knowledge management policies and incentive schemes could be developed soon relative to the fast pace of the information and knowledge economy. Some informants indicated that they were either actively formulating them or were planning to start the process in their banks.

5.4.5 Knowledge management champions at the selected banks

The appointment of knowledge management champions in organisations has become important because KM champions drive knowledge management initiatives, policies and programmes that enable an organisation acquire, create, share or retain knowledge. Squier and Synman (2004) indicated that financial institutions were either still to appoint a CKO or the CKO was already in place. This study identified five knowledge champions, namely: the Director of Information Systems, Chief Knowledge Officer, Best Practice Manager, Chief Information Officer and Knowledge managers. Highlighting the distinct titles was done to enable participants understand or know what was meant by the term 'knowledge management champions'. Had this highlighting not been done, participants would have been confused and failed to provide responses to the questions.

The results (51.48%) shown in Table 4.17 indicate that the Director of Information Systems was referred to as the knowledge management champion in the selected banks, which could best be explained by the fact that knowledge management initiatives were managed under the ambit of the information technology (IT) departments of many organisations. In the introductory chapter of

this study, it was pointed out that people misconstrue IT to be KM and vice-versa. In section 2.11 of Chapter Two it was pointed out that IT was an enabler of KM. Though respondents provided opinions and views about who they thought KM champions were, the results shown in Table 4.17 indicate some gaps about who should manage organisational knowledge; leadership has a responsibility to appoint knowledge management champions to develop organisation-wide KM policies, awareness, strategies and practices.

Organisations that are appointing KM champions have recognised that knowledge is a strategic asset (Nonaka and Teece, 2001) which enables organisations achieve competitive advantage and long term performance. In a knowledge-based economy, knowledge is the most critical element that determines the success of an industrial undertaking (Nghah and Ibrahim, 2008), which is consistent with the resource-based theory.

5.4.6 Knowledge management practices at the selected banks

Organisations such as banks are encouraged to increase investment and put more effort into ensuring that information and knowledge available in databases, patents, trade secrets or tacit knowledge is fully utilised and transferred into products and services that give value to the organisation (Singh, 2007:177). King and Marks (2008) state that an organisation should create a dynamic knowledge capability where knowledge is acquired, created, shared and retained to improve business processes, practices, products and relationships. Knowledge acquisition appeared to be a sub-set of knowledge capture because the knowledge acquired at the selected banks came from such sources as individuals and their colleagues, intranet, internet, documents and databases. The primary findings from questionnaire, interviews, and institutional documents demonstrated this. The use of knowledge “expert systems” (Koenig and Srikantaiah, 2000) was suggested as a way that knowledge acquisition could be done by an organisation to achieve the gradual tapping of knowledge existing in the heads of experts while it was still useful. When discussing issues related to knowledge acquisition, it is important to bear in mind that a vast amount of knowledge is in the heads of experts (Rao, 2004).

Though the overall response rate of 42.57% of FNB respondents was lower than the Nedbank response rate (57.43%), the study was poised to extrapolate opinions and views from research participants to achieve the purpose of this study. A total of 35.65% of Nedbank respondents compared to 26.73% of respondents from FNB stated that knowledge was relevant for a limited

period of time. The willingness and ability of a recipient to acquire and use knowledge are crucial elements (Alavi and Leidner, 2001; Gupta and Govindarajan, 2000). Interviews and survey responses showed that employees did not freely interact or learn from others. As soon as knowledge becomes available in the organisation or to the individual, it should be used immediately otherwise it becomes irrelevant as suggested by Kulkarni, Ravindran and Freeze (2006).

It was established that information use led to knowledge creation as evidenced by 28.71% of the respondents from Nedbank and 20.79% of respondents from FNB, an indication that respondents were able to distinguish information from knowledge. Information use should be a culmination of face-to-face interactions such as conferences, meetings or general discussion forums (Sheriff and Sheriff, 2008). The study established that a culture of knowledge sharing existed at the selected banks as evidenced by 31.69% of the respondents from Nedbank and 22.77% of FNB respondents. A higher response rate was expected in this instance taking into cognisance earlier responses that indicated the relevance of knowledge to accomplishment of tasks. Creating a disciplined culture influences knowledge sharing as noted by Mustaq and Bokhari (2011). A follow-up question was asked to determine the importance of knowledge sharing at selected banks and 35.64% of Nedbank respondents indicated that knowledge sharing improved job performance, whilst 25.74% of respondents from FNB concurred with their counterparts from Nedbank. In section 2.12.2 of Chapter Two, it was highlighted that the primary role of KM in business was to facilitate opportunistic application of knowledge to improve performance, resulting in informed decision-making, streamlined processes, reduced duplication and advanced data integrity as suggested by Cong and Pandya (2003).

The study established that knowledge at the selected banks was mostly kept in databases as evidenced by 21.79% of respondents from Nedbank and 7.92% of respondents from FNB respectively. Respondents (7.92 %) from selected banks indicated that knowledge was also kept in procedure manuals. Views suggested by 5.94% of Nedbank respondents indicated that knowledge was found in experts compared to 3.96% of FNB respondents who concurred with Nedbank responses. It highlighted in section 2.8.2 of Chapter Two that the use of IT did not necessarily mean that IT was furthering KM initiatives, which is contrary to the interviews and surveys which argue that electronic archival and records management systems (Database Management Systems-DBMS) were used to further KM. This probably contributes to managers' belief that IT is the same as KM or all KM initiatives should be managed by the Director of Information Systems as

discussed in section 5.3.5 of this chapter. A smaller response rate (4.95%) was received from Nedbank compared to the 6.93% responses received from FNB stating that archival systems were used in selected banks to keep knowledge as shown in Table 4.18 and Table 4.20.

The use of databases is collaborated by the discussion in Chapter Two that dwelt on IT as a KM enabler. Again the use of electronic databases probably enhances managers' arguments that IT was the same as KM, of which it was proven that IT was merely an enabler. It was highlighted that FNB was at the forefront of banking innovation (Moneyweb, 2012& 2013); that is probably explained by the presence of knowledge portals, innovators campaign and knowledge suggestion boxes.

The major knowledge acquisition, creation, sharing and retention practices that were identified and provided by interviewees and survey respondents were departmental meetings and team building sessions, succession planning, use of the intranet and internet, road-shows, tea/lunch breaks, seminars, interactive communication channels, staff promotion or secondment, mentorship and project teams as shown in Table 4.19. Knowledge management practices at FNB were similar to knowledge management practices at Nedbank as depicted in Table 4.21; however, notable differences in KM practices at the selected banks include innovator campaigns, a training centre, knowledge portals and suggestion boxes which were present at FNB. It was acknowledged that the KM practices mentioned were ideal platforms; it should be noted that some of the practices did not provide employees with opportunities for asking questions or make suggestions as pointed out by one survey respondent. Though departmental meetings and team building sessions were suggested by the surveys, it does not necessarily mean they were the best KM practices because they have their shortfalls which would be compensated for by the other KM practices depicted in Table 4.19.

A culture that promotes the creation of new knowledge in the organisation is vital because this allows banks to create new knowledge from shared and existing knowledge. The new knowledge must be preserved and retained as knowledge assets in appropriate media. Albers (2009) states that an ideal knowledge management culture is characterised by trust, openness, teamwork, collaboration, risk taking, common language, courage and learning. The findings discussed in section 5.3.6.1 concur with respondents who stated that a knowledge sharing culture improves job performance which is consistent with discussions highlighted in section 2.12.2 of Chapter Two.

Knowledge sharing is typified by the characteristics of knowledge that is shared (Hendriks, 2004). It very much depended on trust between departmental members. A lack of trust of other people's knowledge is a weakness if it exists in an organization (Lloria, 2008). The implications of a lack of open-mindedness on KM practices were that any attempts that the banks made at encouraging these KM features would be fruitless if they were not a part of the selected banks' knowledge sharing culture. It would not even matter if there was no proper IT platform to share information. Maybe from the use of a reward system that was perceived to be conducive to the creation of re-usable knowledge resources, and towards contributing to a collection of re-usable knowledge resources, knowledge capture could, if put in place, start happening in a formal way. That means that knowledge capture and retention capabilities needed to be in place from a policy stand point – as suggested in section 2.12 of Chapter Two.

