Knowledge Management Practices in the Public Sector in Botswana

Mini-dissertation

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DECLARATION

"I declare that **Knowledge Management Practices in the Public Sector in Botswana** is my own work and that all the sources that I have quoted have been indicated and acknowledged by means of complete references"

Signed: .....K K ye.....

Date: 25 February 2011

ABSTRACT

The study investigates knowledge management (KM) practices in the public sector in Botswana. The underlying premise is that good KM leads to efficiency and effectiveness. The study assesses the KM practices in the government departments by means of a questionnaire survey of senior managers. The assumption is that the corporate manager/directors will know what knowledge is there, how knowledge is created, shared and flow in the organization. The main question of this study is whether the Botswana public sector is practicing KM. Related questions are:

- What are the views of public service managers/ directors on the benefits that can be reaped from KM practices?
- What evidence is there that the public service has a culture of sharing information and knowledge? And how are staff members encouraged to internalize and use new knowledge?
- How are creativity and new ideas encouraged?
- Are there appropriate technological resources to facilitate effective KM, for example central knowledge repositories and social networking?

The study explores the problem and questions by means of a questionnaire survey amongst 43 departmental directors of the Government of Botswana.

The overall finding is that information management rather than KM is being practiced. The respondents, senior public service managers, certainly recognize the value of and the need for KM. But, they themselves identify certain weaknesses, such as lack of knowledge of KM among their staff, weak communication inside and across the departments, lack of policy and lack of good KM systems.

Keywords

Knowledge management, Information management, Public service, Government, Botswana, Knowledge economy, Survey.

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LIST OF ACRONYMS

BEH: Botswana Education Hub

BIH: Botswana Innovation Hub

BNARS: Botswana National Archives and Records Services

BNLS: Botswana National Library Services

DIT: Department of Information Technology

DPSA: Department of Public Service Administration

EASSy: East Africa Sub-Marine Cable System

ICT: Information Communication and Technology

ITU: International Telecommunication Union

KM: Knowledge Management

O&M: Organisation and Methods

PBRS: Performance Reward Based System

SECI: Socialisation, Externalisation, Combination and Internalisation

WITS: Work Improvement Teams

CHAPTER 1
INTRODUCTION TO THE PROJECT

1.1 Introduction

The purpose of this study is to investigate knowledge management (KM) practices in the public sector in Botswana. The underlying premise is that good KM leads to efficiency and effectiveness. The exploratory study assesses the KM practices in the government departments through a survey of senior government managers. Its aim is to find out how knowledge is being managed in the public sector and if KM principles and practices are playing a role. The main question of this study is whether the Botswana public sector is practicing KM. It explores the question by investigating the presence of KM "enablers" or success indicators, which are garnered from the KM research literature.

1.2 Background

Since the emergence of KM as a discipline there have been many arguments and debates over whether it is just information management in new clothes. Wilson (2002) argues that the concept of KM is oversimplified in the KM literature, and he seriously questions the attempt to manage what people have in their minds. Nevertheless the private sector has since adopted and implemented KM practices, and there have been success stories reported in the management literature. The public sector has followed suit, as it too now faces competition for funding from companies and non–governmental organizations that provide the same services as it does (Luen & Al-Hawamdeh, 2001: 311).

In the agricultural era, value was derived from land. During the industrial era value was created from factories, utilizing resources such as labour and capital. More recently, value is derived from knowledge. Knowledge has become *the* resource, thus the development of the knowledge economy. The knowledge economy has had a significant impact on the way companies do their business. Faced with the knowledge intensity of products and services and the fast-paced change in global competition, companies have had to focus on their intangible resources to drive increased financial returns and competitive advantage (Grange, 2006: 18). For companies to survive in this era they have to manage their knowledge properly. It has been reported in the

management literature that companies that lead in the business world have knowledge management practices embedded in their everyday activities, processes and routines.

The public service has since also noticed the importance of KM as it too faces competition for funding from international donors. It also has pressure from customers as they demand high quality services and products, as some private companies provide the same service as government. With the current financial crisis, there is indeed a need to share knowledge and information between departments to reduce replication of services. The loss of institutional memory due to staff turnover also leads the public sector to embrace KM practices.

1.3 Conceptual analysis and theoretical background

Knowledge, information and data

Cong and Pandya (2003: 26) point out that, to understand KM, distinctions have to be drawn among data, information and knowledge. They argue that, "data are raw facts. For data to be of value, they must be processed and given context to obtain information, from which a decision can be made. Knowledge is then perceived as meaningful information". According to April and Izadi (2004: 4), as soon as data are manipulated and/or related to any category, event, or context, they gain meaning, reveal patterns and trends, and then can be termed "information".

It seems therefore that all the above authors are of the same view that knowledge goes hand in hand with data and information. Data are the raw material, then they are processed into information, and finally knowledge is constructed. Knowledge is defined by Davenport and Prusak (1998: 8), as quoted by Al-Hawamdeh (2003: 17), as "a fluid mix of framed experience, values, contextual information, and expert insight that provides a frame work for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in the documents or repositories but also in organizational routines, processes, practices and norms". Jain's study (2007: 378) states that "knowledge transformation is a three step process, where data is transformed into information, and information is transformed into knowledge where data is simply raw materials. The very first stage is data, which converts into information, and finally into knowledge, which must be managed".

There is no accepted definition of KM, largely due to the breadth of the concept and the complex nature of knowledge. According to the World Bank (2001), as cited by Al-Hawamdeh (2003: 21), KM is the management of knowledge through systematic sharing that can enable one to build on earlier experience and obviate the need for costly reworking of learning by making the same repetitive mistakes. Davenport and Prusak (1998), also cited by Al-Hawamdeh (2003: 22), state that KM is concerned with the exploitation and development of the knowledge assets in order to fulfill an organisation's objectives. Knowledge assets or resources would include *explicit* knowledge in the form of captured or recorded information and *tacit* or implicit knowledge in the form of expertise, skills and competencies of the people working in the organization. KM involves all those processes associated with identification, sharing and creation of knowledge.

The central premise behind KM is that all the factors that lead to superior performance - organisational creativity, operational effectiveness, and quality of products and services - are improved when better knowledge is made available and used competitively (Bahra, 2001: 75).

Knowledge management vs Information management

Al- Hawamdeh (2003: 21) believes that information management is only a small part of KM. Besides explicit knowledge (information), KM includes 'know-how', which of course can be captured and documented as information. Tacit knowledge can only be transferred through socialization and interaction between people.

Grey (1998) differentiates the two by stating that: "Working with objects (data and information) is Information Management and working with people is Knowledge Management". He further states that KM recognizes value in originality, innovation, agility, adaptability, intelligence and learning.

Thus, information management is a subset of KM. In other words, KM is broader than information management as it does not only deal with data and information and systems. It encompasses also the human aspect of the organization, organizational learning and innovation.

Theory of Organizational Knowledge Creation

The study relies on *organizational knowledge creation* theory, which is often used in KM research. Nonaka and Takeuchi (1995: 70) describe the theory as a continuous and dynamic interaction between tacit and explicit knowledge. They further state that the interaction is shaped by shifts between different modes of knowledge conversion involving the four phases of the so-called SECI model: socialisation, externalization, combination and internalization. These are in turn induced by several triggers:

> "First, the *socialization* mode usually starts with building a field of interaction. This field facilitates the sharing of members' experience and mental models. Second, the *externalization* mode is triggered by meaningful dialogue or collective reflection, in which using of metaphor or analogy helps the team members to articulate hidden tacit knowledge which is otherwise hard to communicate. Third, the *combination* mode is triggered by networking newly created knowledge to existing knowledge from other sections of the organization, thereby crystallizing them into a new product, service or managerial system. Finally, learning by doing triggers *internalization*" (Nonaka and Takeuchi, 1995: 71).

They further say that organisational knowledge creation can be viewed as an upward spiral process from the individual level to the collective group level and then to organisational level, sometimes to the interorganisational level.

The study uses organizational knowledge creation theory to explore KM practices in the public sector in Botswana. It investigates how knowledge is shared, how new concepts are created, how the new concepts are incorporated into the organisation and finally how staff internalise and use the knowledge.

The SECI processes are clearly hard to measure and might well require longitudinal studies beyond the resources of a Masters Mini-dissertation project. But KM researchers often turn to surrogate or proxy measures. For example, Gaffoor identifies certain KM *enablers*, such as:

- certain organizational cultures (the unique mix of values and beliefs that models the behaviour of an organization)

- value-ing human resources (based on the understanding that knowledge exists only because of people, as it is derived from people with their experiences)
- explicit organizational KM strategies in organizational policies, programs and leadership
- effective information communication and technologies (ICT), which are needed to facilitate quick searching, access to and retrieval of information which in turn encourage communication among members of the organization (Gaffoor, 2008).

These enablers provide a frame for the investigation described in this dissertation.

1.4 Botswana as a Knowledge Society

In recent years the concept of the information society has evolved into that of the knowledge society. The evolution of information management towards KM, that was described earlier, might reflect these broader social and economic shifts. The study of KM in Botswana should therefore examine the country in terms of the generally accepted attributes of a knowledge society.

According to Britz, Lor, Coetzee and Bester (2006: 28), a knowledge society is a "society that operates within the paradigm of the economics of information". A knowledge society is well connected via modern ICTs to the dematerialized economy, and has access to relevant and usable information. But it values human capital as the prime input to production and innovation. Britz et al (2006: 27), summarise the literature to come up with the following indicators used to describe a knowledge society:

- the use of and access to modern ICTs
- number of scientists in a country
- amount spent on research and development as a percentage of the gross domestic product (GDP)
- ability to produce and export high technology
- number of patents filed in a country
- number of articles published in highly ranked scholarly journals.

Since Botswana gained independence in 1966, it has been heavily dependent on minerals as a

source of revenue. Botswana, in common with other developing countries, has recognised that the economy worldwide has changed to a knowledge based economy and for its future survival as a country it needs to become a knowledge society. In his inaugural speech in 1998, President Lt. Gen. Seretse Khama Ian Khama (1998) had this to say about Botswana moving towards a knowledge society:

> "Closely related to the development of our skills base is the need to move with speed into the knowledge society. Communication, science and technology will be key in this. More use of ICT for service delivery, coupled with strengthened research and development, should not only give us greater efficiency, but opportunities for diversification beyond diamonds. Innovation and creativity, especially amongst the youth, will be encouraged and promoted. Through communication infrastructure development, access for rural areas and international connectivity, as well as telemedicine will be greatly improved".

Pheko (2010) points out some of the ICT hurdles:

- low rates of internet connectivity
- low computer literacy
- lack of local content making it difficult for Internet penetration to grow
- high infrastructure costs
- low disposable incomes
- sparse population.

According to the Botswana Government Portal (2010), the literacy rate of Botswana is 81.2%, ranked number 137 in the world; there are 80,000 internet users in Botswana, number 143 in the world; there are 5, 820 telecommunication internet hosts, number 108 in the world. In the International Telecommunication Union (ITU) 2009 ICT development index, Botswana is ranked number 109 in the world and number 8 in Africa.

In an effort to become more competitive in the knowledge economy, the Botswana Government has developed the National Vision, which is a long term vision to be achieved by 2016, when the

country will celebrate 50 years of independence. Its aim is to drive the country's socio-economic and political development into a competitive, winning and prosperous nation. The national vision has seven pillars, and one of the pillars is to be an informed and educated nation by 2016. This pillar/goal is the one that drives Botswana towards being a knowledge society. In 2005, in an effort to achieve this visionary goal, the Botswana Parliament endorsed a National Policy for ICT, then the tertiary education policy called Towards a Knowledge Society and the establishment of development "hubs" in all sectors.

The National Policy for ICT, known as the Maitlamo Policy, is meant to guide the growth of the ICT industry. An important initiative is the move towards e-government though which government delivers its services online. Through the Maitlamo policy, government has invested in the East Africa Sub-Marine Cable System (EASSy) to increase its international connectivity. The government is establishing telecenters in rural areas with the Kitsong Centre spearheading them. These telecentres offer basic ICT services including access to the internet. These telecentres are also placed in public libraries in some rural areas. Another initiative is Thuto Net, where government refurbishes used computers and distributes them to junior secondary schools. There have been a number of other laws and policies adopted in the ICT industry, like the Telecommunication Policy and Act [72:03], and the Cyber Security Act (Pheko, 2010).

