

**AN EXPLORATION OF KNOWLEDGE SHARING AS A MEANS OF IMPROVING
MUNICIPAL GOVERNANCE IN SELECTED LIMPOPO MUNICIPALITIES**

BY

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DECLARATION

I, Dikotla Maoka Andries declare that this dissertation is my original work and has never been submitted to any other university before. I also declare that all sources cited and quoted have been fully acknowledged as required by the University's plagiarism policy.

.....

Name: Dikotla Maoka Andries

Date: 23 August 2016

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ABSTRACT

The aim of this study was to underscore the role of knowledge sharing in improving the municipal governance in the local government sector of South Africa. The objectives of the study were to find out the kind of knowledge management programmes which are in place in the municipalities of Limpopo Province; establish the extent to which municipalities in Limpopo encourage knowledge sharing for improvement of municipal governance; determine factors which affect knowledge sharing among employees of municipalities of Limpopo Province, and propose recommendations and strategies on how to optimally share knowledge in Limpopo municipalities. The nature of this study warranted the use of two research paradigms, namely positivist and interpretivist approaches. The study employed an integrated research method which covered both the qualitative and quantitative approach. In collecting data, data instruments were triangulated. In this regard, the researcher mostly used a questionnaire with little employment of interviews and observation. The researcher sampled 438 employees and 21 managers from the selected municipalities. Quantitative data was analysed using IBM Statistical Package for Social Science (SPSS) version 23. Qualitative data was analysed using thematic analysis. The major findings of the study are the following: poor knowledge management programmes in Limpopo municipalities, knowledge sharing among the employees and across the municipalities is not encouraged, knowledge sharing in Limpopo municipalities is affected by both individual and organisational barriers and under-utilisation of information communication technology tools to support knowledge management programmes and practices. Comparatively, the findings of this study to a large extent support what has been recorded in literature. However, the study contradicts a typical mind set of many people that “knowledge is power” and cannot be shared freely. The study recommended to Limpopo municipalities

to develop Knowledge sharing strategies that need to be linked to municipal strategic plans; involvement of top management in knowledge management activities; development of knowledge-friendly culture and utilisation of information communication technology tools in support of knowledge sharing. Some recommendations for further study were also provided. Among others, the study recommended that a study on the use of incentive systems as a means of encouraging knowledge sharing be conducted in selected municipalities. This was because studies on the use of incentive systems for motivating knowledge sharing yielded contradictory findings in many organisations.

DEDICATION

This dissertation is lovingly dedicated to my wife: Matobole and daughters: Mashoka and Mapula Dikotla. They understood when I was away from them focusing on this study: **An exploration of knowledge sharing as a means of improving municipal governance in selected Limpopo municipalities.**

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INTRODUCTION AND BACKGROUND OF THE STUDY**1.1 Introduction**

This is a study on how knowledge sharing may lead to improved municipal governance in the Limpopo Province of South Africa. Knowledge sharing is one of the critical functions of knowledge management (KM) because most of knowledge management initiatives depend upon it. The 21st century has ushered in an information and knowledge revolution that is of the same magnitude as that of the industrial revolution in the 18th and 19th centuries (Ondari-Okemwa & Smith, 2009:31). Knowledge has been increasingly recognised as the most important economic resource surpassing the traditional resources of capital, labour and land (Drucker, 1993). It is therefore looked upon as the most critical asset to be managed and shared in both government and non-government organisations. The effective management of this resource is, therefore, one of the most important challenges facing today's organisations (Davenport & Prusak, 1998). Knowledge management is fundamentally about making the right knowledge or the right knowledge sources (including people) available to the right people at the right time. Knowledge means very little unless it is shared with other people (Botha, 2007:35). Knowledge sharing can be defined as the dissemination of information and knowledge throughout the organisation (Wai Ling, *et alia.*, 2009). Knowledge sharing involves the process of converting knowledge and creating new knowledge as well as the process of sharing relevant information, ideas, suggestions, and expertise with others (Van den Hooff & De Ridder, 2004:117). For knowledge sharing to be successful in Limpopo municipalities, significant investments of time, resources and management support are

required from various stakeholders, i.e. employees, communities, and service providers or consultants.