As mentioned in Chapter Two, in a knowledge sharing culture, people are rewarded for individual achievements, and are recognized as well as rewarded for their knowledge sharing and contributions to team efforts (Stankosky, 2005). Giving incentives as suggested in sections 2.7 of Chapter Two to individuals for contributing to KM activities could have been an effective way of encouraging staff to participate (Barquin, 2001; Gross and Leslie, 2008; Sharma and Chowdhury, 2007; Weddell, 2008; Wen, 2005). In other words, recognition and rewards are perceived to have the potential effect of encouraging staff to embrace changing ways of collaborating, knowledge and information dissemination and providing superior banking services.

Knowledge flow is the way knowledge travels and grows within an organization (Dierickx and Cool, 1989; Koenig, 2003; Nonaka and Takeuchi, 1995; Williams, Giuse, Koonce and Giuse 2004). Similarly, the economic (commercial), technocentric, and behavioural schools of KM that were mentioned in the literature review in section 2.6 of Chapter Two indicated that knowledge flow requires a working environment that nurtures and accelerates the sharing of knowledge. However, from interviews, there was the feeling that, regardless of which department one talked of, this knowledge flow also required management support for its success. The authenticity of knowledge is very important so that it is always identifiable as such. Information and knowledge have to be available but, at the same time, those that are using it have to have trust, be assured of its integrity and its non-repudiation.

5.4.6.1 Factors inhibiting knowledge acquisition at the selected banks

The evidence presented in Table 4.22 showed the six challenges that were identified as major hindrances to the acquisition of knowledge, chief among them the environments in the selected banks, were not conducive for knowledge acquisition as was suggested by the 37.62% of respondents. Surveys, interviews and document analysis showed that lack of supportive KM enablers also inhibited the acquisition of knowledge. There was consensus between interview and survey respondents that there were knowledge acquisition challenges in the selected banks. The challenges depicted in Table 4.22 can pose threats and destabilise the implementation of KM initiatives in an organisation if no immediate action is taken by management of the selected banks. Nonaka and Takeuchi's (1995) organisational knowledge conversion theory views the interaction processes of tacit and explicit knowledge as an essential feature in knowledge management in an organisation such as a bank, but a closer analysis of the challenges presented in Table 4.22 could be explained in terms of the prevailing banking security policies, where employees are not allowed to disclose private and confidential information to their peers and counterparts. Therefore, knowledge acquisition can be restricted in such situations. Ramirez (2007) argues that if employees develop fear of being viewed as less knowledgeable, they may be reluctant to receive knowledge from their peers, which was also pointed out during interviews.

Apart from the six inhibitors shown in Table 4.22, it was established during data collection (section 2.7.4) that lack of incentives, rewards and recognition support for knowledge sharing inhibited knowledge acquisition (Chua, 2003; Jacobs and Roodt, 2007). It was pointed out that incentives and rewards schemes existed at the selected banks, but there was no documentary proof that the incentives and rewards were awarded for knowledge acquisition, and hence the argument from the 41.58% who pointed out that their banks did not have KM policies and procedures. The results as shown in Table 4.16 indicate that KM policies and incentives systems have not received the attention they deserve. The importance of documented processes, policies, work manuals and procedures is in line with the advocacy for the creation of knowledge repositories for operational benefit by Kruse (2003) and Rothwell (2004).

5.4.6.2 Factors inhibiting knowledge creation at the selected banks

Nonaka and Takeuchi (1995); Takeuchi (2001) and Ngulube and Lwoga (2007) are of the view that the creation of new knowledge and effectively exploiting the existing knowledge is an important process in knowledge management practice in any organisation. Existing knowledge

should be exploited to generate more knowledge and information for the organisation. The results presented in Figure 4.2 show that the majority (60.39%) of respondents were able to distinguish knowledge management from information management, thus creating good grounds for the respondents to determine which factors affected knowledge creation. Both interview and survey participants concurred that the selected banks did not have proper information sharing platforms. Two extremes were presented: employees from selected banks have a good understanding of knowledge management but management and the banks' policies deny the same employees information sharing platforms. This situation shuts out opportunities for knowledge creation that could be stored in the organisation's centre of memory for re-use. Such a situation could be partly explained in terms of the security and risk policies present in the selected banks. The second scenario is the fear to breach security controls, thus confining employees to operate in silo mechanisms, as highlighted in chapter Two. Survey respondents indicated that information and knowledge about other departments' products and services was not readily and easily available to the entire organisation.

When employees engage in unhealthy competition and spirit of rivalry between organisational departments, that impedes knowledge creation. Unhealthy competition and spirit of rivalry are attributable to ineffective leadership and lack of conducive environments/space-referred to as *ba*(Nonaka, 1995)and that should serve as a warning to leadership that KM efforts will be impeded.

5.4.6.3 Factors inhibiting knowledge sharing at the selected banks

To internalise knowledge sharing, Jacobs and Roodt (2007) suggest that organisations and employees should build and maintain trust across the organisation. The factors highlighted by respondents from the selected banks include fearing to make mistakes, mistrust amongst employees, lack of interactions, absence of rewards or incentives and employees' reluctance to share knowledge which is consistent with the suggestions made by Huang, Quaddus, Rowe and Lai (2011). These factors corroborate discussions presented in sections 5.3.6.3 and 5.3.6.4 respectively. The factors as shown in Table 4.24 have been stated before, an indication that knowledge management initiatives in the selected banks, faced challenges which envisaged leadership intervention. The majority (17.83%) of the respondents pointed out that employees fear to make mistakes in front of their peers, which was also confirmed during interviews that employees did not participate in meetings or team building sessions because of fear. This created

gaps and voids between management and employees. The researcher is of the view that security policies could be exacerbating fear amongst employees.

The study established that the absence of rewards and incentives was a major hindrance to knowledge sharing (15.84%). Employees would be willing to share information if there was a financial benefit or value to knowledge sharing. When there is no value or benefit, it would be difficult to convince employees and managers to share knowledge. Hansen, Nohria and Tierney (2001) opine that in personalisation of knowledge managers need to reward people for sharing knowledge directly with others, while in the codification managers need to develop a system that encourages people to write down what they know and to get those documents to the electronic repository/database. From the gathered data on the incentives to encourage knowledge sharing it was established that promotion at work was the most expected way of incentivizing knowledge sharing. This finding supports Holbeche (2005) suggested that meaningful rewards for knowledge sharing, knowledge creation and innovation stimulate creativity. However, studies done by Stafford and Mearns (2009) indicate that incentives such as bonuses, salary increments and promotions do incentivise employees to share knowledge. Interviews revealed that managers encouraged knowledge sharing but did not have meaningful incentives to encourage the sharing of knowledge for retention purposes. This is consistent with the work of Hansen, Nohria and Tierney (2001) who argue that people need real incentives not small enticements to participate in the knowledge sharing process. Individuals wilfully explicate one's ideas, insights, solutions, and experiences to another individual via an intermediary, such as a computer-based system, or directly when sharing knowledge.

5.4.6.4 Factors inhibiting knowledge retention at the selected banks

Factors that were identified in this study include deaths, retirements and resignations of experienced employees which are consistent with the findings of Wamundila and Ngulube (2011) that suggests that knowledge retention challenges exist in organisations. During document review, the researcher established that the selected banks experienced organisational knowledge loss through death of employees. Though the study was not intended to establish the causes of employees' deaths, 17.82% of the respondents confirmed that retention of organisational knowledge was impeded by deaths of employees. Retirement of the older generation of employees was highlighted as an impediment to knowledge retention. To ameliorate this challenge, selected banks can consider succession planning, or develop policies to leverage retirees as discussed in

section 5.3.4.2 of this chapter. The practice of using retirees to facilitate training, learning and passing on knowledge to new employees is common in organizations and as such the same knowledge is retained in the organizations and becomes organizational knowledge (Behboudi and Hart, 2008).

It was established during the data collection and literature review that experts were resigning from selected banks to move to competitors for better working conditions, salaries, benefits and this was depleting knowledge resources as evidenced by 15.84% of the respondents. Wamundila and Ngulube (2011) posit 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 use of advanced technology to capture work processes.

5.5 Knowledge management enablers at the selected banks

KM can provide significant advantages to the organisation if it is supported by organisational processes, suitable structure, strategy and favourable working environments (Wiig, 1999; Kok, 2003). Rylatt (2003) suggests that a successful KM strategy is attributable to exemplary leadership that values trial and error and shows a commitment to innovation and continuous improvement. Leadership should be able to take responsibility for failure or success of their organisations, this is in agreement with suggestions made by Chantarasombat (2009) that taking of responsibility has to do with employee participation in what is taking place in the organisation and developing a sense of ownership. Leadership creates a *ba* (Nonaka and Konno, 1998:40) to facilitate knowledge creation and sharing as evidenced by 60.39% of the respondents who stated that leadership and strategy were important KM enablers. Apart from creating an enabling KM environment, leaders were expected to demonstrate and exhibit qualities and skills such as ethical conduct, flexibility and business management skills, which were regarded by respondents as paramount to the success of the selected banks. Commitment and supportive were viewed as the most important leadership qualities by 17.83% of the respondents. This view does not mean that other qualities and skills were irrelevant but respondents believed that commitment and support from leadership would enhance KM efforts.