The government has also set up several sectoral hubs, whose main aim is to build conditions favourable to doing business in Botswana. The two that are relevant to driving Botswana towards being a knowledge society are: the Botswana Education Hub (BEH) and the Botswana Innovation Hub (BIH). With the BEH, Botswana hopes to become a viable competitor in the regional graduate student arena and exporter of knowledge-based products and services. The BIH, on the hand, "incorporates best practices from science and technology parks worldwide and will offer state-of-the-art infrastructure and a wide range of business services". This hub is expected to improve Botswana's ability to compete in the global market by building a productive labour force with technical skills and training (University of Botswana, 2010).

Botswana's parliament in 2008 approved a new tertiary education policy, which is called Towards a Knowledge Society, for the stable and rapidly growing southern African nation. The

major goals of the new approach to tertiary education are to enhance relevance, ensure quality, maintain diversity of choice and increase access. The aim is to more than double the number of young people entering tertiary education within two decades. The overall objective is to transform Botswana into a knowledge society, with research and innovation the cornerstones of development. It is believed tertiary education systems serve to stimulate growth by producing people who are "inventive, pioneering ... creative, talented and capable researchers" and who can produce high-impact research to achieve transformation (*Botswana: new tertiary education policy*, 2008).

Libraries have an important role in building a knowledge society, especially in a developing economy such as Botswana. In 2009, the Minister of Youth, Sports and Culture presented a budget of P199 550 000, for building and equipping existing libraries with information resources as part of the National Development Plan 2010-2016. She is quoted as saying, “the services offered by these facilities will create a productive and knowledgeable society, enhance lifelong learning and increase public access to information” (Kokorwe, 2009).

Collectively, these initiatives show that Botswana is taking great strides towards becoming a knowledge society. Even the President of the country shares the vision of the knowledge society. However, despite these initiatives and a number of public sector reforms over the years to improve service delivery, the results of a recent customer satisfaction survey carried out by the Office of the President showed that the performance of the public sector is rated as only 27% (Botswana. Office of the President, 2010).

The research described in this mini-dissertation rests on the premise that KM might play a significant part in improving this score. It investigates the status of KM in the Botswana public service. The research problem and its research questions will be elaborated on in Chapter 3, after the review of relevant literature in Chapter 2.

1.5 Outline of chapters

Chapter 1 introduces the project and explains the rationale for the project. It undertakes the conceptual analysis of key concepts like KM and the SECI theoretical frame. Chapter 2 surveys

the existing professional and research literature of KM in the public sector. Chapter 3 describes the research problem, research questions, the data-gathering methodology and some ethical principles. Chapter 4 presents, summarizes and analyses the data collected. Chapter 5 tries to answer the research questions through reflecting on and interpreting the findings presented in the previous chapter. The author concludes by reflecting on the limitations of the study and makes some recommendations for future research. She also makes some recommendations to enhance KM in the public service in Botswana.

CHAPTER 2
REVIEW OF THE LITERATURE OF KM IN THE PUBLIC SECTOR

2.1 Introduction

This chapter discusses the literature on the benefits and challenges of KM in the public sector, comparing the public sector with the private sector. It discusses the KM enablers that Yeh, Lai and Ho (2006) and others identify as success factors in the implementation of KM initiatives in organizations. Then it also discusses some selected empirical case studies of KM in the public sector.

2.2 KM in the Public Sector

As stated in Chapter 1, the premise of the study is that KM is as important to the public sector as to the private sector. Public administration is the way in which the state is organized to deliver, produce and deliver public goods. The mandate of the public service has always rested on social responsibility and ensuring a better life for all citizens. Wiig (2002: 225) claims that KM can contribute to the three objectives of government services, namely to provide:

- a stable, just, orderly and secure society
- acceptable level of quality of life and
- a prosperous society.

Yuen (2007) from Singapore National University presented a useful overview of KM in the public sector in developing countries at the 7th Global Forum on Reinventing Government. Her survey shows that the implementation of KM is mainly the responsibility of ICT departments. Lack of awareness and lack of time are identified as the key obstacles in KM implementation. Yuen concludes however that, in general, developing countries see KM as a key initiative that is central to information sharing between the public sector and its citizens.

2.2.1 KM objectives in the public sector

Cong and Pandya (2003: 29) argue that government needs KM for four reasons. Firstly, in the knowledge economy, governments are increasingly facing competition over service delivery and policy-making both nationally and internationally from foreign organisations delivering the same services. Secondly, customers demand and receive more customization from knowledge-

oriented organizations, so they expect similar benefits from public service. Thirdly, the retirement of civil servants and frequent transfer of knowledge workers across government departments create new challenges for retention of knowledge and preservation of institutional memory and hence the need for the training of new staff. Finally, jobs today depend more on employees' knowledge than manual skills.

Riege and Lindsay (2006: 25) elaborate on the objectives for KM initiatives in the public sector that Wiig (2002) identifies. They see KM as:

- maximizing efficiencies across all public services by connecting silos of information across different levels of government and across bordersdeveloping new or consolidated systems to improve overall performance and capitalize on a broader, more integrated and more easily accessible knowledge base
- improving accountability and lessening risks by making informed decisions and resolving issues faster, supported by access to integrated, transparent information across all organizational boundaries
- delivering better and more cost effective services by enhancing partnership with and responsiveness to the public.

In their study of the status of KM in the public sector in Nepal, Nirmala and Shrestha (2004) are of the view that the ultimate objective of KM in the public sector is to maximize productivity and enhance public service delivery. They believe that KM at government level aims to improve the internal processes and formulate sound policies and procedures for efficient public service delivery and increased productivity.

All these objectives highlight the importance of KM in the public sector. Its goal is to break the barriers that hinder the flow and sharing of knowledge in the public sector. Through KM practices, the possibility of duplication of efforts between departments and divisions can be minimized. KM improves decision-making in the public sector as it enables the right knowledge to be received by the right person at the right time, so that he or she makes the right decisions. Nirmala and Shrestha (2004) believe that, for these objectives to be attainable there have to be strong systems and mechanisms to share knowledge, to provide access to knowledge and

expertise, and to retain knowledge in-house. Increased transparency of public service activities can result in building trust in government among citizens.

2.2.2 Private vs. public sector KM

Comparison of KM in the public sector with that of the private sector cannot be avoided when discussing KM in the public sector. Taylor and Wright (2004: 23) are of the view that KM, like many other managerial innovations, appears to have been adopted firstly by manufacturing firms. The public sector is only beginning to recognize the importance of KM, as it is traditionally slower to embrace innovative management practices. In their study of the perceptions of and the use of KM in both public and private sectors, McAdam and O'Dell (2000: 327) conclude that both private and public organizations perceive KM benefits similarly: as improved quality, more efficiency, enhanced management learning, better products and services, and reduced operating cost.

Cong and Pandya (2003: 30) state that the major differences between the private sector and the public sector are that the latter is stakeholder dependent, while the private sector is shareholder dependent. The government has a variety of stakeholders: local government, the public at large, private companies and the state. When the government has to make policy decisions and deliver services, it has to consider the interest of these stakeholders. The private sector, on the other hand, only provides their shareholders with their profits and investment. Moreover, the private sector is competition based, while the public sector is dependent more on factors such as service delivery, information provision, and knowledge identification, sharing and utilization. Due to the survival issue, private sector is always on its toes to gain competitive advantage by adapting to new management tools, techniques and philosophies such as KM.

Skryme (2010) also stresses the fact that the private sector operates in a competitive environment, where a key measure is financial success, while the public sector often operates in a quasi- monopoly situation where its measures of success are perhaps less clear cut and are perceived differently by different stakeholders. He further states that there are several areas where in general, the public sector faces higher levels of complexity, for example:

- It operates at several levels: local, regional, national and international

- It covers many sectors - education, health, justice, defense and, so on
- Many public sector organizations are large and have staff and offices dispersed over a wide area
- Government deals with a large number of customers, often numbering millions
- A high degree of inter-departmental and inter-agency working is needed to address a specific policy area or to deliver joined up services
- It must balance demands for accountability and openness against the need to protect privileged and personal information.

These factors put pressure on developing common definitions and standards so that knowledge can flow easily across the larger number of interfaces. They also mean that documents need careful classification, to distinguish their status and intended audience.

From the above, it is clear that it is easier for KM practices to succeed in the private sector than the public sector. The private sector is solely concerned with making profit; while the public sector is concerned with a variety of issues that affect the wellbeing of every citizen. Grange (2006) carried out a literature review to find out whether KM has any relevancy in government/ public sector and whether the measurement models used in the private sector can be applicable in government. The study concludes that KM has clear value for the public sector. It argues that government has two KM imperatives: organizational and national. Organizational KM imperatives ensure improved performance and service delivery in the public sector, while the national imperative ensures national competitiveness in the new knowledge economy. Grange identifies the Intangible Asset Monitor as a useful tool to assess KM inside government. As for the national KM imperative, he points out that the Knowledge Assessment Matrix and other international competitive reports provide an indication of how measurement at the national level can be dealt with.

2.2.3 Challenges of KM in the public sector

Taylor and Wright (2004: 34) outline the following factors that hinder KM in the public sector:

- The public sector has a rule-based culture that seeks compliance rather than entrepreneurship, innovation and improvement

- The pressure for accountability for taxpayers' money and media scrutiny erode the willingness of staff to reflect upon and learn from mistakes
- Changes emanate predominantly from government policies that are perceived to be imposed, and consequently received as unnecessary external interference
- The focus on individual agency performance is at variance with the need for inter-agency collaboration across the entire service value chain.

That is to say, governments tend towards a culture of working according to the book and this culture hinders innovation, as employees are not allowed by the culture to think or practice outside the box. Sinclair (2006) describes this rule-based culture as old bureaucratic, hierarchical, organizational culture. He states that this culture hinders KM as there are too many constraints and controls to allow knowledge and information to flow freely. The structure of the bureaucratic organization is top down, and the information flows in one direction from the top down, from manager to junior in the form of instruction. KM might thrive more in a flat structure where information flows in all directions, both horizontally and vertically.

Sinclair (2006) also points out another barrier to effective knowledge sharing in the public sector - both the managers and their staff are simply not aware of KM and its benefits. In their study of the role of KM in enhancing government service delivery in Kenya, Ondari-Okemwa and Smith (2009) identify the culture of "secrecy" in most African governments as one of the challenges of KM in the public sector. They claim that this culture of secrecy is exemplified by the Swahili word for government "serekali", which means top secret. They believe that this culture prevents people sharing knowledge in government.

Syed- Ikhsan and Rowland (2004a: 241) add another challenge: governments do not have "motivate and reward systems" that can encourage knowledge sharing. They can only provide limited financial incentives. As a result, employees are not eager to share knowledge as they do not see how sharing information will benefit them as individuals.

Some of the solutions to meet the challenges are to take a proactive attitude towards KM practices established in the private sector and adopt and adapt them to the public setting. Cong

and Pandya (2003: 25) are of the view that, to be able to raise awareness of the benefits of KM to both the staff and managers, there should be an environment of trust that will enable people to willingly share their knowledge. The following section discusses the KM enablers that are identified by Yeh, Lai and Ho and others as success factors in implementation of KM initiatives in organizations.

2.3 KM enablers

Yeh, Lai and Ho (2006: 794) refer to enablers as the driving forces in carrying out KM. They are what some authors call critical success factors. They do not only generate knowledge in the organization but they also motivate the group members to share their knowledge with one another, allowing organizational knowledge to grow concurrently and systematically. They identify four key KM enablers:

- strategy and leadership
- corporate culture
- people
- information technology.

Monavvarian and Kasaei (2007: 354) prefer to call the enablers "organizational elements", saying that "effective KM requires many organizational elements: technology, human resources practices, organizational structure and culture, in order to ensure that the right knowledge is brought to bear at the same time." They claim that, if government is to implement a KM strategy in the public organization, they have to manage these organizational elements, and if they are managed efficiently and effectively, knowledge can be easily created, disseminated, stored and applied in the ministry. Adding to the four, Syed-Ikhsan and Rowland (2004b: 95) identify "political directives" as another element that is specific to the public sector. They argue that, in a public organization, political influence has a great impact on the creation of knowledge.

For this project the term enablers is preferred. The following are discussed in the following sub-sections: people / human resources practices, information technology, corporate culture and organizational structure.

2.3.1 People / human resources practices

According to Cong and Pandya (2000), people are the most important components in KM, because managing knowledge depends on people's willingness to share and reuse knowledge. Yeh, Lai and Ho (2006: 798) also argue that people are core to creating organizational knowledge, as knowledge is kept within individuals. They further argue that KM is the way to allow hidden knowledge within an individual to be transferred to other members of the organization in order for them to share, utilize and then convert it into knowledge within the organization. Hence organizations must view employees as their most important knowledge resource.