1.2 Contextual setting

Research about knowledge sharing has emerged from various epistemological approaches. A predominant perspective on knowledge sharing is the one of competitive advantage through effective sharing of knowledge. Again, most of the existing researches about the topic-especially those that include quantitative research- have approached the topic by presenting correlations between macro constructs (Llopis-Córcoles, 2011:1). Knowledge sharing has also been addressed from organisational learning perspective while some authors have approached it from a motivational perspective (Swift, *et al.*, 2010), focusing on exploring the attributes of individuals that are useful in encouraging those who possess knowledge to share it. For example, Yao, Kam and Chan (2007:51) investigated how culture, attitudes and barriers affect knowledge sharing in a Hong Kong government department. Another study by Davenport and Prusak (1998) analysed knowledge sharing behaviour and have outlined some of the perceived benefits which include future reciprocity, status, job security and promotional aspects. Based on this perspective, knowledge sharing would be positively affected when an individual expects to obtain some future benefits through reciprocation (Liang, *et al.*, 2008: 3).

Other previous studies have reported factors related to the social exchange theory as successful in explaining knowledge sharing behaviour among individuals. They include personal cognition, interpersonal interaction and organisational contexts. A survey by Kankanhalli, *et al.* (2005:113) found that an individual's perceived benefit is one of the

major factors that encourage employees to contribute knowledge to electronic knowledge repositories. In another Socialisation, Externalisation, Combination and Internalisation (SECI)-based study, Yeh, *et al.* (2011:146) reported that building a learning community, engaging in observational learning, and participating in both class and online group discussions contribute to knowledge sharing. As revealed from the background that knowledge sharing is influenced by different factors and that people engage in knowledge sharing for different reasons. The ease or difficulty to share knowledge depends among other factors such as the characteristics of knowledge itself, which has great influence over the way it is shared, stored and used (Llopis-Córcoles, 2011:5). Knowledge sharing depends on the habit and willingness of the knowledge worker to seek out and be receptive to these knowledge sources. On the other hand “the unwillingness of knowledge sharing causes fatalities for organisational survival and poor service delivery” (Zhou, 2004:18). Therefore, determining factors influencing the effective knowledge sharing in an organisation is an important base of this study. According to Sandhu, *et al.* (2011:209) factors such as the right culture, rewards, incentives, should be present for successful knowledge sharing in organisations. Issa and Haddad (2008) have shown that cultural elements are related to successful knowledge sharing in developed and developing countries. Additionally, Riege (2005:18) states that factors influencing knowledge sharing may include “individual factors (e.g. motivation, trust, time, power, and leadership, communication skills), organisational factors (e.g. management support, reward system, organisational structure, human resource management practices, organisational culture, office politics, and strategies to share knowledge), and technological factors (e.g., IT systems and IT skills and member training)”. Another influencing factor is social network, which can be defined as a patterned organisation of a collection of actors and their relationships

(Jordan & Jones, 1997). In an organisation, people establish contacts and links with others through social networking. In social networks, strong ties within organisations can have positive impact on knowledge sharing. This is because people with a close relationship or closer ties, are likely to be comfortable in sharing their thoughts and resources, (Jordan & Jones, 1997). Conversely weak ties, can negatively affect the flow of knowledge in an organisation because people would only share knowledge with their established contacts.

1.3 Why is it important for municipalities to share knowledge?

It has been noted that knowledge sharing is positively related to reductions in production costs, faster completion of new product development projects, team performance, firm innovation capabilities, and firm performance including sales growth and revenue from new products and services (Mesmer-Magnus & De Church, 2009). Relevancy of knowledge sharing in municipalities lies on the fact that municipalities need to constantly offer effective and efficient service to citizens and this task could be impossible to achieve without sharing necessary knowledge among individuals and different functions of municipality. Knowledge sharing enables the flow of knowledge among and between individuals, groups and organisations (Yeh, *et al.*, 2011). Therefore, knowledge sharing is critical to Limpopo municipalities' success because it leads to faster knowledge deployment to portions of the organisation that can greatly benefit from it (Syed-Ikhsan & Rowland, 2004). Moreover knowledge sharing is important for proper functioning of Limpopo municipalities in the sense that no single employee possesses the combination of knowledge, skills and authority to complete a task without the input or assistance of others (Riley, 2003:11). When individuals share organisationally relevant experiences

and information with one another, it significantly increases the resources of an organisation and decreases time wasted in trial-and error (Lin, 2007). In addition, Islam (2010) indicates that knowledge sharing helps organisations to transfer new ideas or solutions. To this end, governments are starting to adopt knowledge management practices and encouraging knowledge sharing (Cong, *et al.*, 2007: 250).