IT is a crucial enabler in the implementation of an effective KM system only if management cultivates a culture of learning and enthusiasm. Wiig (2004:4) argues that IT is significant in enabling knowledge management but it occupies a secondary role because it serves as passive

infrastructure. However, Jain (2009) posits that effective knowledge management practices could be achieved by utilising the latest in IT in order to capture, create, store, transfer, share, retrieve maintain and update knowledge. IT was acknowledged as an important enabler as evidenced by 44.55% of the respondents who stated that it would have been impossible to process huge volumes of transactions had the selected banks not implemented an IT infrastructure. Information technology (IT) was acknowledged as one of the core pillars of KM as indicated from the research by Stankosky (2005) mentioned in section 2.8 of Chapter Two. In this perspective, IT can support the process for knowledge creation, sharing, application and storage as suggested by 44.55% of the respondents shown in Table 4.27. In view of the fact that every employee at the selected banks had an e-mail account and could interact easily online, the researcher suggests that there was the potential for the extraction of useful information from an intranet. That could be a way to identify any experts or specialists who may have had untapped knowledge, that is, the human capital analysis at FNB and Nedbank. If the IT platform available was used for information and knowledge gathering, then implications of individual privacy and related issues needed be dealt with. An intranet platform could also enhance the interaction of individual, group, organizational, and inter-organizational knowledge (Nonaka and Takeuchi, 1995; Singh, 2007).

The already available modern technology at selected banks is a capability especially if it is also used to incorporate and further KM practices. The interactive nature of knowledge sharing required that the selected banks embrace a culture of free-flow of information. The way that knowledge was transferred could be regarded as its presentation and dissemination, and would be dependent on the communication infrastructure, information transfer protocols, its social structure, its knowledge sharing culture and information dissemination (Stankosky, 2005). This is where the expertise of the IT department would become essential and not necessarily become the KM champions. Organisations that make big investments in IT applications are likely to acquire the required and relevant technology that will enhance the organisation's operations (Hawkins and Oblinger, 2005). The findings of Hayes (2007) mentioned in section 2.8 of Chapter Two suggest that KM processes can be supported by many information communication technologies that depend on basic IT infrastructure.

When an organisation embarks on KM, it has to align its organisational structure to facilitate the creation and effective flow of knowledge throughout the organisation. Concurring with the KM analysis depicted as the SECI model by Nonaka and Takeuchi (1995) mentioned in section 2.5.3 of Chapter Two. Daud, Rahim and Alimun (2008) suggested that the concepts of knowledge

creation (socialisation, externalisation, combination, and internalisation) and innovation had a strong relationship which had not been examined systematically. The results in the current study bring some light into this suggestion as discussed in section 5.3.2 of this study.

Mustaq and Bokhari (2011) investigated the impact of organisational culture and their findings show that organisational culture and transformational leadership had an influence on knowledge sharing. After retrieving information, the next step is to use it for knowledge creation. This is dependent on the culture and behaviour of those who are retrieving it because “a knowledge culture characterises an organizational culture that understands and values knowledge management” (Baskerville and Dulipovici, 2006:91), values the knowledge, feedback and control, and actual implementation. This suggests that the context of knowledge creation and the process of converting it are essential for KM success (Davenport and Prusak, 1998).

5.6 Knowledge management and organisational performance at selected banks

Lack of knowledge management practices might lead to high costs as a result of lost institutional memory, knowledge gaps and uninformed decisions. Managing knowledge in a bank can leverage efficiency across all its services to customers through accessing the right information for making informed decisions and eliminating duplication of efforts. Section 2.12.3 of Chapter Two referred to the works of Baskerville and Dulipovici (2006), Jain (2007), and Rowley (1999 & 2002) who mention one of the characteristics of the economic school of KM as incorporating the ability to be a learning organization that enables creativity and in the process increases the value generation capacity of an organization. The study established that knowledge enhanced organisational performance as shown by 21.78% of the surveys, though some arguments were raised by 17.83% of the respondents that a combination of knowledge and business strategies enhanced organisation performance which is supported by the discussions presented in section 2.5.2 of Chapter Two.

Surveys and interviews concurred that in the knowledge economy, organisations leveraged efficiency across departments, thus improving service delivery and processes as evidenced by 13.86% of the respondents who viewed KM as a solution to business problems, while 11.88% of the respondents felt that KM enhanced customer relationships. Building relationships with customers or suppliers is regarded as a competitive strategy (Kotler and Keller, 2010 & 2013). Like any competitive industries, the banking industry is characterised by intense competition for market-share, product innovation and customer loyalty. The researcher is of the view that building

long term relationships with suppliers and customers will enable the selected banks leverage on such relationships for growth. Nine (8.91%) of the respondents stated that knowledge management improved work processes, whilst 6.93% of the respondents stated that KM improved product and services development-an important factor required to address the ever-changing tastes and needs of customers. An organisation that has technology and processes that produce products and services within a shorter space of time than competitors usually satisfies customers (Kotler and Keller, 2010 & 2013) - resulting in knowledge work. Knowledge work is defined as the use of personalised and codified knowledge to execute duties and responsibilities at work (Wiig, 2004).

When knowledge is available, employees and managers can think independently to work effectively as evidenced by 53.46% of the respondents. Employees and managers should access and retrieve knowledge for use. This was found to be relevant concerning the organisation of the selected banks' institutional archives. Some knowledge was stored in databases, records and other locations which made the retrieval of some knowledge impossible due to security and limited access to private and unpublished institutional documents. Rowley (1999:417) suggests the creation of knowledge repositories, improvement of knowledge assets, and the enhancement of the knowledge environment. This would call for knowledge classification.

Senge (1990) regards a learning organisation as that which provides members with energy to keep exploring the world and adjusting themselves to changes. Vinson (2003) posits that to truly learn from employees organisations must have knowledge sharing programmes. The interviewees indicated that, in spite of various challenges that may be faced by the surveyed organizations, the selected banks engage in organizational learning activities such as management development programmes offered at business schools (UNISA Graduate School of Business Leadership, Witwatersrand Graduate School and Gordon Institute of Business Studies-GIBS). At times the selected banks held in-house training to equip the workforce with skills and knowledge about trends in the banking industry. Such activities are consistent with Johannessen, Olaisen and Olsen's view (2001) that organisational learning produces organisational knowledge which, if properly used, gives the organisation a competitive advantage.

5.7 Risks of losing knowledge at selected banks

Knowledge loss can negatively affect the operations and performance of the bank. The loss of expertise and on-the-job knowledge that was built up over the employee's career, the loss of client

intelligence, established internal and external networks and loss of social and networking skills are some of the risks of losing implicit knowledge in organisations due to staff attrition (Poole and Sheehan, 2009). Fifty-five (54.45%) of the respondents who concurred with Poole and Sheehan (2009) stated that organisational knowledge loss was prevalent in the selected banks as shown by some departments failing to fulfil their mandates. This view was challenged by 41.58% of the respondents who stated there was no organisational knowledge loss. The results shown in Figure 4.10 confirm that loss of organisational knowledge affected the operations of the selected banks. This is in line with Tiwana (2008)'s views that "the departure of some employees reduces collective firm-wide competence (tacit knowledge walk-outs). The banking industry provides a good example of how knowledge walk outs become instant threats. The departure causes loss of knowledge, key clients, suppliers, best practices and even revenue." Respondents argued that human capital was not the main KM enabler needed in the selected banks as suggested by 66.33% of the respondents. The researcher disagrees with the 66.33% of the respondents because human capital without other supporting structures, IT, strategy and financial resources would not create, store, share and retain knowledge alone. However it was established that employees' contribution to organisational centres of memory was regarded as an essential evaluation criteria for knowledge creation.