Having established that there cannot be knowledge without people, there is a need to create a conducive environment where people are willing and able to share their knowledge. Yeh, Lai and Ho (2006: 798) believe that an incentive programme plays a major role in encouraging employees to share their knowledge that will then be turned into organizational knowledge.

According to Syed- Ikhsan and Rowland (2004: 103), human resources as an enabler of KM in the public sector is affected by posting, training and staff turnover. In relation to posting, they argue that employees bring to the organization their prior education, experience, knowledge and skills and they add value to the organization, if they are properly placed in the right places. With regards to training, they believe that employees should be given constant training in order to keep up with the latest development and improve on the knowledge that they already have. The knowledge gained by employees through training will enable them to convert their knowledge into the organization's routine, competencies, job descriptions and business processes, plans, strategies and cultures. This will enable the creation of new knowledge in an organization. Some departments are constantly affected by staff turnover, which means that knowledge workers leave the organization without leaving their knowledge behind. KM ensures that organizations will have proper mechanisms in place to prevent this.

2.3.2 ICT

Monavvarian and Kasaei (2007: 356) believe that technology is a key enabler of KM, as it is the most effective means of capturing, storing, transforming and disseminating information. But Cong and Pandya (2003), on the other hand, point out that, although technology is a crucial

enabler that helps to connect people with information and people with each other, it is not a solution to KM.

According to Yeh, Lai and Ho (2006: 798) information technology enables rapid search, access and retrieval of information, and can support teamwork and communication between organizational members. They list four different roles of ICT in KM: 1. Obtaining knowledge; 2.Defining, storing, categorizing, indexing, and linking knowledge related items; 3. Seeking and identifying related content; and 4.Flexibly expressing the content based on the specific utilization background. Syed- Ikhsan and Rowland (2004b: 102) add two general capabilities of ICT with regard to knowledge: first, knowledge may be codified into a decision support or expert system by making it explicit; secondly, it helps to keep track of persons with particular expertise and enables speedy communication between them.

Groupware, intranet, internet are some of the IT tools identified by Gaffoor (2008) that enable collaboration or KM in organizations.

2.3.3 Corporate culture

Syed- Ikhsan and Rowland (2004b: 102) define corporate/organizational culture as the shared values, beliefs and practices of the people in the organization. They argue that culture is the key factor that determines the outcome of other elements such as technology and management technique. Yeh, Lai and Ho (2006: 797) believe that organizational culture does not only define the value of knowledge and explain the advantages that knowledge creates for the organization but it influences the willingness of employees to share and put knowledge into the organization.

It is agreed that knowledge sharing can only work if the culture of the organization promotes it. The knowledge sharing culture will lead to people being willing to share ideas and insights because it natural to them. It is not something they are forced to do. Multiple viewpoints are allowed for in this culture.

2.3.4 Organizational structure

According to Nirmala and Shrestha (2004: 8), organizational structure is a way in which people and jobs are organized in organizations to carry out the organizational work properly. They further point out that organizational structure comprises the following: communication flow, proper documentation of policies, procedures and regulations.

Syed- Ikhsan and Rowland (2004b: 101) focus on the communication flow and documentation as components of organizational structure. They argue that the status of information and documents plays a major role in the transfer and creation of knowledge in the organization. They say that, in government especially, the classifying of information and restricting of documents according to designated levels of employees prevent the free flow of information. They believe that in most government organizations communication flows top down, and it takes too much time for this information to filter down through every level of the organization. The flow is too slow to meet employees' needs. Moreover, Monavvarian and Kasaei (2007: 357) argue that formal organizational structures limit an individual division's access to knowledge collected by other divisions in the organization.

It seems that these KM enablers are all crucial, and need to be intertwined for the successful implementation of KM strategy in organizations.

2.4 Selected case studies of KM in the public sector

This section highlights a few case studies of KM in the public sector. The focus is on research in developing countries. They serve as useful models for the study in Botswana.

The South African studies show that the public sector has started implementing KM but it is at an infancy stage. Mphahlele's Masters thesis (2010) investigates KM Practices in the South African public sector between 2002 and2008. It concludes that the South African public sector has taken some giants steps in implementing KM initiatives, although they are not implemented in all government departments. Mphahlele narrates that KM implementation in SA government departments was kick-started in 2002 by an agreement between the Departments of Public Service Administration (DPSA) and Communication, which was followed by road shows about

KM all over the country spearheaded by DPSA. In 2003 the KM Working Group was formed by the Government Information Technology Officers Council. The study claims that the increased number of advertised KM positions in national and provincial government is a sign that the South African public sector is serious about the implementation of KM. Unfortunately, the implementation is hindered by a number of challenges, mostly coming, Mphahlele says, from the public sector silo mentality. She claims that there is little coordination and cooperation between the national departments and their related provincial departments. Secondly, most KM appointments are middle managers, and middle managers are merely implementers, who do not take the final decisions for the organization. Thirdly, her study reveals that there is no standard payment scale in department for the same position and this has resulted in high staff turnover as staff move from one department to another.

Gaffoor (2008) uses the Stellenbosch Municipality as a case study to evaluate the impact of the accepted KM organizational enablers, like culture, leadership, human resources, ICT and organizational structure, on the implementation of KM. The findings of the study show that, even though KM is a new concept, the municipality has the potential to implement KM initiatives successfully. This conclusion comes from extensive interviews in various departments and a review of documents. Human resources and ICT are identified as the enablers that are particularly conducive for the implementation of KM. The greatest challenge identified in the study is weak leadership support and the lack of culture of sharing across the municipal departments. It is noteworthy that Gaffoor cites the City of Johannesburg and the Buffalo City municipalities as the municipalities that have implemented KM successfully in South Africa.

An Iranian study by Monavvarian and Kasaei (2007) chose the Ministry of Labour as a case study. It examines the connections between KM and the following factors: organizational culture, organizational structure, technology, human resources, transparency of documents, flow of communication and information, and training. The study reveals that the most important factors for effective implementation of KM at the Ministry of Labour are culture followed by technology and training.

Ondari-Okemwa's PHD research (Ondari-Okemwa 2007; Ondari-Okemwa and Smith 2009)

investigated the practices, procedures and challenges of KM in government-owned organizations in Kenya. The study reveals that knowledge is managed though library services, documentation services, records management, and communication and public relations services. It shows that, even though there are really no formal KM programmes in the organizations, there is much collaboration between them and organizations in other countries. The main challenges are lack of standards for measuring the value of KM, little top management support, and no sophisticated IT support. They rely on the Internet for transfer and exchange of knowledge. Another challenge is that bureaucracy is prevalent and it hinders interaction and collaboration between knowledge workers. Ondari-Okemwa-and Smith conclude that, even though KM is not adequately integrated into the Kenyan public sector, it has the potential to improve service delivery in the public sector. They argue that the benefits of KM are not very visible in Kenya and other sub-Saharan countries because the public sector is still too bureaucratic and there are no incentives to create, distribute and share knowledge and information.

In Malaysia, Syed-Ikhsan and Rowland (2004) carried out two studies at the Ministry of Entrepreneur Development. One investigated the relationship between organizational elements and knowledge transfer. The study relates organizational culture, ICT, human resources, and political directives to knowledge transfer and creation of knowledge assets. The study reveals a powerful relationship between the two sets of variables. The authors conclude that, when implementing KM in the public sector, all the organizational elements, including political directives, should be taken into consideration. The second study at the Ministry of Entrepreneur Development investigated the perceptions and understandings of respondents about various aspects of KM. It compared the responses of more and less experienced staff. The study finds that, even though the Ministry does not have a specific KM strategy, knowledge is integrated in its procedures and policies, job manual procedures, desk files, work flow and databases. The study also reveals differences between new and old employees with newer employees believing that changing employees' behaviour is very difficult.

Nirmala and Shrestha (2004) assessed the readiness of the Nepal public sector to initiate KM. They carried out interviews with high and middle level government officials. Readiness factors, such as understanding of KM, organizational culture, KM practices, technology and policy, were

used to rate the status of KM in Nepal's public sector. The total score is low, 6.75 out of a possible 20, indicating that Nepal is at an infant stage in introducing KM in the public sector.

2.5 Summary of key points

This chapter has surveyed the discussion in the literature of the value of and status of KM in the public sector. This discussion concludes that KM offers great benefits for government, although it faces specific challenges, which come from its typically bureaucratic structures. KM enablers or critical success factors were also discussed, namely: people, technology, corporate culture and organizational structure. These serve as measures of KM and form the basis of much of the case studies of KM. The literature review shows that KM is perhaps still a newish concept especially in Africa and other developing regions.

CHAPTER 3
RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter describes the research methodology used in the investigation of KM practices in the public sector in Botswana. The chapter starts by stating the research problem and the research questions, which come from the theoretical discussion of KM in Chapter 1 and the literature review in Chapter 2. More information on the public sector in Botswana is then given before the research procedures are described.

The research might be described as "exploratory" as its purpose is to paint a preliminary picture that might be expanded in follow-up research (Neuman, 2006: 33). KM is notoriously difficult to define and contain; and it is hoped that this limited study might point the way to further research.

3.2 Research problem and questions

The study investigates KM practices in the public sector in Botswana. It follows the example of existing research in exploring the existence of generally accepted KM "enablers" as they provide a conducive environment for KM and are thus indicators of "practice".

The underlying premise is that good KM leads to efficiency and effectiveness - as discussed in the previous chapters. As mentioned in Chapter 1, even though the government of Botswana has introduced a number of public sector reforms over the years to improve service delivery, it does not perform well in customer satisfaction surveys (Botswana. Office of the President, 2010). There is high staff turnover with 1151 people leaving the service in 2008 alone (Botswana. Central Statistics Office, 2009).

The main question of this study is whether the Botswana public sector is practicing KM. It explores this question by means of a questionnaire survey of senior managers. The assumption is that they will know what knowledge is there, and how knowledge is created, shared and disseminated in the organization. As shown in the previous chapter, existing research agrees that

top management support is crucial for effective KM. The questions that come from the problem are:

- What are the views of public service managers or directors on the benefits that can be reaped from KM practices?
- What evidence is there that the public service has a culture of sharing information and knowledge?
- How are creativity and new ideas encouraged?
- How do staff members internalize and use the new knowledge?
- What are the technological resources available to facilitate effective KM, for example central knowledge repositories and social networking?

3.3 Research site: the Botswana public sector

Botswana is a unitary state and operates a written constitution with separation of powers between the executive, legislature and the judiciary, which ensures checks and balances. The executive arm of government, headed by the President, comprises a body of ministers or cabinet, responsible for the administration of national affairs. The administration of the country is divided into central and local government. Central government has 16 ministries with 103 departments, six independent departments, and 16 para-statal organizations. There are 16 local authorities, two city councils, four town councils and 10 district councils. The permanent secretary to the President is the head of the public sector. The public sector management and administration falls under the Directorate of Public Service Management, which is responsible for administration, manpower planning, recruitment and development, as well as public service performance and productivity (Botswana, 2003: 4; Botswana public administration country profile, 2004: 9).

The public sector is the largest organization in Botswana in terms of its breadth of services, number of customers, assets, expenditures and number of employees. The Institute for Development Policy Analysis (Botswana, 2004: 1) is of the view that, even though Botswana is said to be doing well in economic terms, the public sector performs poorly. This is evidenced from official reports like national development plans, annual budget speeches and the Vision

2016 document that was mentioned in Chapter 1. For two decades now, the government has been introducing public sector reforms like Work Improvement Teams (WITS), Organization and Methods (O& M), Performance Management Systems and recently e-government - in an effort to curb the problem of poor performance, and improve efficiency and effectiveness in the public sector.

Information Management in the Public Sector

Botswana National Library Services (BNLS), Botswana National Archives Records Services (BNARS) and the Department of Information Technology (DIT) are the departments that are responsible for information management in the public sector. However, DIT is mainly responsible for ICT services across the public sector. BNLS encourages the establishment of libraries in the government ministries and independent departments. It then provides professional staff for the various departments. In 1999 according to Kgosiemang (1999), there were 27 special libraries with BNLS staff in Botswana government departments. Their purpose is to provide information, literature and publications to support the core business and research activities of the departments. The collections of these libraries vary; but in general they provide reference services, current awareness services, abstracting and indexing services, audio-visual materials, books, journals, periodicals related to the core business of the department, as well as local and regional newspapers.