The significance of knowledge sharing has become even more apparent with the rise of information and communication technology application in service delivery. Information and communication technology assist in facilitating knowledge sharing in an organisation. As such many organisations have invested time and money in the development of knowledge management initiatives and the development of information technology based tools such as knowledge repositories (Cabrera, *et al.*, 2006). However, the mere existence of these knowledge management initiatives does not guarantee that individuals will be effectively involved in the process of sharing. The existence of information technology based tools can facilitate the disposition to share, but does not remove the requirement of a certain amount of individual disposition and effort for an effective sharing (Llopis-Córcoles, 2011:5). Therefore, it is important for Limpopo municipalities to recognise that employees may decide to share or not to share knowledge for various reasons.

Without knowledge sharing, employees and other stakeholders in organisations tend to remain fixed in silos, poorly knitted together, prone to duplication of work and repetition of mistakes, wastage of resources, forgetful of good ideas, and without the harnessing of strengths (Gaffoor & Cloete, 2010:1). This can be costly and affect effectiveness and efficiencies in municipalities. Research has shown that the low level of information and

knowledge sharing among government agencies is the major contributor to poor service delivery in the public sector (Yusof & Ismail, 2009:1).

Studies on knowledge sharing initiative in the country, particularly in the government agencies, such as municipalities are still at scarce (Syed-Ikhsan & Rowland, 2004). Among few studies conducted in South African local government include the one titled *e-Thekwini Municipality's intranet for augmenting knowledge-sharing in the organisation* by Averweg (2012) and *Knowledge management in local government: The case of Stellenbosch Municipality* by Gaffoor and Cloete (2010). Therefore, this study attempts to fill a gap in the research on knowledge sharing by examining how knowledge sharing may lead to improvement of municipal governance in Limpopo municipalities as they face continuous public sector reforms and demand for efficient and effective service delivery. The relevance of knowledge in government has been acknowledged, but the mechanisms, influences, and outcomes of knowledge sharing have barely been studied, particularly in Limpopo municipalities. Therefore the purpose of this study is to contribute to a better understanding of the significance of knowledge sharing between individuals and business departments of Limpopo municipalities. This study bears significant value for Limpopo municipalities because they are centred on knowledge management processes such as the knowledge retrieval, sharing, and dissemination of knowledge. Research shows that knowledge management applications is mainly found in the private sector, which utilises the knowledge management process to attain a competitive edge (Fowler & Pryke, 2003:255). On this background, this study aims to investigate knowledge sharing in local government, hence this study on knowledge sharing as a means of improvement of municipal governance in Limpopo Province.

1.4 Knowledge

The literature features several definitions for knowledge. Davenport and Prusak (1998:5) define knowledge as “a fluid mix of framed experience, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information”. Knowledge can also be defined as the interpreted information that helps members of an organisation to take purposeful actions so as to perform their assigned tasks properly (Jasimuddin, *et al.*, 2012). In sense, knowledge is viewed as information in context, together with an understanding of how to use it (Davenport & Prusak, 1998). Knowing how to use knowledge to make better decisions in municipalities may result in improved municipal governance. These definitions encapsulate two types of knowledge, namely, tacit knowledge (stored in the heads of people) and explicit knowledge (documented knowledge). Using survey method, questionnaires and interviews Dewah (2012:53) noted that knowledge in the broadcasting organisations resides in different places such as databases, filing cabinets, print material and the intrinsic skills and experiences of reporters, journalists, camera persons, producers, marketing officers, librarians, archivists, editors, engineers, administrative officers, graphic artists, trainers, legal and corporate services, accountants, communication officers and others. In the current study the researcher noted that explicit knowledge in studied municipalities is in documents, databases, manuals and procedures, while tacit knowledge is in a form of experience and organisational values that employees and consultants hold in their minds. Therefore, to understand how knowledge sharing may lead to improvement of municipal governance, it is crucial to discuss types of knowledge, but before doing the difference between information and knowledge is provided in section 1.5.