5.8 Plans for capturing the knowledge of experts leaving the selected banks

Plans should be in place to capture organisational knowledge before leaving the organisation. Several options suggested by respondents during data collection included mentorship and apprenticeship, training and development, coaching, career guidance and counselling and succession planning. This study did not investigate how these plans were or would be carried out, but from the responses provided it was evident that each plan was applicable in specific situations. For instance it was optional to use one or more plans concurrently depending on the situation and type of knowledge to be captured. In circumstances where experts had resigned, prompt strategies such as training and development or coaching were applicable. There is a danger of lack of succession planning, as in many situations expert knowledge is lost without any recourse. The results (20.79%) shown in Table 4.32 indicate that succession planning was viewed as the most ideal plan for capturing expert knowledge. Succession, of course, involves a critical moment that attempts to ensure the continued existence of the organization. If it is not planned and organized, then there is a risk that major conflicts may emerge between current employees and the successors. It is imperative, therefore, to establish the ground rules that will govern the succession

process as well as to prepare for the changes that will guarantee the sustainability of the organization (Nel, Werner, Haasbroek, Poisat, Sono and Schultz, 2008:217).

The introduction of incentives, rewards and attractive salaries and benefits can be used to harness expert knowledge as suggested by 12.87% of the respondents which is consistent with Jacob and Roodt (2007). One survey respondent remarked that experts such as business process engineers and business analysts were moving from one bank to the other in search of better salaries, benefits or working conditions. The question that one would pose is, if offered attractive packages in the other bank, how long does the expert stay with that bank before moving to the next? To address this challenge, the selected banks ought to have succession plans in place. Another plan suggested by 5.94% was to extend the retirement age of retirees. According to Alexander Forbes (2010:2) to solve the problem of fewer young people contributing to the pensions of more old people, many European countries are thinking of increasing the normal retirement age. There is no general retirement age in South Africa. Employers and employees agree to an employee's retirement age and this should be stipulated in the employee's employment contract. That means that the normal retirement age will vary from company to company (Alexander Forbes, 2010:2). The truth is that the Basic Conditions of Employment Act does not prescribe an age at which employees must retire. Since labour legislation is silent on this issue, it will be up to the employer to prescribe the retirement age for its employees (Alexander Forbes, 2010).

It emerged that respondents highly valued knowledge from various experts, knowledge from experienced workers, critical knowledge and knowledge from those approaching retirement age, regarded as the critical knowledge of veteran employees. During the interviews, managers concurred with this observation and individual managers could even mention some experts whose knowledge needed to be captured as long as they were still working for the organizations. For instance employees who have worked long for the selected banks were regarded as experts because they possessed vast experience and knowledge. Examples given during the surveys included a messenger who had been with FNB for 45 years was regarded to know everything from past to present senior executives. Another example was of the systems analyst who had been with Nedbank for 30 years and who was regarded as an expert; which is consistent with Dan (2008) who posits that knowledge retention is about focusing on the critical knowledge that is at risk of loss and then develops actionable plans to retain that knowledge.

5.9 Strategies for safeguarding knowledge in selected banks

Scholars such as Dubin (2005), Lee and Oslon (2008), Jain (2009), Poole and Shenan (2009) and Dewah (2011) point out various approaches applicable to knowledge retention and these include: communities of practice, repositories, mentoring and apprenticeship programmes, use of subject experts and project milestones. Banks should be dynamic learning environments – communities of practice where knowledge is created, shared and transferred in all departments. As pointed out in section 2.6.1 of Chapter Two, in the economic school organisations are seen as dynamic learning environments and it was suggested by 23.76% of the respondents that communities of practice allow people to interact on an on-going basis with a real need to know each other, deepening their knowledge and expertise in a particular area of concern. Project management teams provide such platforms as highlighted by the respondents in Tables 4.19 and 4.21 respectively.

Other strategies suggested include: mentoring and apprenticeship (18.81%), the use of subject matter experts (28.72%), leveraging retirees (16.83%) and story-telling (11.88%) as shown in Table 4.33. Though 28.72% of the respondents indicated the use of subject matter experts as the most ideal strategy for safeguarding knowledge, other strategies presented in Table 4.33 are also important and applicable to specific situations as dictated by organisational objectives and type of knowledge to be safeguarded. However, from the literature discussed in 2.10.5 of Chapter Two, story-telling was not widely used in banks as evidenced by 11.88% of the respondents; therefore, effective strategies would be suggested in this study.

5.10 Knowledge management solutions at the selected banks

KM needs a systematic approach to develop capabilities which accelerate the evolution of knowledge into a key organisational resource (Sandhawalia and Dalcher, 2010). Gold, Malhotra and Segars (2001) identify IT and organisational structure and culture as infrastructure capabilities, and acquisition, conversion, application and protection as process capabilities. Consistent with the discussion in section 2.11 of Chapter Two, it was established that ICT tools provide an enabling platform for knowledge acquisition, capturing, sharing and retention (Dewah, 2011). During data collection, the different knowledge management solutions that were identified include business intelligent tools such as CRMs (22.77%). The use of CRM systems enables organisations to build relationships with a customer which is in line with the discussions presented in section 2.11.1 of Chapter Two. Laudon and Laudon (2013) state that CRM systems offer

account intelligence product information, an application that supports the KM technology category of knowledge sharing.

Laudon and Laudon (2012 & 2013) envisage that organisations should have to implement technologies that integrate vast assortments of disparate application interfaces, controls and datasets which enable information sharing and centralised management of organisation-wide information and knowledge as pointed out by 14.85% of the respondents. Other technologies that were identified include: collaboration technologies of whom the majority (44.55%) of the respondents stated that these systems were highly used for document management, unlike the use of external file management service providers. The use of external file management services can pose threats to the security and safety of files (Laudon and Laudon, 2012:346). In Chapter Two, section 2.11.1, it was pointed that collaboration technologies supported virtual meetings, subject expert repositories, image galleries and email management-features that could have motivated the participants to highlight these KM tools. The use of business process management systems was highlighted by 7.93% of the respondents. Organisations such as banks are adopting project-based approaches to managing and accomplishing assignments. Project-based approaches help an organisation to allocate resources (time, human capital, finance, tools and equipment) and plan how projects should be accomplished. Business process management systems were, therefore, ideal tools for project teams.

As suggested by Barnes (2002) expert knowledge systems provide the framework for handling the exchange and integration of organisational knowledge. Ten (9.9%) of the respondents stated that expert systems were used for data modelling, mining and modular programming. The researcher noted that respondents did not discuss interactive communication technologies and tools such as Wikis, Blogs, Facebook and Twitter which were used by the selected banks to communicate with their customers. The interactive communication tools allowed customers to conduct cell-phone banking, electronic funds transfers (EFTs), balance enquiries or any transactions supported by the bank's IT platforms. In Chapter Two, it was pointed out that ICT tools are merely enablers for knowledge creation, sharing and retention, and are to a great extent automated to improve efficiency and productivity. Clients do not need to go to banking halls to conduct their transactions, but can process most of their transaction on the internet, unless the transaction requires the issuance of a credit, debit or garage card.

5.11 Synthesis

The researcher constantly referred to Chapter Two when interpreting the findings of this study. The scholarship reviewed in Chapter Two augmented and helped synthesise the ideas that were discussed in this study. It was also important to refer to Chapter Two because the study was able to identify gaps and built on arguments by other scholars.

From the interpretation of findings participants understood KM and distinguished KM from information. Most KM activities were centred on the capability of the selected banks to acquire, create, share, retain and organise their knowledge assets, or institutional memory. It was established that selected banks did not have documented KM policies in place. Surveys and interviews confirmed that knowledge management enablers were: leadership and strategy, IT, organisational culture, organisational structure and human capital, whilst strategies for safeguarding knowledge included: communities of practice, mentoring and apprenticeship programmes, the use of subject matter experts, leveraging retirees and story-telling.

From questionnaire responses and interviews, it was realised that most respondents agreed that there were factors inhibiting knowledge acquisition, creation, sharing and retention such as strict policies on security and privacy, lack of employee interactions and an environment that did not foster organisational structural ties. Both survey responses and interviews agreed that banks should put in place KM policies and rewards for creating re-usable knowledge resources, re-using existing knowledge resources, and contributing to a collection of re-usable knowledge resources. The actual use of incentives at selected banks was, therefore, not obvious because there was no documentary proof to show the existence of such policies, which was in line with Ngulube (2003) that written documents serve as binding contracts between two or more parties. But then, if instituted, the individual motivational elements of human beings needed to be considered as having the potential to derail well-intended KM initiatives and efforts. It was unclear whether recognition was only for individual achievement where people were rewarded for their personal knowledge/product development or innovation and had no incentive to share knowledge. The results, therefore, indicated that the culture of the selected banks theoretically partly encouraged sharing of information and knowledge, but that in practice there was still need and room for improvement.