The BNARS provides a records information service to government, and provides advisory services to the local authorities and parastatals. Its mandate is to manage all public records from creation to disposition. All the government departments have records management units which are commonly called registries. BNARS provides departments with professional staff on secondment. The units control all the records coming in to and leaving the organization, and they are supposed to ensure that:

- Incoming and outgoing correspondence receives attention without delay
- Official correspondence is assigned to appropriate files
- Files are distributed to the appropriate officers
- The right information is provided to the right person at the right time

- All files not in use are stored and maintained in such a manner that ensures their legibility and preservation
- Non-current records are periodically disposed off in accordance with the retention and disposal schedule.

The *Botswana Government Portal* (2010) describes the role of the Department of Information Technology (DIT) as a facilitator and administrator of ICT services across the public sector. It also plays an advisory role on all ICT related matters to government ministries and departments. Other major services provided by the Department include website hosting for government, e-mail connectivity and internet access. All the departments in the public sector have an IT office, which supports the core business of the department through ICT. These offices make sure that the server, website and the e-mail systems are working properly on a daily basis. They also help staff with any computer related queries.

3.4 Research design and methodology

The focus in this study is the central government departments based in the capital Gaborone. It uses the quantitative questionnaire survey approach. Creswell (1994: 117) describes survey design as a description of trends, attitudes or opinions of a population by studying a sample of the population. From the sample results, the researcher then generalizes about the whole population. The survey approach was chosen because of its ability to generalize from a small sample and its relative convenience and affordability.

3.4.1 Sampling

As has been mentioned in the previous paragraph, the study covers only the central government. There are 16 ministries and 103 government departments in Gaborone. T he 103 department directors make up the population for this study. The decision was made early on to restrict the exploratory study to a rather homogenous group of senior management for three reasons:

- Existing research has shown the importance of senior managers' understanding and attitudes to KM
- It was felt that senior managers might be best placed to provide a picture of the status of KM in their departments

- The limited resources of a mini-dissertation study hindered a bigger, more diverse and stratified sampling approach.

Research texts suggest that with small populations, such as in this study, the bigger the sampling ratio the more accurate the sample will be. However, smaller samples are acceptable when less accuracy is acceptable, when the population is homogenous and not many variables will be examined at a time (Neuman, 2006: 241).

The researcher, an employee of the Botswana government but also a student at the University of the Western Cape in Cape Town, allocated one month for the distribution and collection of questionnaires. To ensure a good response rate, she went door to door to all the 103 government departments distributing questionnaires to corporate managers (managers of the ministry management section and extra ministerial departments) and departmental directors. The plan was to physically collect the questionnaires after five days from the directors' secretaries. The researcher walked into the departments confidently, in the belief that she would get at least 80 questionnaires back. She had two covering letters: one from the Office of the Auditor General written by the Assistant Auditor General who is the researcher's sponsor and employer and one from the University of the Western Cape written by her supervisor. Unfortunately many of the departments refused to accept the questionnaire because the researcher did not have permission from the Office of the President to carry out the research. This was an oversight on the researcher's part. It took three weeks to get the required permission from the Office of the President, and so she was left with only ten days to conduct the survey. This is the reason for getting only 43 responses. With hindsight, it is clear that a month was not adequate in any case as government senior managers and their assistants are busy people, who are often at meetings, conferences or other official duties. In fact, the researcher had to make more than one trip to each department to get the questionnaire back. Owing to time constraints and the researcher's return to classes in Cape Town, she was not able to follow up all the departments.

Table 1 below shows all the ministries and departments of the government of Botswana and the numbers of departments that responded to the questionnaire. Extra ministerial departments are independent departments without ministries but they report to the Office of the President.

Ministries	Departments in each Ministry	Number of responses
Ministry of Agriculture	Animal production Agricultural Research Extension Services Coordination NAMPAAD Ministry management Veterinary Services Crop Production Agribusiness and Promotion	4/8
Ministry of Education and Skills Development	Secondary Education Primary Education Special Education Out of school Education Student Placement and Welfare Vocational Education and Training Curriculum Development Teaching Service Management Teaching Training and Development Ministry management Pre and Primary School	4/11
Ministry of Environment, Wildlife and Tourism	Waste Management and pollution control Wildlife and National Parks Tourism Metrological Services Environmental Affairs Ministry management Forestry and Range Resources	3/7
Ministry of Finance and Development Planning	Ministry management Supplies Central Statistics Office Accountant General	2/4
Ministry of Foreign Affairs and International Cooperation	Protocol and consol services Europe and American Affairs Multi lateral affairs	1/5

	Africa and Asia Affairs Ministry management	
Ministry of Health	Heath Inspectorate Clinical Services Health Sector Public Health Ministry management Health Policy Development Monitoring and Evaluation HIV/AIDS Prevention are Care	4/7
Ministry of Infrastructure ,Science and Technology	Building and Engineering Service Radiation and Protection inspection Research and Science Technology Ministry management	0/4
Ministry of Justice Defense and Security	Directorate of Intelligence Service Botswana Defense force Botswana Police Directorate on Corruption and Economic Crime Ministry management Criminal Investigation	1/4
Ministry of Labour & Home Affairs (MLHA)	Ministry management Labour and Social Security Gender and Woman's Affairs Madirelo Training and Testing Centre Prisons and Rehabilitation Immigration and citizenship Civil and National Registration	2/7
Ministry of Local Government (MLG)	Social Services Food Relief Services Ministry management Tribal Administration Local Government Development Planning Local Government Service Management	4/5
Ministry of Lands and Housing (MLH)	Land Tribunal Town and Regional Planning	2/6

	Housing Survey and Mapping Ministry management Lands	
Ministry of Minerals, Energy and Water Resources (MMEWR)	Corporate Services Geological survey Energy Affairs Water Affairs Ministry management Mines	1/6
Ministry of Trade and Industry	Trade and Consumer Affairs Register of companies and Intellectual Property Industrial affairs Ministry management	1/5
Ministry of Transport and Communications(MTC)	Roads Ministry management International Trade Central Transport Organization Telecommunication and Postal Services Roads, Transport and Safety Information Technology	4/6
Ministry of Youth, Sport and Culture	Ministry management Sports and Recreation National Museum and Monument Botswana National Archives and Records Services Botswana National Library Services Arts and Culture Youth , Sports and Culture	4/7
State President	Office of the President National Aids Coordinating Agency Broadcasting Information services Directorate of Public Service Management	2/6

	National Assembly	
Extra ministerial Department	Attorney General's Chambers	
Extra ministerial Department	Independent Electoral Commission	
Extra ministerial Department	Office of the Auditor General	
Extra ministerial Department	Office of the Ombudsman	
	Total	43/103

Table 1: Ministries and their Departments

3.4.2 Questionnaire design

Fink (2009**)** points out that there are four types of surveys: self administered questionnaires, interviews, structured record reviews and structured observations. The researcher chose a self administered questionnaire because it is said to encourage respondents to give considered, frank answers without pressure to impress the person administering. Another reason is its ability to collect a large amount of data in a short period of time (Powell, 1999: 91). The questionnaire was designed with the assistance of the student's supervisor and was guided by Syed-Ikhan and Rowland's questionnaire in their 2004 study titled, *Benchmarking Knowledge Management in a Public Organization in Malaysia*, and Gaffoor's Masters thesis (2008), which investigated the readiness to implement KM in the Stellenbosch Municipality. The questionnaire used in Statistics Canada's *Survey of Knowledge Management Practices* 2001 also assisted the researcher.

3.4.2.1 Pre–test

A pre-test of the questionnaire was carried out to check whether the questionnaire had any deficiencies. According to Powell (1999: 105), a pre-test gives a researcher an opportunity to identify questions from the questionnaire that tend to be misunderstood by participants, and that do not obtain the information that is needed. He further states that there should be an interview with the people that participate in the pre-test, so that they might express what they found to be problematic with the questionnaire. A pretest of the questionnaire was carried out at the

University of the Western Cape by two senior managers, namely the University Library Director and the Senior Faculty Manager at the Faculty of Arts. The researcher chose the two because they are directors of departments, and the target respondents of the questionnaire are Botswana public service managers and directors. A professor of KM at the Department of Information Systems at the University of Cape Town and another lecturer in KM at the University of the Western Cape also checked the questionnaire. After completion of the questionnaire, the researcher had a meeting with each of these key informants and a few changes were made to the questionnaire. Ideally, the researcher would have carried out a proper pilot study with government directors in Cape Town but it was not feasible due to time constraints and logistics of getting into government departments as the researcher is not familiar with the South African government system.

3.4.2.2 Questionnaire design

The questionnaire which is included in an Appendix has six sections and 18 questions. The questionnaire is designed to gather data that throw light on the research questions identified earlier in this chapter. In Chapter 1 the researcher explained that this study relies on the SECI model from organizational knowledge creation theory. The SECI processes cannot be easily measured, so the researcher turned to the KM enablers identified by Gaffoor which are often used by KM researchers as surrogate measures.

The questions are mostly closed but there are two open-ended questions, where respondents are simply asked to give some free comment. Powell (1999: 95) argues that there are a number of advantages and disadvantages of fixed response questions as compared to open ended question. He warns that among the disadvantages of closed questions is that the listed set of possibilities can compel respondents to select an inexact answer. He suggests that offering an alternative category for "other" will help the respondent to be as exact as possible. The open-ended questions gather more qualitative data and serve to enrich the quantitative findings.

The questionnaire is divided into sections that reflect the chosen KM enablers: organizational culture, ICT, human resources, and organizational structure. They refer to the conducive conditions and tools that are needed in the organization for the successful implementation of KM practices.

Section A (Question 1-3) gathers data about background information of the respondent and his or her department. It gathers information about the name of the department, the number of staff, the gender and age of the director and how long he or she has worked in the Botswana public sector, and how many years he or she has served as director.

Section B (Questions 4-6) consists of Likert scale statements that probe the understandings of KM and perceptions of is benefits.

Section C's (Questions 7-9) questions are about the organizational culture and KM practices**.** These questions gather information about the culture of the department, how knowledge is shared and created in that department, and whether there are systems and mechanisms of capturing knowledge from staff, and whether there is KM policy.

Section D (Questions 10-11) is headed *ICT Support for KM*. This section seeks to find out the technologies that exist in the departments to support or enable KM, and what kind of knowledge or information is stored in their electronic databases.

Section E (Questions 12-15) is titled *KM and Human Resources*. These questions seek to know who is directly responsible for KM practices in the department, how knowledge, skills and experiences are transferred to the younger generation of employees, whether there is a specific criterion of knowledge sharing when assessing performance of staff, and whether there is formal and informal training in KM practices.

Section F (Question 16-17) is headed *Organizational Structure and Communication of Knowledge*. This sections deals with the way knowledge flows in the organization. A number of barriers that hinder organizational knowledge sharing are listed for respondents to tick those that affect their department.

Finally, Question 18 is an open-ended question for free comment, for respondents to freely say what might not have been covered in the questionnaire about KM practices.

3.4.3 Data analysis

The Statistical Package for Social Sciences (SPSS) was used to summarize and analyze the quantitative data, and the two qualitative questions were grouped into themes. Chapter 4 shows the summaries and the analysis of the questionnaire data. No inferential analysis or cross-variable analyses were undertaken.

3.5 Ethics statement

At all times the researcher adhered to the ethical guidelines of the Research Committee of the University of the Western Cape. The researcher respected the rights of participants. The researcher obtained informed consent from her research participants based on adequate information on the project as provided in the letters of introduction included in Appendix A and B. Respondents have remained anonymous. Participation in this research was voluntary and participants were allowed to withdraw at any stage of the research process.

3.6 Conclusion

The research study used the quantitative survey questionnaire approach, specifically a questionnaire to collect data from departmental directors of the 103 central government / public sector departments in Botswana. Only 43 department directors responded to the questionnaire..

CHAPTER 4
SUMMARY AND ANALYSIS OF DATA

4.1 Introduction

As has already been stated in Chapter 1, the study uses organizational knowledge creation theory to explore KM practices in the public sector in Botswana. Since the SECI processes as discussed in Chapter 1 are clearly hard to measure, the research uses the KM enablers identified in the literature as indicators: organisational culture, human resources procedures, ICT and organisational structure. As explained in Chapter 3, these KM enablers were used to structure the questionnaire. This chapter summarises and analyses the data collected by questionnaires completed by the directors of 43 government departments in Botswana. The Statistical Package for Social Sciences (SPSS) was used to analyse and summarise the data. The questionnaire is headed with a definition of KM as "any systematic activity related to capture, sharing and creation of knowledge by an organisation".