1.5 Difference between information and knowledge

It has been stated that data, information, and knowledge are not the same. Despite efforts to define them, some people use the terms casually. Mostly, the terms knowledge and information are often used interchangeably, even though the two entities are not the same. Nonaka and Takeuchi (1995) provide three characteristics that distinguish information from knowledge.

“First, knowledge is a function of a particular perspective, intention, or stance taken by individuals, and therefore, unlike information, it is about beliefs and commitment. Second, knowledge is always about some end, which means that knowledge is about action. Third, it is context specific and relational and therefore it is about meaning”.

As a way of differentiating the information and knowledge, Wilson (2002) indicates that, information is manipulated and processed outside human minds, and can easily be managed, while, knowledge emphasises on cognitive dimension such as: beliefs, values, insights, and experience processed only in the human minds. Various authors (Nonaka & Konno, 1998; Nonaka, Toyama & Konno, 2000; Bollinger & Smith, 2001) regard explicit knowledge as information. This is because such knowledge exists outside human minds. Knowledge cannot exist without a knower, unless it is externalised, that is, communicated knowledge dies with the knower. Unlike knowledge, information does not die with the mind that holds it (Todd, 1999:11). Information, unlike knowledge (tacit in particular) is easy to share among the employees. This is because information can be shared through a variety of media, such as departmental meetings, conferences, interdepartmental meetings, in-house magazines, organisation newsletters and videos (Holbeche, 2005). Unlike information, knowledge is a personal

and private possession in the sense that it exists in a human mind and is available only [[to or through that mind (Todd, 1999: 11). It is for this reason that knowledge rather than information has become the critical resource that needs to be managed in organisations. Organisations need to manage knowledge in order to improve municipal governance. To understand knowledge in the context of knowledge sharing, it is important to first explain two types of knowledge, namely tacit and explicit knowledge.

1.6 Types of knowledge

Knowledge can be categorised in many ways. Generally there are two types of knowledge, namely, tacit and explicit knowledge. The most widely accepted knowledge taxonomy among researchers and practitioners is the differentiation between tacit knowledge from explicit knowledge, which was first introduced by (Polanyi, 1967) and popularised by (Nonaka & Takeuchi, 1995). It is argued that tacit knowledge resides in the employee's mind and is difficult to codify or share. Explicit knowledge on the other hand is knowledge which can be codified but it may also refer to knowledge which is already codified and found in an organisation's documents, data bases, manuals and procedures and it is easy to share or leak. It is thus relevant to this study to elaborate more on different types of knowledge (tacit and explicit knowledge) in order to study knowledge sharing and its impact on municipal governance, understand strategies for sharing each type of knowledge and to further understand challenges associated with transfer of knowledge in organisations. It is imperative to distinguish between tacit and explicit knowledge, because the transfer processes for tacit and explicit knowledge and their resource requirements differ significantly in terms of their modes, their speed, the

supporting mechanisms they require, and the conditions that enable them (Nonaka, 1994). The transfer processes for tacit and explicit knowledge differ significantly.

1.6.1 Tacit knowledge

Tacit knowledge is usually defined as the type of knowledge where you “know more than you can explain, or knowing how to do something without thinking about it, like ride a bicycle” (Polanyi, 1966). According to Zack (1999) tacit knowledge refers to knowledge residing within individuals demonstrated by actions, watching and doing, innately understood and used. Similarly Bollinger and Smith (2001:314) view tacit knowledge as practical, action-oriented knowledge or “know-how” based on practice, acquired by personal experience, seldom openly, often resembles intuition. Accordingly tacit knowledge is practical expertise that is hard to express.

“Tacit knowledge is deeply rooted in action, commitment, and involvement in a specific context” (Nonaka, 1994:16). This type of knowledge is gained experientially, is private and is incommunicable, and it is inseparable from the process of its creation”. In the context of this study, tacit knowledge in municipalities is embedded in the minds of the employees and is in the form of skills and competencies that employees possess (Abdul Rahman, 2011:212). It emerged from the interviews with managers that organisational tacit knowledge is mainly embedded in the employees that have long service in municipalities. Such knowledge need to be acquired and be shared among all the employees. Sharing tacit knowledge involves organisational learning. In this regard, situated and contextual learning are the elements that tie tacit knowledge to organisational learning. “In learning situations, for example, it is not simply what a mentor or teacher can say, but also what he or she implicitly displays about the particular

art, craft, or discipline” (Duguid, 2005:112). The same scenario can be applicable whereby junior staff members emulates behaviour of senior staff members at work. This is consistent with Polanyi (1966) who states that tacit knowledge can be acquired mainly through observations and interactions with those possessing it.