The knowledge cycle discussed by Rowley (2001), which was consistent with the pillars of KM that Stankosky (2005) suggested, was pertinent to the synthesis of this study. It is composed of knowledge use, knowledge revision, knowledge creation and construction, knowledge articulation, knowledge repository updating, and knowledge access as processes with no beginning or end. The desire to have the capacity to create knowledge, retain or share knowledge in the modern information environment was regarded as incentives for the selected banks to enable themselves becoming learning organisations. It is through learning and realising shortcomings that it could potentially become clearer where KM practices would be most effective and worth investing in. That way it would become more practical to initiate the systemic regard of knowledge as a resource or an asset. According to Broadbent (1998), “KM is about enhancing the use of organizational knowledge through sound practices of information management and organizational learning”.

5.12 Chapter summary

This chapter dealt with the analysis and interpretation of results. The analysis of results was organised according to how data were consolidated, combined and integrated. The findings were interpreted according to theories of knowledge management, patterns of data for each research objective. During analysis and interpretation of results, the researcher made constant reference to chapter two- literature review - and Chapter Four. The findings from this study have shown that the concept of knowledge management was known in selected banks but there was room for improvement through the use of educational and awareness campaigns. It was established that tacit knowledge was more prevalent in selected banks compared to explicit knowledge. The findings have also shown that selected banks did not have written KM policies in place as evidenced by surveys, interviews and document review. Both surveys and interviews concurred that KM practices such as acquisition, creation, sharing and retention existed at the selected banks. It was established that KM practices in the selected banks were impeded by several factors. The success of KM initiatives was attributable to KM enablers such as leadership and strategy, IT, human capital, organisational structure and organisational culture. Finally, the elements of KM that ended up being highlighted included knowledge management and organisational performance, risks of losing organisational knowledge, plans for capturing knowledge of experts, strategies for safeguarding knowledge and KM solutions in selected banks. In Chapter Six, the summary, conclusions and recommendations of the study will be presented.

CHAPTER SIX: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

I may have gone astray at many points....It is up to others to try to do better. My one hope is that I have made the reader feel both the reality, difficulty and urgency of the problem and at the same time, the scale and form which the solution cannot escape (De Chardin, 1975:290).

6.0 Introduction

The previous two chapters described and explained the nature and dimensions of the role of the knowledge management problem that was uncovered by the research. The description showed us what the units of analysis shared in common and what made them distinctive from one another. On the basis of the data presented and interpreted in the two previous chapters, and the research experience gained during the conduct of the project, this chapter is concerned with giving a summary of findings, conclusions and recommendations of the study. Having started with doubts about whether the use of KM principles and tools can enhance organisational performance in the selected banks of South Africa, findings from this study have given indications that KM practices and tools are likely to enhance organisational performance and fulfil the selected banks' mandate.

6.1 Research purpose and research questions

The purpose of this study was to investigate the role of knowledge management in enhancing organisational performance in the selected banks of South Africa. It was also highlighted that it could be useful if knowledge was considered as a strategic asset, which could be captured, codified, shared and retained for competitive advantage and for future use in selected banks. In order to fulfil the purpose of the study, the following research questions guided the study:

- What is the level of understanding of KM in the selected banks?
- To what extent have banks implemented KM practices such as knowledge creation, sharing and retention through the assessment of existing KM enablers?
- What are the factors that can inhibit knowledge creation, retention and sharing in an in selected banks?
- What is the role of KM enablers in the implementation of KM strategies in selected banks?
- What KM strategies are needed to safeguard knowledge in the selected banks?
- What KM systems and solutions are in the selected banks?

6.2 Summary of chapters

In an attempt to investigate the role of knowledge management in enhancing organisational performance in selected banks in South Africa, in Chapter One the study began by giving a background of the project. The background of the study covered pertinent issues such as the nexus of knowledge and information, essence of knowledge management practices in banks, and the background histories of First National Bank and Nedbank. Chapter One also covered the theoretical framework for the study whose purpose was to assist the researcher. Some of the theories covered include Polanyi's theory of personal knowledge, resource-based theory, adaptive structuration and organisational conversion theory. This study is anchored in Nonaka and Takeuchi's (1995) theory of organisational knowledge conversion, which views the interaction processes of tacit and explicit knowledge as an essential feature in knowledge management. The originality, objectives, questions, problem statement, significance, purpose and organisation of the study were the other issues addressed in Chapter One.

Chapter Two of this study covered the literature review which is an overview of published literature on knowledge management, knowledge management practices such as acquisition, creation, sharing and retention, ICTs, knowledge management enablers such as leadership and strategy, human capital, organisational culture and structure and IT for the benefit of organisations. The literature road-map was also covered in this chapter as well as knowledge management schools of thought, use of theories, benefits of knowledge management, strategies for safeguarding knowledge and other related studies on knowledge management.

Chapter Three of the study covered the research design and methodology used to collect, analyse and interpret both quantitative and qualitative data. The survey had 101 respondents and four face-to-face interviews were conducted. The chapter provided details of the data collection procedure and type of analysis done for the study. The Survey Monkey- an online web-based survey and Microsoft Excel 2010 were used to analyse quantitative data whilst thematic codes were used to analyse qualitative data.

Chapter Four of the study presented quantitative and qualitative data. Great deals of quantitative data were reduced to descriptive statistics and presented in tables, pie-charts, bar-graphs. Qualitative data from interviews and document analysis were presented in narratives. Some short extracts from the transcribed interviews were presented.

In Chapter Five the discussions of findings based on the research objectives and questions were presented. The chapter was fairly long because of the discursive writing to explain the analysis of both quantitative and qualitative data that were gathered using the questionnaire, document reviews and interviews. The discussions of the data in relation to other studies and findings in already published literature were done under various themes that included: understanding of knowledge management principles; KM practices, policies and rewards/incentives systems at the selected banks; factors inhibiting knowledge acquisition, creation, sharing and retention; KM enablers in existence at the selected banks; strategies for safeguarding knowledge at the selected banks and knowledge management solutions.

The current chapter, Chapter Six, synthesises the research into conclusions and recommendations. The chapter covered findings with regards to the six research objectives that were formulated as research questions. The organisational knowledge conversion and adaptive structuration theories complemented each other in providing the theoretical framework for this study. The study concluded that there is a fair understanding of knowledge management in the selected banks. Both FNB and Nedbank are learning organisations but knowledge management was impeded by the strict policies on security and privacy which did not allow employees to interact and share information and knowledge freely without fear of dismissal. The study suggests recommendations for the management of the selected banks on how to improve knowledge management.

6.3 Summary of Findings

This section provides a summary of findings with respect to the objectives meant to be achieved by the study. The study investigated the role of knowledge management in enhancing organisational performance in two selected banks of South Africa- namely FNB and Nedbank. The findings suggest the following answers to the six main objectives which were formulated into six research questions which guided this study.

6.3.1 Understanding of the concept of knowledge management at the selected banks

- From questionnaire responses and interviews, the managerial levels clearly understood KM concepts;
- From the questionnaires and interview responses it was clear that respondents understood the difference between knowledge management and information management; and

- Knowledge was organised and recognised as a key strategic asset for the banks.

6.3.2 Knowledge management policies at the selected banks

- Though surveys indicated that the KM policies were not clear, both surveys and interviews agreed that KM policies existed in their banks;
- The interviews pointed out that strict bank policies on secrecy were put in place to safeguard banks;
- Interviews indicated the existence of incentives/rewards to motivate knowledge creation and sharing; this was disputed by survey respondents who pointed out that there were no rewards/incentives schemes; and
- Surveys indicated that the selected banks had put in place policies such as recalling retirees as consultants and using archives, but there were no policies on rewards/incentives for retirees to mentor junior employees.

6.3.3 Knowledge management champions at the selected banks

- Both surveys and interviews concurred that selected banks needed knowledge to operate efficiently;
- Surveys and interviews concurred that tacit knowledge was present in the selected banks and it was the widely used category of knowledge;
- Interviews indicated that Chief Knowledge Officers were knowledge champions in organisations whilst surveys indicated that the Director of Information Systems was the KM champion;
- There was consensus from both interviews and surveys that KM champions played an important role in crafting KM policies, strategy and awareness;
- Interviews and surveys identified Chief Knowledge Officers, Best Practice Managers, the Director of Information Systems, Chief Information Officers and Knowledge Managers as KM champions.

6.3.4 Knowledge management practices at the selected banks

- The respondents agreed that their banks had knowledge acquisition, creation, sharing and retention practices;

- Both questionnaire responses and interviews stated that tacit and explicit knowledge were present in their banks; however, the results (51.49%) of the surveys indicated that tacit knowledge was more important than explicit knowledge; and
- Survey responses showed that departmental meetings, team building sessions, road-shows, intranet, smoke/tea/lunch breaks, seminars and staff secondment and promotions were the common KM practices in their banks.