4.2 Summary and analysis of responses to questionnaire

As already mentioned in Chapter 3, the questionnaire has six sections from A to F. It is included in Appendix C. Section A covers the background information about the respondents and their ministries. Section B explores the views of respondents on KM, what respondents understand as KM and what they perceive as benefits of KM. Section C focuses on organisational culture and KM. Section D collects data on ICTs that support KM in the departments. Section E gathers data about KM and human resources procedures and finally Section F is about the organisational structure and communication of knowledge. The tables and figures that follow include the question numbers for easy reference. The figures and tables in this section provide the number of responses to each question (N). Although 43 questionnaires were returned to the researcher, not all respondents answered every question so the N varies. .

4.2.1 Background Information

The target population for this research was the departmental directors because they are believed to know the overall flow of knowledge in the department, and, according to Gaffoor (2008), management support is the key to the success of KM initiatives.

	Median	Mean
Age	46.5	46
No. of staff members in department	123	449
No. of years as director	2.3	4.2
No.of years in Botswana public sector	12	22

Table 2: Background information: age, experience as director and public servant: Question 2 & 3 (N=43)

Table 2 gives the demographic characteristics. Gender is evenly distributed, 52% percent male and 48% female. The reason for this even gender distribution could be that Botswana is part of the task force that has been assigned by the Southern African Development Community to upgrade the 1997 Declaration on Gender and Development to a Protocol on Accelerating Gender Equality in SADC countries. The whole aim of this campaign is to ensure that women are given equal participation in decision making by 2020 (*Botswana Government Portal* 2010). Table 2 shows the median age of directors is 46 years. The average number of years they have worked in the department as director is quite low, 4.2 years. There are huge disparities in size of department with the smallest department in the sample having 24 staff members while the largest department has 3760 staff members. The number of staff members might be significant in KM as it will affect the ease of sharing knowledge in an organization. If they are many employees and they are geographically dispersed, there will be need of sophisticated technology to share knowledge properly.

4.2.2 Respondents' views on KM

Section B seeks to collect the views of respondents about knowledge management. A key question is if KM is seen as nothing different from information management. In some of the literature authors even use the terms interchangeably. Figure 1 summarizes responses to Question 4 which consists of general statements about KM. Its aim is probe the respondents' views on KM. The figure gives each statement and the levels of agreement.

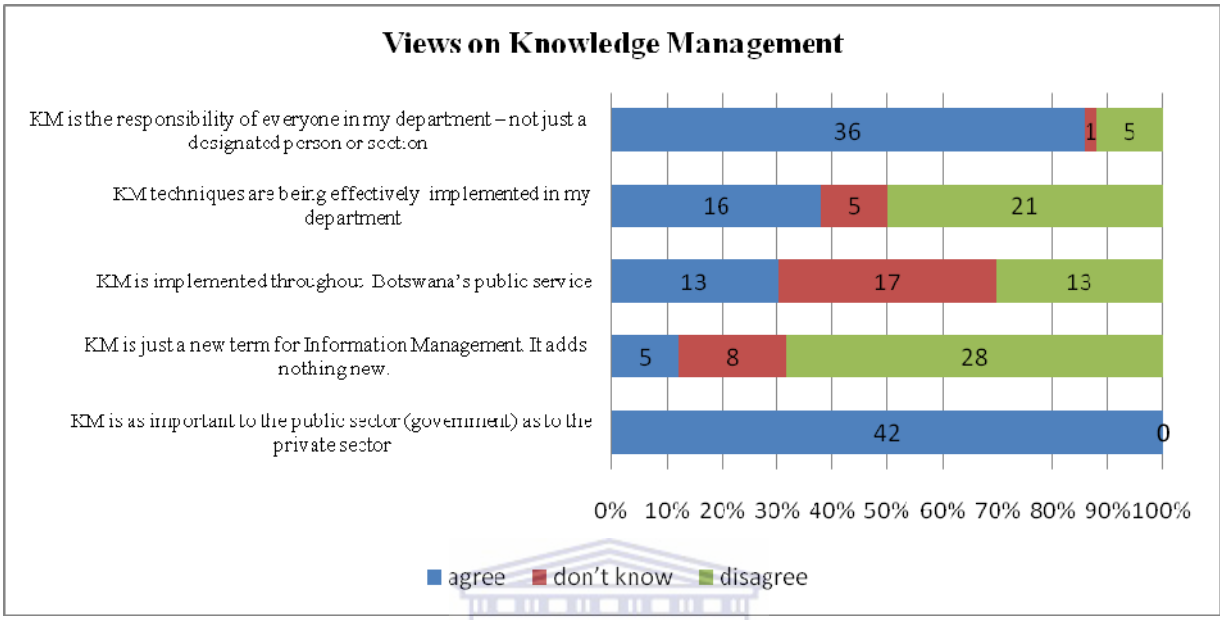

Figure 1: Respondents' views on KM: Question 4 (N=42/43)

The statements that receive the strongest support are that KM is as important to the public sector as to the private sector and that KM is the responsibility of everyone in the department. There is less unanimity on whether KM is implemented throughout the Botswana public sector and whether the respondents' departments have implemented KM techniques. A rather large percentage, 69%, sees KM to be different from information management, one of the issues in the literature.

The respondents are given a qualitative question or space to express themselves or to add any free comment in relation to the above statements. Only 12 respondents provide some comments but they serve to enrich the statistical summary provided in Figure 1, for example:

- One or two express doubts about staff capacity and knowledge of KM
- Others acknowledge shortcomings related to lack of policy and systems. For example "Even though information is managed it is not effective because there are challenges of missing information and documents and this is proof that there is no systematic method of capturing, sharing and creating knowledge"

"It is difficult to assess the impact of KM where there is no policy to guide the practice" An interesting comment from one respondent is that "KM status cannot be generalized but needs to be validated through research." The researcher believes that her study might form part of the recommended research.

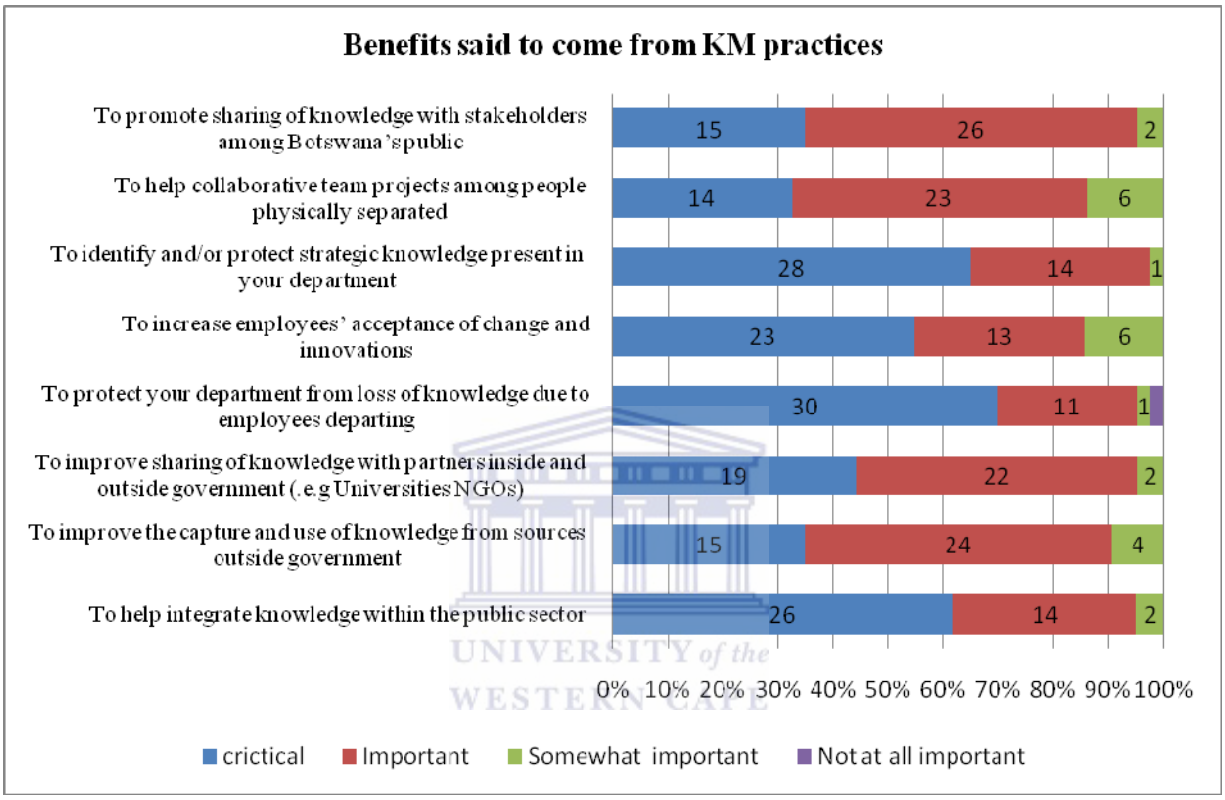

Figure 2: Benefits said to come from KM practices: Question 6 (N=42/43)

Figure 2 summarizes responses to Question 6, which asks for response to a list of benefits of KM in the public sector as identified in the literature review in Chapter 2 (Cong and Pandya, 2003; Nirmala and Shrestha, 2004; Riege and Lindsay, 2006). Figure 2 indicates fairly uniform opinion across all the benefits. The respondents find protection of loss of knowledge due to employees leaving the department more critical than other benefits. The two next most critical benefits in their opinion are: saving/storing the knowledge of employees who leave and protecting the strategic information of the department. This latter one could suggest the existence of what Ondari-Okemwa (2007) calls a culture of "hoarding".

4.2.3 Organizational culture and KM practices

This section of the questionnaire seeks to understand the departments' organizational cultures in terms of the knowledge management practices in the departments. It thus might give a more realistic picture of the situation than the previous section which gave more general, possibly theoretical, responses to the perceived benefits of KM. Yeh, Lai and Ho (2006: 797) believe that organizational culture influences the willingness of employees to share and put knowledge into the organization. Syed-Ikhan and Rowland (2004b: 100) stress that the culture of an organization is the major factor that can make or break the success of KM initiatives. This section seeks to find out if the organizational culture of the Botswana public sector enables KM practices.

Figure 3 summarizes responses to Question 7, whose aim is to find out how information is shared and stored in the department by asking for responses to a number of statements relating to the environment and processes deemed favourable for KM. The figure indicates a general view that knowledge/information is easily shared in the departments. Most respondents claim that information/knowledge can be shared informally and formally without difficulty. It is interesting that the library is rated most strongly. This will be returned to later when the role of the library comes up in later questions.

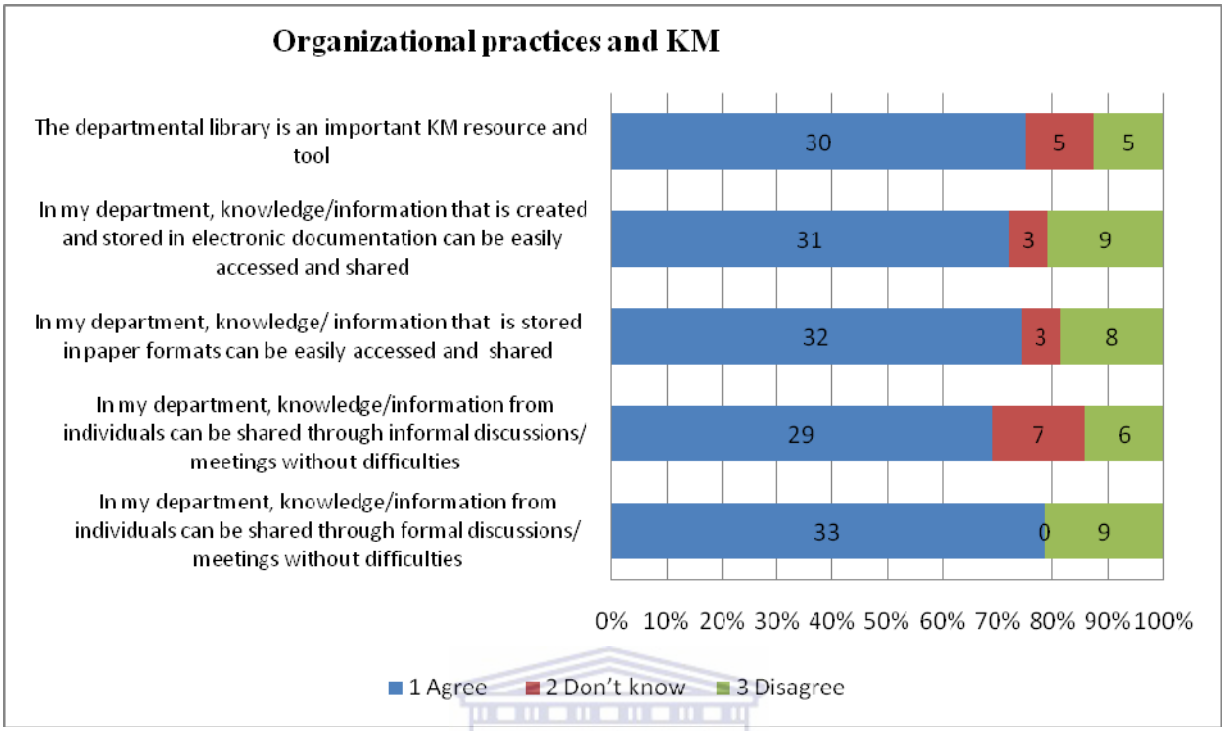

Figure 3: Organizational practices and KM: Question 7 (N=40/42/43)

Table 3 summarizes responses to Question 8 which consists of a number of statements probing the culture of the organization and KM practices. The majority of respondents (37) claim that staff is expected to take part in communities of practice. This lends support to the earlier responses to Question 6 where respondents agreed on the importance of sharing knowledge with partners inside and outside government. Knowledge from the outside world can enhance the knowledge that the department has already, and the combination can bring about innovation.