1.6.1.1 *Mechanisms of sharing tacit knowledge*

The most important factor in knowledge sharing is how knowledge is transferred in an organisation. The ability to share knowledge depends on what type of knowledge to be transferred. In other words, the success of knowledge sharing largely depends on the type of knowledge and the purpose which knowledge is shared for. Social interaction is posited as the primary means by which tacit knowledge is shared (Ryan & O’Connor, 2009:1617). Social interaction in this regard may mean through workshops, meetings, etc. To this end, knowledge management experts such as Nonaka and Takeuchi (1995); Polanyi, (1966) show that tacit knowledge is transferred mainly through observation and face to face interactions. Sharing tacit knowledge is also achievable using information and communication technology such as the demonstration (or imitation) of skills through the use of videos (Hildrum, 2009). Although information and communication technology has been regarded as one the main enablers of tacit knowledge sharing, there are supporting and opposing arguments on whether information and communication technology can facilitate tacit knowledge sharing (Panahi, *et al.*, 2013:391). Therefore, it can be argued that the role of information and communication technology in sharing tacit knowledge is currently uncertain.

1.6.1.2 *Challenges of sharing tacit knowledge in an organisation*

There are some challenges associated with tacit knowledge. The most important feature of tacit knowledge approach is the fundamental principle that knowledge is basically individual in nature and is consequently complicated to extract from the heads of individuals (Polanyi, 1966). It is difficult to code and share tacit knowledge because it is embedded in organisational practices and informal rules, routines, and processes and that tacit knowledge is more of unspoken. Other difficulties regarding tacit knowledge sharing include individual, cultural, and technical difficulties, (Panahi, *et al.*, 2013: 386). For instance, Haldin-Herrgard (2000) notes five difficulties in sharing tacit knowledge:

- **Perception** (unconsciousness of holding knowledge)

This involves the problem of people not being aware of the full range of their knowledge because tacit knowledge is so internalised that it has often become a natural part of people's behaviour or way of thinking (Haldin-Herrgard, 2000: 361).

- **Language** (and its limit in expressing hard to verbalising forms of expertise).

Regarding language, employees may find it difficult to find proper language to share tacit knowledge because of different terminology/jargon that prevails given the different line of businesses and/or activities in organisation. In municipalities there are artisans, electricians, administrators, accountants, librarians etc. thus the terminology may be a challenge based on this different fields of work.

- **Time constraints:** (long time required to process and internalise new knowledge).

The internalisation of tacit knowledge requires more time both for individual and organisation. For example more time is required for induction of new employees. Again to reflect on experience is time consuming and financially costly.

- **Value** (immeasurableness value of some kind of tacit knowledge).

This poses some difficulties in sharing tacit knowledge because tacit knowledge is held in non-verbal form that is hard to express or articulate and quantify. This is in agreement with Polanyi's view (1966) that people know more than they can explain. Hence sometimes people are not aware that they hold some kinds of tacit knowledge.

- **Distance** (the need for face-to-face Interaction).

Distance or geographic location may hinder flow of knowledge because sharing tacit knowledge requires face to face interaction.

In sum, transferring and sharing tacit knowledge is not as simple as transferring explicit knowledge. However, this does not suggest that explicit knowledge is free from challenges. Subsequent paragraph provides an explanation about explicit knowledge.