6.3.5 Factors inhibiting knowledge acquisition, creation, sharing and retention at the selected banks

- Survey respondents and interviews showed that there were many factors impeding the acquisition, creation, sharing and retention of knowledge such as lack of structural ties, mistrust amongst employees, strict bank policies on security, deaths, retirements and resignations;
- Strict bank security issues were also pointed out during interviews as an impediment to information sharing between employees/departments;
- Survey respondents showed that there were common factors that were peculiar to knowledge acquisition, creation, sharing and retention such as strict bank policies on security, mistrust amongst employees and lack of interactions between employees.

6.3.6 Knowledge management enablers at the selected banks

- All questionnaire respondents and interviewees showed the existence of computers in their offices and workspaces, and observations indicated this;
- All employees had an mail address for business communication;
- Questionnaire responses indicated that the main KM enablers present in their banks were leadership and strategy, organisational structure, organisational culture and human capital;
- Interview respondents also indicated that a conducive knowledge management environment was important to support the KM enablers available in their banks; and
- Surveys indicated the qualities and skills of leaders in a knowledge/learning organisation such as: ethical, supportive, people management and communication skills, consultative and fair minded.

6.3.7 Strategies for safeguarding knowledge at the selected banks

- Surveys indicated that workforce attrition can cause organisational knowledge loss, which can negatively affect operations and performance;
- Questionnaire responses and interviews indicated that their banks were putting in place strategies to safeguard knowledge and these include: communities of practice, mentoring, subject matter experts and leveraging retirees;
- Interviews indicated that knowledge was regarded as a strategic organisational asset and the selected banks were appointing CKOs, CIOs and knowledge champions;
- Both questionnaire and interviews responses concurred that the presence of both tacit and explicit knowledge played an important role in individual and organisational performance;
- Another strategy that was suggested was the manager-employee openness, more formal and informal meetings, and workshops and social interactions to create and share knowledge and information.

6.3.8 Knowledge management solutions at the selected banks

- Both questionnaire and interview responses showed some confusion between IT as an enabler of KM and IT as knowledge, but both categories of respondents agreed that IT was an enabler of KM;
- The banks were using business intelligence, collaboration technologies, business process management and expert systems;
- Information communication technologies were used for automation, knowledge acquisition, creation, sharing and retention; and
- Knowledge sharing systems were needed in the bank

6.4 Conclusions

The conclusions of this study are based on the findings provided. Following the suggestion of Bryman (2006), the conclusion returns to the research questions and spells out the implications of the findings and for KM theories introduced in sections 2.5 and 2.14 of Chapter Two. According to Powell (1997:11), “the truth of the conclusion obviously depends on the truth of the premise...” Leedy and Omrod (2010: 296) point out that “the conclusions should be entirely supported by the data presented”. The conclusions were drawn according to the order in which the research

questions were stated in section 1.9 of Chapter One. In drawing conclusions, only the major findings that directly addressed the research questions were discussed.

6.4.1 Conclusions on understanding of the concept of knowledge management at the selected banks

At both FNB and Nedbank, though the field of KM was fairly new, research has shown that the concept was understood and the respondents were able to distinguish knowledge management from information. If the assertion by Addleson (2000:156) that “action and decisions follow understanding” is taken into consideration, then it follows that FNB and Nedbank had the potential and capacity to use KM practices to enhance organisational performance. An understanding of KM in itself is not sufficient for instituting it. It takes research and a detailed assessment of institutional needs before venturing into KM, a new field that is unclear to a lot of people. All knowledge should continuously be subjected to tests and evaluations and criticism because it is subjective (Abbot, 2004). Despite the vagueness of KM, this research concludes that using KM practices and principles had the potential to enhance organisational performance of the selected banks.

6.4.2 Conclusions on knowledge management policies at the selected banks

In all sectors, knowledge is increasingly recognised as an organisation’s strategic asset. As a resource, knowledge is used to improve an organisation’s efficiency and effectiveness, to create innovative solutions and to enhance decision making capabilities (Cong and Pandya, 2003). It is important to bear in mind that even with the best KM tools available and a mandate to employees to make extensive use of it, if employees feel it is not part of their jobs and of themselves, the KM effort will not yield any desired results.

Findings on the current means and processes employed to acquire, create, share and retain knowledge indicated the absence of policy guiding access and contribution to institutional knowledge. The absence of policy implies that employees could have sometimes not been aware what information and knowledge was available to help them effectively fulfil their job requirements, and, even when they had valuable knowledge, they lacked guidance on how to preserve it effectively (Mavodza and Ngulube, 2011:292). Policies aimed at creating an inventory of organisational intellectual assets, and avoiding their loss can be a part of best practices in organisation such as banks. By developing KM policies, it is a conclusion of this study that selected banks recognise and regard knowledge as a strategic organisational asset. The lack of KM

policies may compromise the ability of the selected banks to make timely, informed decisions that take place in a dynamic competitive environment.

6.4.3 Conclusions on knowledge management champions at the selected banks

The study established that The Director of Information Systems was regarded as the KM champion as evidenced by 29.71% of the respondents which concurs with the discussion highlighted in Chapter One of this study that many managers and other professionals misconstrue IT to be KM. In section 2.11 of Chapter Two, it was highlighted that ICT tools merely acted as facilitators for knowledge management. Despite the majority (29.71%) of respondents stating that the KM champion was the Director of Information Systems, several arguments were echoed where 9.81% of the respondents mentioned the Chief Knowledge Officer, and other respondents mentioned Best Practice Managers, Chief Information Officers and Knowledge Managers, an indication that such KM officers were mentioned to the participants and, therefore, this study concludes that there was need for selected banks to appoint KM champions.

6.4.4 Conclusions on knowledge management practices at the selected banks

KM practices in the banking situation are actions aimed at improving the internal flow and use of information and knowledge, and the banks can be a major participant in these activities. Examples of such practices include the creation of “best practices”, databases, regular training and development programmes, encouragement and promotion of employee interaction within departments and between individual staff and departments (Nonaka and Takeuchi, 1995; Kidwell, Van der Linde and Johnson, 2000). KM practices need not be based on the preconception that an organisation can mandate people to share their knowledge. It is likely that individuals would be willing to share their knowledge because they want to, not because they have been told or coerced to do so. The study found that there were no stipulated practices at both banks for knowledge acquisition, creation, sharing or retention. However, the efforts that were made included staff meetings, team building sessions and project management teams.

The study established that knowledge at selected banks was not properly managed to facilitate the implementation of competitive KM practices for surviving in a knowledge-driven environment. Being a dynamic competitive and information-intensive industry, bankers should possess skills that include the identification of knowledge needs, distinguish knowledge management from information management which can facilitate a broader and more inclusive KM initiative. This could result in the development of a KM framework for sharing institutional practices that include all employees-an important component of a KM strategy.

6.4.5 Conclusions on factors inhibiting knowledge acquisition, creation, sharing and retention at the selected banks

One of the most important aspects of KM is to remove barriers to knowledge contribution. The focus must be on extracting knowledge from the output of the applications that are already in use. Knowledge acquisition, creation, sharing and retention were impeded by strict bank policies, mistrust among employees, lack of employee interactions and lack of an enabling knowledge sharing environment. Policies, culture and processes should not be an impediment to knowledge acquisition, creation, sharing or retention in an organisation. The challenges contributed to the rate/level of understanding of KM in selected banks. Surveys and interviews concurred that improved job performance was attributable to knowledge acquisition and sharing, but, due to the environments that existed in the selected banks, the situation was contrary to Nonaka and Konno's (1998) suggestions that knowledge is shared within a contextualised space called *ba*. It was also established that the culture in the selected banks was not a very conducive environment for knowledge sharing. Deaths of employees, resignations and retirement of employees impeded knowledge retention as suggested by Wamundila and Ngulube (2011).

6.4.6 Conclusions on knowledge management enablers at the selected banks

The KM enablers used for knowledge acquisition, creation, sharing and retention at the selected banks as reflected by the data interpreted included:

- leadership and strategy;
- information technology;
- organisational structure;
- organisational culture; and
- human capital.