Thirty-two indicate that they have brainstorming sessions to encourage employees to come up with new ideas and experience. Nonaka and Takeuchi's research (1995) shows how brainstorming brings about innovation. This statement attempts to throw light on the research question of how creativity is encouraged in the public sector.

The responses summarized in Table 3 might provide a more accurate picture of KM in the various departments than earlier more general theoretical ones as they refer to specific practices and tools. It reveals for example that only five departments have a written KM policy or strategy

and that 28 have no formal mechanisms to capture the knowledge of departing employees. It is a pity that Question 8E, which asks whether there are formal mechanisms in place to capture experience and knowledge of employees when they leave, does not have a follow up question. It would be interesting to find out what the follow up mechanisms are in the 14 departments with positive responses.

Organizational culture & KM practices	**Yes**	**No**
A.Is there a written KM policy or strategy?	5	35
B. Does your department have brainstorming sessions to encourage employees to come up with new ideas and experiences?	32	11
C. Are staff expected to participate in professional associations and other communities of practice related to their fields of expertise?	37	5
D.Is it mandatory for staff to pass on and share new knowledge after attending seminars, workshops and conferences?	30	13
E. Are there formal mechanisms in place to capture experience and knowledge of employees when they leave from your department	14	28

Table 3: Organizational culture and KM practices: Question 8 (N=40/42/43)

Table 4 summarizes responses to Question 9 which gathers data on how staff members share new knowledge acquired in courses, seminars and conferences. This question expands on Question 8D. Thirty eight of the respondents show that they report back at meetings while 33 say they write a report for directors. The table shows that very few departments deposit seminar materials in their libraries or on their websites and newsletters. This might contradict the earlier finding in Question 7, where departmental libraries were seen as important KM resources and tools. The seven respondents who filled in the “any other comment” space specify that they have weekly briefings in general staff meetings and that reports are filed in the open registry for every officer to access.

Ways of sharing new knowledge	Yes	No
A. Report back at meetings	38	4
B. Write a report for directors	33	9
C. Deposit seminar/workshop material at the library	10	32
D. Present report on the website or in the newsletter	6	36
E. if any other, please specify	7	35

Table 4: Sharing of new knowledge from courses and seminars: Question 9 (N= 42)

4.2.4 ICT support for KM

Chapter 2 highlighted the importance of ICT as an enabler of KM initiatives in the organization. It is said to enable rapid access and retrieval of information, and can support teamwork and communication among organizational members. This section establishes which KM technologies the departments have invested in, and also finds out from the respondents what they store in their databases.

Figure 4 summarizes responses to Question 10 which gathers information about the kind of knowledge or information that can be found in the departments' databases. The figure shows that most of the departmental databases store policies, regulations and procedures in the department. This finding suggests that departments are largely managing information rather than knowledge. Most of the information that is stored in the databases is "explicit" knowledge. But, maybe the response was influenced by the fact that the questionnaire did not list examples of tacit knowledge. Listing information on staff competencies and expertise in databases has been found to enable knowledge sharing in departments, as employees know who knows what. Other researchers call these competencies databases "corporate yellow pages" which are said to encourage sharing in the organization as the organization will know the knowledge that it has.

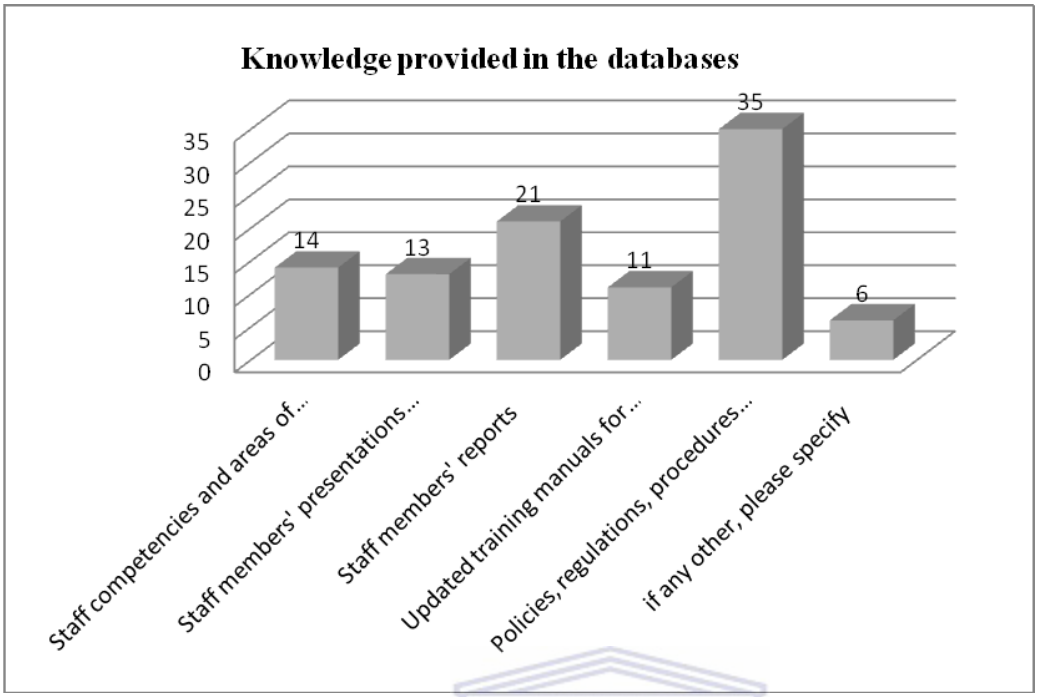

Figure 4: Knowledge provided in the databases: Question 10 (N=42)

Table 5 summarizes responses to Question 11 which enquires about the KM technologies that the department has implemented to support knowledge acquisition, storing and sharing. The table shows that most departments mainly use the Internet and the Intranet. Rowland and Syed-Ikhsan (2004) also indicate that most of the respondents in their Malaysian study cite the Internet as most important. It is noteworthy how few have bought specialised KM software and systems. Three respondents specify that they have call centres and e-government as technologies that support KM. Recently the Department of Information Technology launched the Botswana Government Portal as part of the e-governance project which is meant to improve communication and information flow between the public and government (*Botswana Government Portal*, 2010).

KM technologies	Yes	No
A. Internet	36	6
B. Intranet	27	15
C. Database management system	16	26
D. Extranet	5	37
E. Data warehouse e.g.Oracle Database 11g	6	36
F. Groupware e.g. Lotus notes/Microsoft exchange	14	28
G. Decision support system e.g Analytica	3	39
H. Knowledge management software e.g interspire KM software	1	41
I. If any other, please specify	3	39

Table 5: Technologies implemented to support KM: Question 11 (N=42)

4.2.5 KM and Human Resources procedures

Cong and Pandya (2003: 30) are of the view that the success of KM initiatives depends upon people's motivation, willingness, and ability to share their knowledge and use the knowledge of others. This section seeks to establish the importance of people as enablers in KM initiatives, and what the organization is doing to encourage people to share their knowledge and how the knowledge is transferred to new staff members.

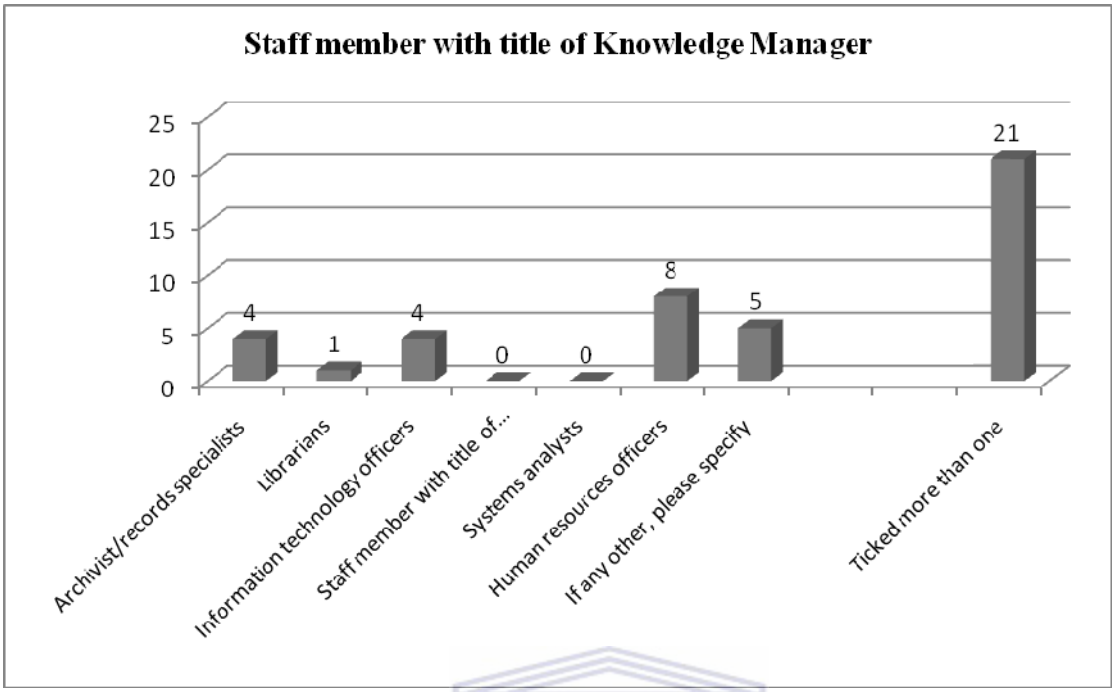

Figure 5: Persons directly responsible for KM practices in the departments: **Question 12(N=43)**

Figure 5 summarises responses to Question 12, where the respondents are asked to indicate the person who is directly responsible for KM practices in the department. The figure shows that there is no one with the formal title of knowledge manager. Twenty one respondents ticked more than one person as responsible for the KM practices. This could support the earlier finding in Section 4.2.2 that respondents view KM as the responsibility of every staff member. However the literature of KM in the private sector makes the point that it is important that one person has the job title Knowledge Manager. She/he in addition might be supported by a team that champions KM across the departments of an organisation. Five indicated that there are other possible claimants for the title, as follows:

- Research and development section
- Public relations section
- Performance improvement coordinator
- Inventory officer.

Figure 6 summarizes responses to Question 13 whose aim is to find out how the departments

transfer knowledge, skills and experiences to the younger generation of employees. The figure shows that only 18 respondents indicate that they assign mentors or coaches during the induction period for new staff, but some add the following in their answers:

- Mentoring is done by head of unit and senior staff in the department on various aspects of the mandate of the department.
- Training is provided on the job
- Senior officers mentors junior ones continuously
- The department provide copies of regulations and employment acts for new employees to read for themselves
- Seminars and workshops are provided for new officers.

The list above suggests that there are more that do provide mentoring for new staff. Nonaka and Takeuchi's SECI model (1995) shows that apprenticeship is one of the most effective ways of passing tacit knowledge from a knower to a learner, or from master to learner.

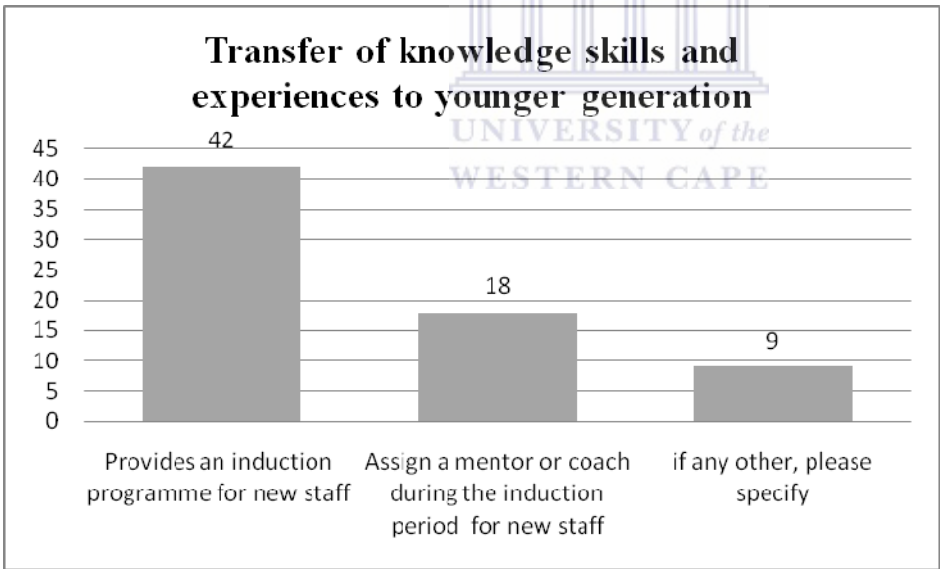

Figure 6: Transfer of knowledge skills and experiences to younger generation: Question 13 (N=42)

In Question 14 the respondents are asked if sharing of knowledge/information is an explicit criterion for the assessment of staff performance. Sixty-seven percent indicate that it is not. Yeh, Lai and Ho (2006: 798) point out that incentive programmes can influence employees to contribute to organizational knowledge or sharing knowledge. As has already been said in

Chapter 3, the Botswana government has introduced a number of public sector reforms in order to improve service delivery. One of the reforms currently in use is the Performance Reward Based System (PBRS) in which an employee is rewarded for outstanding performance - but not explicitly for knowledge sharing.

Question 15 establishes whether departments provide training, formal and informal, in KM practices. According to Monavvarian and Kasaei (2007: 358), it is important for organizations to have a proper training programme, so that employees are able to contribute to the creation and transfer of knowledge. Seventy-two percent of respondents report that the department does not provide training in KM practices. All the government departments have a training coordinator who has the responsibility to plan and assess the training needs of the employees in his/her department. There is also a policy that allows employees to study courses that are related to their work; then when they complete their studies, the government re-reimburses them (*Botswana Government Portal*, 2010).

4.2.6 Organizational structure and communication of knowledge

Organizational structure is one of the KM enablers discussed in Chapter 2. Taylor and Wright (2004), Sinclair (2006) and Syed- Ikhsan and Rowland (2004b) have all identified barriers to KM in the public sector related to organizational structure. Question 16 asks the respondents to indicate barriers to KM from a list provided. Table 6 summarizes their responses.

Barriers to organizational knowledge sharing	Yes	No
A. Bureaucratic organizational structure of government	23	19
B. Political interference	5	36
C. Poor communication channels between members of the department	31	10
D. Poor communication across government departments	30	11
E. Prevailing lack of trust within the department	12	29
F. If any other, please specify	4	38

Table 6: Barriers to organizational knowledge sharing: Question 16 (N=41/42/43)

The most cited barrier seems to be poor communication channels inside and across departments. The table shows that responses are evenly split on the issue of bureaucratic structure of government. Flat structures are agreed to favour KM (Sinclair 2005). This poor communication across department may suggest that there are silos which hinder the flow of knowledge from one department to the other. The concept of silos implies that departments work in isolation. This practice can encourage duplication of work or activities. Four respondents specify "other" barriers that impede the sharing of knowledge in their departments such as:

- high staff turnover in government
- lack of commitment to KM.

Although only five respondents indicate that political interference is a barrier to knowledge sharing in their departments, one notes that one of the barriers of knowledge sharing is lack of trust within the broader ministry.

Question 17 asks whether the departments have a print or electronic newsletter that they use to share knowledge amongst staff members. Only 42% indicate that their department has such a newsletter. This finding might contradict the earlier finding given in Figure 3 that in most

departments knowledge is easily created and stored in both print and electronic documents.

Question 18 is a final open-ended question that requires free comments from respondents about KM practices that the questionnaire does not cover. Table 7 categorizes the comments that came from 10 respondents and gives selected quotations.

Themes	Selected quotations
KM is important	KM improves productivity in the entire public sector, sharing information internally can reduce complaints/queries from external customers (Questionnaire 2). KM is useful, it's only that it is not adequately practiced but it is something a department should consider. The good start is to ensure that reports are stored safely and useful information is shared among staff members at various fora(Q17) KM is crucial for any organization (Q21).
Better communication strategies are needed	The organization has communication strategy that does not cover structures of communication and does not cover creation, capturing and sharing of information (Q10).
There is heavy reliance on meetings	Members of staff meet on Monday for an hour for a general brief of pertinent issues, activities or information for that week. Then meet again on Wednesday for talk shows or lessons from speakers on some expertise for an hour or so, on a chosen area, e.g. Money management, stress management and diabetes (Q13). Department have weekly senior staff meetings and the deliberations are later shared with the rest of the staff

	member(Q37)
KM systems are not adequate	No KM system (Q15) Not all members of staff are connected to the internet making it difficult for them to access information that is downloaded (Q16). There is need to come up with defined means of KM to ensure knowledge transfer from generation to generation (Q22).

Table 7: Final comments on KM that might not have been covered in the questionnaire: Question 18 (N=10)

The comments support the findings from earlier questions, leading the researcher to conclude that overall the respondents believe that KM can play a very vital role in improving productivity in the public sector. But there are doubts that it is being practiced.

4.3 Summary

This chapter begins to paint a picture of the findings of the study that might throw light on its research questions. The following key findings from each section might be highlighted:

- Respondents are aware of the benefits of KM in an organization
- Respondents on the whole believe that the culture of their departments is favourable to KM
- However, a gap between beliefs and the actual practices is evident. For example, 81% admit that they have no written KM policy or strategy and 65% acknowledge that they have no formal mechanisms in place to capture experience and knowledge of employees when they leave. Almost all agree that is library is an important KM tool but 32 (70%) of the departments do not deposit seminar/workshop material at the library
- The Internet and the Intranet are the ICT supporting technologies that are mostly implemented in the departments. There is little evidence of specialised KM software and systems

- Apparently, there is no job title “knowledge manager” in the Botswana public sector
- A fairly large number see bureaucracy as a hindrance to KM. However, the majority of respondents indicate that political interference is not a barrier to knowledge sharing in their department. But, it has to be borne in mind that respondents are directors of departments and might not want to say anything controversial.

The following chapter will relate these findings to the research problem and questions.

CHAPTER 5
DISCUSSION OF FINDINGS AND CONCLUSIONS

5.1 Introduction

This chapter goes back to the research questions identified in Chapter 3, and attempts to answer them in relation to findings from Chapter 4 and the literature reviewed in Chapter 2.

The study investigates KM practices in the public sector in Botswana; the underlying premise being that good KM leads to efficiency and effectiveness. It probes the existence of certain KM enablers as they provide the conducive conditions and tools that are needed in the organization to implement and practice KM. The study identifies possible gaps. This chapter returns to the research questions using data gathered across the sections of the questionnaire as summarized in the previous chapter. The chapter also makes some recommendations to the Botswana public service, so that it might reap the benefits of effective KM practices.

The limitations that come from the chosen methodology of the study have to be acknowledged before the research questions are examined. As explained in Chapter 3, it was decided to limit the survey to directors of departments. The discussion that follows represents the situation through their eyes. No attempt was made to include other staff members. Also the questionnaire survey approach was used alone. There was no attempt to triangulate its data, for example by comparing respondents' claims with observation data. This was beyond the scope of the mini-dissertation study and would have demanded far more time and resources. The project is described in Chapters 1 and 3 as "exploratory". This chapter includes some recommendations for future research that might extend it.

5.2 Discussion of findings

This section looks at each research question in an attempt to throw light on the central research problem – the status of KM in the Botswana public sector.

5.2.1 What are the views of public service managers or directors and information officers on the benefits that can be reaped from KM practices?

On the whole the Botswana public sector directors are positive about KM. They believe strongly that KM is as important to the public sector as the private sector. They thus confirm or agree with the views in the literature that KM in the public sector will improve service delivery which is the mandate of government (Nirmala and Shrestha, 2004**;** Onkemwa and Smith, 2009).

Figure 2 in Chapter 4 shows uniform opinion across all the benefits. The respondents found the prevention of loss of knowledge due to employees leaving the department more critical than other benefits. The other most critical benefit in their opinion is protecting the strategic information of the department. This could suggest that the culture of "hoarding" that Ondari-Okemwa (2007) warns of exists. Having said that, a very large majority see KM as a means to integrate and share knowledge within and across the public sector. This possible contradiction might be followed up in future research.

Although there is general agreement on the benefits of KM, some doubts on its implementation are evident, for example:

- in questions over staff capacity
- the comment on the need for policy and better systems.

5.2.2 What evidence is there that the public service has a culture of sharing information and knowledge? And how do staff members internalize and use new knowledge?

Respondents on the whole believe that the culture of their departments is favourable to KM. The literature agrees that knowledge sharing can only work if the culture of the organization promotes it. It is difficult to measure "culture" directly so, as stated in Chapters 1 and 2, enablers or organizational elements are regarded as indicators.

Chapter 4 shows that 30 respondents (70%) indicate that it is mandatory for staff to pass on and share new knowledge after attending seminars, workshops and conferences. However, contradictions emerge, for example:

- the claim that it is mandatory for staff to pass on and share new knowledge versus the low use of libraries and other knowledge repositories
- lack of KM policy/ strategy.

KM policy is important as it provides guidelines for employees on how to share knowledge, and whom to share it with, what kind of knowledge, and in which format. Syed-Ikhan and Rowland have a similar finding (2004a). Their Malaysian respondents overwhelming agree on the importance of a KM policy while only 52% report they have one. And the Kenyan study by Ondari-Okemwa (2007) makes a similar finding on the lack of explicit policy. About 95% of its respondents find lack of knowledge policy to be an obstacle to knowledge flow or access.

This Botswana study identifies certain other barriers to knowledge sharing culture, for example:

- Poor communication channels between members of the department and across government departments are identified as the greatest barrier that hinders knowledge sharing in the Botswana public sector. This echoes Syed-Ikhan and Rowland's finding (2004a) that 53.6% of their respondents indicate that communication channels between employees hinders knowledge sharing government departments. Ondari-Okemwa and Smith (2009) are of the view that bureaucratic structures have an unspoken motivation to gain competitive advantage. They say "knowledge sharing decreases as the level of competition within an organization increases" Ondari-Okemwa and Smith (2009: 34).
- Sixty-seven percent of the respondents indicate that knowledge/information sharing is not an assessment criterion for staff performance in their departments. Yeh, Lai and Ho (2006: 798) point out that incentive programs can influence employees to contribute to organizational knowledge or sharing knowledge. When something is an explicit criterion for assessment of staff performance there are bound to be rewards or incentives.
- The study also provides some evidence that lack of trust might hinder the culture of knowledge sharing. Lack of trust can lead to silo building as shown by Ondari-Okemwa (2007) and Gaffoor (2008) in their studies.

As has been said in Chapter 1, internalization of knowledge is closely related to "learning by doing". Nonaka, Toyama and Konno (2000) are of the view that training programs can help

trainees to understand an organization and themselves. Chapter 4 shows that 72% of respondents do not provide training specifically on KM practices. They just provide training related to the employee's job description or requirements.

The study finds that only 18 respondents indicate that they assign mentors or coaches during the induction period for new staff; but some of the others point out that mentoring is the responsibility of a wide range of people. They also say that trainees can internalize explicit knowledge by reading and reflecting on documents and manuals about their jobs and their departments.

5.2.3 How are creativity and new ideas encouraged?

A large majority of respondents agree that KM practices increase employees' acceptance of change and innovations. This is a positive step toward embracing KM practices as they also see change and innovation as a key benefit of KM.

New ideas and creativity are said to bring about innovation and innovation brings about new products or service. This is one of the cornerstones of KM. Chapter 4 shows that 32 respondents (76%) have brainstorming sessions to encourage employees to come up with new ideas and experience. Nonaka and Takeuchi's research (1995) shows how brainstorming brings about innovation.

Thirty-seven respondents (86%) claim that their staff is expected to take part in communities of practice. This lends support to another finding on the agreement on the importance of sharing knowledge with partners inside and outside government. Knowledge from the outside world can enhance the knowledge that the department has already, and the combination can bring about innovation.