It was established that leadership played a key role in developing the vision and strategy of the organisation and lack of leadership support and drive on KM initiatives impeded the management of organisation-wide knowledge. The study established that IT was widely used in the selected banks' operations; that explains why IT was misconstrued to be the same as knowledge, ultimately resulting in IT departments being given the responsibility to manage knowledge. It was also established that Nedbank and FNB had top-down organisational structures which did not promote KM. A model that takes into consideration all members of the organisation to generate knowledge is the ideal solution. When an organisation embarks on KM, it has to align its organisational

structure to facilitate the creation and effective flow of knowledge throughout the organisation. The impact of organisational culture as enabler showed that organisational culture and transformational leadership had an influence on knowledge sharing. The study established that selected banks relied heavily on expert and non-expert knowledge. The loss of key staff was a worrisome factor that was perceived to reduce collective firm-wide competence (tacit knowledge walk-outs). These departures cause loss of knowledge, key clients, suppliers, best practices and even revenue. The findings from the study indicated that the successful implementation of KM was influenced by the KM enablers supported by an enabling environment.

6.4.7 Conclusions on strategies for safeguarding knowledge at the selected banks

The findings from the study indicated that knowledge was regarded as a strategic asset that called for proper preservation and retention. This knowledge was retained and stored in organisational servers, archives, videotapes and databases. The results also showed that the selected banks were putting in place strategies for safeguarding knowledge such as communities of practice, mentoring, subject matter experts and leveraging retirees. The use of subject matter experts was so popular (28.72%) which indicates that capturing of best practices as a strategy for safeguarding knowledge was common in the selected banks. Story-telling (11.88%) was not so popular, which indicates that it was not the best strategy for safeguarding knowledge in the selected banks.

6.4.8 Conclusions on knowledge management solutions at the selected banks

It emerged that the selected banks were using information communication technologies to transmit codified explicit knowledge and most processes were automated. The study found that respondents were computer literate and therefore were capable of using computers for knowledge creation, acquisition, sharing and retention of explicit knowledge. It was established that the selected banks used business intelligence, collaboration technologies, business process management and expert systems and knowledge sharing systems. The use of business intelligence, collaboration technologies, business process management, and expert or knowledge sharing solutions was attributable to the fast changing IT trends as well as the dictates of the banking industry. During surveys, managers yearned to use such advanced technology to create, share and retain organisational knowledge.

6.5 Overall conclusions on the research problem

The aim of the study was to investigate the role of knowledge management in enhancing organisational performance in selected banks of South Africa. The study also sought to investigate and recommend the KM practices and strategies that could be adopted by selected banks in South Africa to create, capture and retain knowledge as a competitive advantage and for future use. Despite the level of understanding of KM shown by the responses, the general understanding of KM was still low and there was room for improvement. KM was investigated for its possible application at two selected banks of South Africa. KM practices such as knowledge acquisition, creation, sharing and retention were in place at the selected banks but on a low scale. Concluding from the research findings, there were indications that the selected banks faced some challenges that included: inadequate understanding of what KM meant, lack of written knowledge retention policies, lack of knowledge sharing policy, lack of employee interactions, mistrust amongst employees, lack of a conducive KM environment and strict bank policies that impeded knowledge acquisition, creation, sharing and retention.

The findings from the study revealed that there were weak strategies to capture tacit (personalized) knowledge in the selected banks investigated. However, explicit (codified) knowledge is captured in the organisational computers, servers, documents, records, archives, audio and video tapes. Nevertheless, efforts made to acquire, create, share, capture and retain knowledge in these banks are consistent with strategies suggested in the available published literature. The study found out that the strategies to safeguard knowledge that were in place included communities of practice (CoPs), mentoring and apprenticeship, subject matter experts, leveraging retirees and story-telling. Safeguarding knowledge through collaboration and social networking of subject matter experts and CoPs were vital in the selected banks. Story-telling has not yet been adopted as an important strategy of sharing knowledge in selected banks yet it has been found to be an effective way of transferring personalised knowledge to fellow employees. It was also established that there were no rewards/incentive policies to stimulate knowledge creation or sharing as pointed out by the survey responses and interviews. Having acknowledged the importance of knowledge, the selected banks continued to lose knowledge through various ways of attrition. Furthermore, the findings suggest that there is absence of knowledge management systems in the selected banks as evidenced by the survey responses and interviews (non-existence of the post of Chief Knowledge Officer in the banks' organograms).

The findings revealed that the selected banks had put in place strategies to harness expert knowledge leaving the banks. The users of the selected banks could get relevant knowledge and information, while employees and managers learn and participate in inputting and organizing information and knowledge, enabling continuous knowledge creation and innovation.

6.6 Recommendations

The study identified various factors which affected KM practices at the selected banks. The study therefore makes recommendations to address the KM issues identified by the study in order to enhance the value of the service offered by the selected banks. The recommendations made address each of the research questions of the study.

6.6.1 Recommendations on understanding of the concept of knowledge management at the selected banks

If the selected banks were to spear-head a KM guided way of operating, awareness programmes, education and training and marketing of the concept to all employees would be envisaged. This is because KM is a relatively new concept that is often misconstrued to mean IT and it has to be considered as such if it were to be adopted as an operational guide in the banking environment. In an information and knowledge-driven economy the emphasis is on demand services (Laudon and Laudon, 2013:465); organisations need to keep abreast of such major developments in their industries to remain relevant and competitive. This research recommends that the managers of the selected banks find the best way forward to enhance the value and quality of their services and products as KM practitioners. The use of the information highway such as the intranet, internet and interactive communication channels: Blogs, Wikis, Facebook, Twitter and Web 2.0 technologies can improve the understanding and importance of the concept of knowledge management. In addition, this research study recommends the managers of the selected banks to develop KM platforms, knowledge portals and training centres where knowledge management principles are imparted. The study also recommends that all organisational knowledge should be subjected to tests and evaluations as suggested by Abbot (2004).

6.6.2 Recommendations on knowledge management policies at the selected banks

The study findings reflected the lack of a knowledge retention policy for the management of organisational memory, and that needed attention. Knowledge retention was likely to happen in an enabling environment for knowledge sharing. Sharing the view of Keeler (1999:22), some of the recommended key characteristics of a knowledge sharing culture in an organization are that:

- top leadership sees knowledge as a strategic asset and provides incentives and support for knowledge management processes;
- the organization focuses on the development and exploitation of its knowledge assets;
- tools and processes for managing knowledge are clearly defined;
- knowledge creation, sharing and use are a natural and recognized part of the organization's processes, not separate from normal work processes;
- groups within the organization cooperate instead of compete with each other;
- knowledge is made accessible to everyone who can contribute to it or use it;
- rewards and performance evaluations specifically recognize contributions to, and use of, the organisation's knowledge;
- knowledge management policies should be written or documented for future references; and
- the study also recommends that management at selected banks should put in place policies relating to the extension of retirement age, leveraging on retirees and succession planning.

6.6.3 Recommendations on knowledge management champions at the selected banks

Organisations that recognise knowledge as a strategic asset are appointing knowledge management officers or champions to drive all KM initiatives and policies. It was established during data collection that the Director of Information Systems was the KM champion and this posed knowledge gaps to employees and managers. It was, however, necessary for selected banks to identify issues of greatest relevance in terms of knowledge management champions. That way, it would be possible to appoint experienced knowledge champions to drive KM initiatives. The practical situation would be to recommend to management at selected banks to review their organisational structures and incorporate a knowledge management department. KM initiatives, policies and education programmes would be implemented and accessible to everyone in the organisation for use, thus presenting employees of selected banks with opportunities for gaining a better understanding of the strategic importance of organisational knowledge.

6.6.4 Recommendations on knowledge management practices at selected banks

There are various methods that organisations utilise to acquire, create, share and retain organisational knowledge. The study established that the investigated selected banks' databases and procedure manuals were the most common methods of retaining organisational knowledge. This is consistent with Hansen, Nohria and Tierney's(2001) findings that people-to-people

documents are not the only way to share knowledge; though people talk with one another they place emphasis on the codification strategy for certain types of work. Mavodza and Ngulube (2011) opine that knowledge becomes manageable, shareable and re-usable only if it is recorded and made available. The study established that selected banks had archival systems (libraries and records) where organisational explicit knowledge was kept. During document review, the researcher was taken and shown around and observed the repositories of selected banks, which, in the researcher's view, contained incomplete records and made it impossible to decipher the types of knowledge present or how KM was viewed. The study recommends that management at the selected banks should properly manage knowledge through the adoption of the organisational knowledge conversion theory (SECI model). The organizational knowledge conversion theory states that knowledge is converted from one state to another (Nonaka and Takeuchi, 1995) and in that way critical knowledge can be retained in the organisation either by sharing it or preserving it in the archives, thus forming part of the organisational memory. Another recommendation is in line with suggestions made by Jashapara (2005), who shares a similar view as Rowley (2001), that it is important for selected banks to include KM practices as they are made up of organisational learning, human capital, systems and technology, as well as culture and strategy. The views by Rowley (2001) and Jashapara (2005) could result in selected banks developing KM frameworks for sharing institutional practices.

6.6.5 Recommendations on factors inhibiting knowledge acquisition, creation, sharing and retention at selected banks

The study established that knowledge acquisition, creation, sharing and retention were inhibited by several factors such as mistrust amongst employees, lack of employee interactions, deaths of employees, resignations, employees' reluctance to share knowledge and a culture that does not promote knowledge sharing. It was also established that strict bank policies on secrecy and confidentiality inhibited employees from interactions. This research recommends that the appointment of knowledge management champions would alleviate all these challenges because knowledge management would be integrated with all other functional units. In addition, the appointment of KM champions will develop KM policies and strategies for all knowledge efforts and initiatives. The introduction of rewards and incentives would encourage employees to create, share and acquire knowledge in enabling environments. The study also recommends the implementation of succession planning policies so that, in the event of experts leaving the selected banks, replacements would fill their positions. The study also recommends the development and implementation of a knowledge sharing culture that cultivates trust amongst employees.

6.6.6 Recommendations on knowledge management enablers at the selected banks

A KM enabling environment is a platform where knowledge acquisition, creation, sharing and retention experience minimum or no disruptions. Surveys and interviews pointed out leadership and strategy, IT, organisational structure, organisational culture and human capital were the major enablers present at selected banks. The study established that in some instances respondents were not happy with their organisational cultures and qualities and skills of their leadership. This research recommends that leaders should attend management development programmes (MDPs) offered by different business schools in South Africa and at other reputable universities such Harvard and Cambridge. By attending MDPs, leaders would be exposed to new ideas, strategies, knowledge and skills needed to successfully manage the selected banks.

It was established that most of information dissemination was done between selected banks and customers and employees were not very much involved. The study recommends that the use of interactive communication tools such Facebook, Twitter, wikis, Blogs and WhatsApp be made available to employees to enable a KM environment. This research established that KM is a tactical response to the transformation to an information driven economy facilitated by planning, implementing, and monitoring of the knowledge-related activities of an organization (Lloria, 2008). It was observed that organisational structures of selected banks did not accommodate the function of a KM champion. In view of that discovery, this study recommends the establishment of a KM department in the organisational structure that allows the process of knowledge acquisition, creation, sharing and retention.

6.6.7 Recommendations on strategies for safeguarding knowledge at the selected banks

The study established strategies such as communities of practice, leveraging retirees, subject matter experts, story-telling and mentorship and apprenticeship as suggested by Lee and Olson (2008) and Dewah (2011). The researcher opines that the strategies identified during interviews are not exhaustive, but recommends that each selected bank puts in place policies for extending the retirement age of experts, the use of retirees as consultants and incentives and rewards. The study further recommends that the selected banks should work out a knowledge retention policy on how to implement a mentoring programme, coaching, succession planning, apprenticeship, encouraging communities of practice, subject matter experts and keeping the lessons-learned archives as strategies of capturing and retaining critical and personalized/tacit organizational knowledge. The experienced and subject matter experts (SMEs) should be identified so that they assist junior employees in knowledge acquisition and skills-equipping that should be retained in

the selected banks. It is recommended that the selected banks create the posts of knowledge officers. Knowledge officers may maximize the value of the organisations' assets, design and implement knowledge management strategies, and effectively exchange knowledge assets internally and externally (Turban, McLean and Wetherbe, 2004). Professional knowledge officers would execute the management of knowledge in the selected banks.

6.6.8 Recommendations on knowledge management solutions at the selected banks

The institutional use of the Web 2.0 tools that have been mentioned is required in order to survive in the modern information environment that has produced a need for an approach for a visual and interactive banking environment rather than traditional banking. As suggested by Tredinnick (2006), banking technologies can be integrated with Web 2.0 technologies to share and use information more creatively with customers and other stakeholders. Essential in this approach is problem-based banking in order for it to be meaningful. It represents the ability to identify a problem, analyse possible solutions, implement a plan, and present the solution. The reason for creating these interactive banking platforms is to encourage customers to use ICT tools in the comfort of their homes and offices rather than to go and spend time queuing in the banking halls. Interactive communication tools enable interaction and instant delivery of messages and prompt customers to react quickly. This study recommends that managers at selected banks should make IT policies clear to employees and managers relating to the usage of IT. Surveys and interviews indicated that selected banks communicated more with customers than with staff, much to the annoyance of staff. In that regard, the study further recommends that communication using ICT tools should extend to employees as well.

6.7 Implications of the research for theory and practice

Major changes such as the twenty first century information driven existence have resulted in paradigm changes which leave no discipline unaffected. The study revealed that KM was not the backbone of practice at the selected banks but it was established that KM played an important role in enhancing organisational performance. This study further shows that the use of mixed methods for data collection helped the researcher to fit together the insights provided by quantitative and qualitative research in answering the research questions.

The study contributes to the existing body of knowledge with regard to the topic in question by integrating KM practices where they are foreign to the institution and their implementation in selected banks. For this reason the contribution of this study is original. This study is important

because banks, in particular, possess a number of practices that need further investigation due to the fast changing information environment, which are affected by social networking and the media to establish good quality knowledge systems. Thus, the findings of the present study may be of use to banks, KM scholars, educators, researchers and students undertaking studies into KM practices all over the world.

What is important, if any such change were to happen, is to have a database of retrievable information as a way of enhancing the knowledge available to stakeholders. That way, it would be possible to have a place where instructional guides could be retrieved for re-use, tailoring, or changing/updating. This is an instance where the input of knowledge management champions could become relevant in the organisation of the knowledge. Besides the findings from this research, KM practice is a phenomenon reflected in the literature reviewed about different situations and different organisations. It is, therefore, incumbent upon banks to define KM in banking situations and make that meaning clear to the banking community, particularly with its systemic change implications.

6.8 Suggestions for further research

The area of the use of incentive systems in encouraging knowledge creation and sharing requires further investigation into how the selected banks can improve KM initiatives. The reason is that this includes elements of motivation theory, making it important to find out how it applies to a KM oriented organization. A knowledge needs analysis could also be useful in measuring staff skills and opportunities for training and development, institutional practices such as a knowledge sharing attitude, collaboration, team spirit, rewards and recognition and staff relationships with their colleagues at all levels.

Social software brought forward a wave of richer interactions with people connecting and sharing knowledge in many more meaningful ways than before. There needs to be a balance for banks to make their choices and select the tools they would want to work with. It means that it is important to determine if they want to use in isolation the tools they have been using already or start making use of those social networking tools that go further and beyond sharing the content, and focus as well on establishing the different relationships, connections and conversations amongst different beneficiaries of bank services. They can augment what is already available and improve on how knowledge flows between different departments and amongst staff. A recommendation is made to conduct a comparative study on the role of knowledge management in enhancing organisational

performance in the banking industry from other countries such as the United States of America (USA), United Kingdom (UK) or Germany. The USA, UK and Germany are global economic power-houses boasting of advanced technology and booming economic growth; therefore, the performance of banking industries in these countries could provide lessons on the role of KM.

6.9 Final conclusion

The study investigated the role of knowledge management in enhancing organisational performance in two selected banks of South Africa. It was established that KM practices existed at the selected banks but KM policies were not in place or documented. After discussing the implications of KM for the selected banks, the suggestion made by Wen (2005) can be a practical way of getting the KM process in place:

The divisional director should consider him/her-self as the chief knowledge officer of the entire organisation and should work together with the CIO, heads of the planning department, the computer and information technology center, the human resources management department, the finance department, etc. to design and develop such a system. Such a knowledge management system should be built on existing computer and information technology infrastructures, including upgraded intranet, extranet, and Internet, and available software programs to facilitate the capture, analysis, organization, storage, and sharing of internal and external information resources for effective knowledge exchange among users, resource persons (other departments, and subjects specialists, and so on), publishers, government agencies, businesses and industries, and other organizations via multiple channels and layers.

This study established that various challenges that existed in the selected banks impeded KM initiatives and recommendations were made to management on how to alleviate the challenges. Based on the findings presented in Chapter Four, it was established that the selected banks possessed leadership and strategy, IT, organisational structures and culture and human capital as the main KM enablers. The loss of organisational knowledge was highlighted as a major concern and the selected banks were putting in place strategies for safeguarding knowledge. The study established that KM solutions such as business intelligence, collaboration technologies, knowledge sharing and expert systems were present at the selected banks. Recommendations based on the findings of the study were made and areas for further research were identified.

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