Chapter 4 reveals that a large majority (90%) indicate that they expect staff to report back at meetings the new knowledge acquired in courses, seminars and conferences. But information simply shared in meetings is ephemeral. By the time the staff leaves the meeting room it

disappears. If the knowledge is stored in the library or database, staff can refer to it at any time. The new knowledge thus would form part of the organizational knowledge base or memory.

A number of authors warn that bureaucracy stifles innovation because of its red tape and rigidity. Table 5 in Chapter 4 indicates that a sizable number of respondents agree that the bureaucratic organizational structure of government is a barrier to knowledge sharing.

5.2.4 Are there appropriate technological resources to facilitate effective KM, for example central knowledge repositories and social networking?

Very little specialist KM software exists in the Botswana public sector apparently. ICT enables rapid searching, accessing and retrieving of information, and can support teamwork and communication among organizational members. The study finds that the Botswana public sector mainly uses the Internet and the Intranet to support knowledge acquisition, sharing and storing. This echoes the Malaysian study of Rowland and Syed-Ikhsan (2004a). Ondari-Okemwa's study (2007) also shows that Kenyan government-owned organizations have only basic ICT to enable or support KM programmes. The Kenyan study indicates that the government-owned organization managers believe that KM technologies are too expensive. The basic technologies are in the meantime functioning well as a starting point in sharing, creating and storing knowledge.

The Botswana public sector has departmental databases that mostly store policies, regulations and procedures inside the department. Only 33% of respondents store staff competencies and areas of expertise in their databases; while only 26% store updated training manuals for new staff. This could mean that the information inside the database is not current and updated information that could address the everyday knowledge needs of the employees. Ondari-Okemwa (2007) indicates that 99.3% of his Kenyan respondents have some form of knowledge repository in their organization. Mostly they are non-electronic knowledge repositories like libraries, archives and records centres.

5.3 Overall conclusions on the research problem

The study was motivated in Chapter 1 in terms of Botswana's aspirations to become a knowledge society and the need to improve government services so that they compare well with

the private sector and deliver efficient and effective services. The research set out to investigate if KM is being practised in the Botswana public sector. The limitations of the exploratory study have already been acknowledged in Section 5.1.

Having examined the findings presented in Chapter 4 in the light of the research questions, the overall conclusion might be that information management rather than KM is being practiced. The respondents, senior public service managers, certainly recognize the value of and the need for KM. But, they themselves identify certain weaknesses, such as lack of knowledge of KM among their staff, weak communication inside and across the departments, lack of policy and lack of good KM systems.

KM, as stated in Chapter 1, is about people as much as systems. The study finds that it will be perhaps difficult to move beyond information management without more specific training and education programs in KM. The respondents agree that KM is everyone's responsibility, which is of course true. However, as reported in the previous section, the study found gaps and contradictions between beliefs and actual practice. To introduce, nurture and sustain KM might require the appointment of specialist knowledge managers who could make up a KM team across the various departments.

5.4 Recommendations

This final section outlines some recommendations to the departments and for possible future research.

5.4.1 Recommendations for departments

The following are recommendations for government that this study suggests:

- The departments should have a KM strategy /policy which is aligned to the organizational strategy. The strategy will act as a guideline on the sharing of knowledge, as to whom, how, when and where the knowledge should be shared internally and externally
- The departmental directors should encourage and make it mandatory for their employees to store new knowledge in KM repositories such as the departmental library

- The departments should set up so-called “corporate pages” to act as a knowledge index of who knows what
- The directors should design an incentive program for knowledge sharing that will encourage people to share their knowledge. This will mitigate tendencies to hoard information
- The public sector should create posts for people who will be directly responsible for KM in the department and across departments.

5.4.2 Recommendations for future research

The limitations of the mini-dissertation study come from the small and limited sample, as described in Chapter 3. Future research with more resources could extend and deepen the study. A longer term and qualitative participation observation study could uncover the “why”, that the questionnaire survey could not probe.

It would be good to extend the study in future to include more levels of staff, since the directors might see things from a limited perspective and might understandably wish to put a positive spin on their departments.

There are a few ambiguities and contradictions among the data which might be followed up. For example, a follow up study could investigate the role of government libraries, real and potential, in KM.

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APPENDIX A & B: LETTERS OF EXPLANATION AND REQUEST TO RESPONDENTS

Private Bag X17, Bellville, 7535
South Africa
Tel: +27 (0) 21 959 2137
Fax: +27 (0) 21 959 3659

FACULTY OF ARTS
Department of Library & Information Science

31 May 2010

Department Director

Dear Sir/Madam

REQUEST TO PARTICIPATE IN RESEARCH PROJECT

I hope that you will be able to find the time to take part in Ms Kelebogile Komanyane's MBibl (Information Studies) research project. Ms Komanyane's studies are being sponsored by the Botswana government through the office of the Auditor General. Her topic is *Knowledge Management Practices in the Public Sector in Botswana* and she is conducting a survey of senior management in Botswana's government.

The attached questionnaire will take about 15 minutes of your time. You will remain anonymous and your responses will be confidential. If you are unable to complete the questionnaire for any reason, perhaps you could hand it on to your deputy. Please hand the completed questionnaire to your secretary and Ms Komanyane will fetch it.

We hope that Ms Komanyane's dissertation will provide valuable information on the status of Knowledge Management in government circles. She has undertaken to provide a summary report on her findings, which she will send to her respondents. If you would like more information, please contact me (ghart@uwc.ac.za).

Yours faithfully

Professor Genevieve Hart
Post-graduate Convenor

APPENDIX B

TELEPHONE: (+267) 3617100/3951050
FAX: (+267) 3908582/3188145
FARM FORST HILL, NO.9
LOT 134, MILLENIUM PARK
KGALE HILL
GABORONE
BOTSWANA

OFFICE OF THE AUDITOR GENERAL
PRIVATE BAG 0010
GABORONE
BOTSWANA

23 June 2010

To Whom It May Concern:

Dear Sir/Madam

KNOWLEDGE MANAGEMENT PRACTICES IN THE PUBLIC SECTOR

Ms Kelebogile Komanyane has been sponsored by Government through the Office of the Auditor General to read for a post graduate studies at the University of the Western Cape.

The officer is in the country to carry out a research study on Knowledge Management Practices in the Public Sector in Botswana. This research is conducted under the supervision of Prof Geneviene Hart of the University of the Western Cape.

This therefore, serves as a humble request to you to allow Ms Komanyane to carry-out this research in your Organisation. She will explain the methodology of how she will be collecting data from your Organisation.

I shall indeed be grateful if you could assist her.

Yours faithfully

L. M. Letsholo

L. M. Letsholo
Senior Assistant Auditor General

APPENDIX C: QUESTIONNAIRE

KNOWLEDGE MANAGEMENT PRACTICES IN THE PUBLIC SECTOR IN BOTSWANA

QUESTIONNAIRE FOR DEPARTMENT DIRECTORS

MBIBL (INFORMATION STUDIES)

UNIVERSITY OF THE WESTERN CAPE

Knowledge Management (KM) is defined as any systematic activity related to the capture, sharing and creation of knowledge by an organisation. The purpose of this survey is to find out what Knowledge Management (KM) practices are used to support the acquisition, creation, sharing and retention of knowledge in Botswanan Government departments**.** Please note that your responses are confidential and that my reporting will not include your individual department's name.

Section A: Background information

1. Name of your Department & Ministry: ……..
2. About how many staff members are there in your department?.....
3. Some personal details

A	Your gender	Male 1	Female 2
B	Your age	. years	
C	Number of years as Department Director	. years	
D	Number of years in Botswanan public service	. years	

Section B: Your views on Knowledge Management (KM)

4. Please respond to the following statements

		1 Agree	2 Don't know	3 Disagree
A	KM is as important to the public sector (government) as to the private sector			
B	KM is just a new term for Information Management. It adds nothing new.			
C	KM is implemented throughout Botswana's public service			
D	KM techniques are being effectively implemented in my department			
E	KM is the responsibility of everyone in my department – not just a designated person or section			

5. Please feel free to add any comments related to the above statements

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6. The following benefits are said to come from KM practices. Please indicate the level of importance you would assign to each.

		Critical	Important	Somewhat important	Not at all important
A	To help integrate knowledge within the public sector				
B	To improve the capture and use of knowledge from sources outside government				

C	To improve sharing of knowledge with partners inside and outside government (.e.g Universities NGOs)				
D	To protect your department from loss of knowledge due to employees departing				
E	To increase employees' acceptance of change and innovations				
F	To identify and/or protect strategic knowledge present in your department				
G	To help collaborative team projects among people physically separated				
H	To promote sharing of knowledge with stakeholders among Botswana's public				

Section B: Organisational culture & KM practices

7. Please tick the most appropriate box in response to the following statements:

		1 Agree	2 Don't know	3 Disagree
A	In my department, knowledge/information from individuals can be shared through ***formal*** discussions/ meetings without difficulties			
B	In my department, knowledge/information from individuals can be shared through ***informal*** discussions/ meetings without difficulties			
C	In my department, knowledge/ information that is stored in paper formats can be easily			

	accessed and shared			
D	In my department, knowledge/information that is created and stored in electronic documentation can be easily accessed and shared			
E	The departmental library is an important KM resource and tool			

8. Please answer yes or no to the following questions by ticking the appropriate box:

A	Does your department have a written KM policy or strategy?	1 Yes	2 No
B	Does your department have brainstorming sessions to encourage employees to come up with and share new ideas and experiences?	1 Yes	2 No
C	Are staff expected to participate in professional associations and other communities of practice related to their fields of expertise?	1 Yes	2 No
D	Is it mandatory for staff to pass on and share new knowledge and information after attending seminars, workshops and conferences?	1 Yes	2 No
E	Are there formal mechanisms in place to capture experience and knowledge of employees when they leave/ retire from your department?	1 Yes	2 No

9. Please state how staff members share new knowledge acquired in courses, seminars and conferences. *(Please tick all that apply*)

A	Report back at meetings	
B	Write a report for Director	
C	Deposit seminar/workshop material at the library	
D	Present report on the website or in the newsletter	
E	If any other, please specify	

Section C: ICT (Information and Communication Technologies) support for KM

10. Please tick which of the following are provided for in your department's databases. (*More than one might apply.)*

A	Staff competencies and areas of expertise	
B	Staff members' presentations and talks	
C	Staff members' reports	
D	Updated training manuals for new staff	
E	Policies, regulations, procedures and various processes of the department	
F	If any other, please specify	

11. Which of the following technologies has your department implemented to support knowledge acquisition, storing and sharing? *(Please tick all that apply)*

A	Internet	
B	Intranet	
C	Database management system	
D	Extranet	
E	Data warehouse e.g. Oracle Database 11g	
F	Groupware e.g. Lotus notes/Microsoft Exchange	
G	Decision support system e.g. Analytica/Online Analytic Processing	

H	Knowledge management software e.g. Interspire KM Software/Enterprise Wizard	
I	If any other, please specify	

Section D: KM and human resources

12. Who is directly responsible for the KM practices currently in use in your department? *Tick one answer only*

1	Archivist/records specialists	
2	Librarians	
3	Information technology officers	
4	Staff member with title of Knowledge Manager	
5	Systems analysts	
6	Human resources officers	
7	If any other, please specify	

13. How does your department transfer knowledge, skills and experience to the younger generation of employees? *(Please tick all that apply)*

A	Provides an induction programme for new staff	
B	Assigns a mentor or coach during the induction period for new staff	
C	If any other, please specify	

14. Is knowledge/information sharing an explicit criterion for the assessment of staff performance?

1 Yes	**2** No

15. Does your department provide training (formal & informal) in KM practices?

1 Yes	**2** No

Section E: Organisational structure and communication of knowledge

16. The following have been found to be barriers related to organisational knowledge sharing. Please tick the ones that apply to your department in your opinion. (M*ore than one answer might apply)*

A	Bureaucratic organisational structure of government	
B	Political interference	
C	Poor communication channels between members of the department	
D	Poor communication across government departments	
E	Prevailing lack of trust within the department	
F	If any other, please specify	

17. Does the department have a newsletter - either print or electronic - that it uses to share knowledge / information amongst staff members?

1 Yes	**2** No

18. Please add any free comment on the KM practices in your department that might not have been covered in this questionnaire

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Thank you for your co-operation.

Please hand your completed questionnaire to your secretary.

I will return to fetch it in five days' time.

For further information contact Kelebogile Komanyane
kelebogilekomanyane@gmail.com
cell no: 71817732
And/or
Prof Genevieve Hart – ghart@uwc.ac.za
(Dissertation supervisor)