1.6.2 Explicit knowledge

Explicit knowledge refers to knowledge that is transmittable in formal, systematic language (Zhang, *et al.*, 2005). Alavi and Leidner (2001) view explicit knowledge as tacit knowledge that has been clarified, coded and distributed using symbols or common language. Essentially, explicit knowledge refers to "know-what" or systematic knowledge that is described in formal language, print or electronic media, often based on established work processes, use people-to-documents approach (Bollinger & Smith, 2001: 314). In other words explicit knowledge is knowledge that has been codified into something that is formal, structured and systematic, and can be shared, communicated with ease and be accessible to other people. It emerged from the studied municipalities that explicit knowledge in municipalities is in various formats which include records, manuals, reports, business processes, newsletters and other documents. Explicit

knowledge is generally saved in codified form in databases and can be easily conveyed to the receiver without any misunderstanding (Bollinger & Smith, 2001). This is not always true, because there might be some barriers from the receiving party in decoding, and comprehending knowledge. Explicit knowledge can be presented in words and numbers and has the ability to be shared in manuals, specifications and scientific data (Nonaka, Toyama & Konno, 2000). Explicit knowledge can be documented and distributed to others such as guidelines, reports, procedures, strategies and databases (Nonaka & Konno, 1998). In other words explicit knowledge is characterised by the fact that it can be disseminated within an organisation through documents, drawings, standard operating procedures, manuals of best practice, to mention but a few. Therefore, this kind of knowledge can be regarded as the information and individual expertise which can be stored in different types of media, thereby providing the opportunity to reuse it for different purposes within the organisation (Lindvall & Rus, 2002). This kind of knowledge can be transferred through more technology-driven, structured processes such as information systems (Mårtensson, 2000). As part of information technology, intranet play a pivotal role in facilitating the dissemination of both explicit and tacit knowledge between individuals. To this end, the researcher established that the studied municipalities have stored vast amount of explicit knowledge in both website and intranet.

It can be noticed from the preceding paragraphs that explicit knowledge can exist independently from the human agent. It can also be noticed that explicit knowledge is divided into object-based or rule-based. "Object-based explicit knowledge is embedded into artefacts and is usually represented using a string of symbols, or is embodied in the entity such as products, patents, software code, computer databases, technical

drawings, tools, photographs, voice recordings, and films. On the other hand rule-based explicit knowledge takes the form of rules, routines, or operating procedures” (Choo, 2000:396).

1.6.2.1 *Challenges of sharing explicit knowledge in an organisation*

Just like tacit knowledge, there are some challenges surrounding management of explicit knowledge in an organisation. Sanchez (2004) identified some challenges regarding the dissemination of explicit knowledge as follows:

- **Skill/motivation to articulate useful knowledge:** individuals may need organisational support to adequately articulate their knowledge into useful knowledge assets. This may have a significant financial cost and inevitably takes time.
- **Resistance of request:** individuals may resist request by the organisation to articulate their knowledge. Job security or loss of power may influence individuals not to share knowledge.
- **Challenge of adequately evaluating the knowledge:** in an organisation, process of evaluating explicit knowledge can be daunting and time consuming.
- **Rejection of explicit knowledge:** knowledge articulated may be rejected on the basis that it was not created within the organisation or by an individual himself.

1.6.2.2 *Characteristics of explicit and tacit knowledge*

Regarding the characteristics of tacit and explicit knowledge, one could contend that both forms of knowledge could be regarded as separate and distinct. According to Brown and Duguid (2001) there is hardly any practical distinction between tacit and explicit knowledge since they reflect dimensions of knowledge, rather than distinguishable types of knowledge. For Polanyi (1966: 7) “a sharp division between tacit and explicit knowledge does not exist ...all knowledge is either tacit or rooted in tacit knowledge”. Polanyi (1966:16) states that “we can know more than we can tell and we can tell nothing without relying upon our awareness of things we may be able to tell.” Tsoukas (1996) differs with Polanyi’s view by arguing that knowledge can be more or less tacit or it can be more or less explicit, but may not be fully explicit or fully tacit. Moreover Tsoukas (2005) argue that explicit knowledge is grounded in a tacit component and vice versa. This implies that both tacit and explicit knowledge are complementary. Table 1.1, provides further description and characteristics of both explicit and tacit knowledge.

Table 1.1: Characteristics of explicit and tacit knowledge

Citation	Explicit knowledge	Tacit knowledge
Choo (2000)	Products, patents, code, databases, technical drawings, tools, prototypes, audiovisuals, operating procedures	Learned through observation and imitation; shared through analogies, metaphors, and stories face collaboration
Davenport and Grover (2001)	Easily codified and transferred through documents	Primarily transferred through direct interaction between individuals

Citation	Explicit knowledge	Tacit knowledge
Clarke and Rollo (2001)	Codified, formal, systematic, reports, manuals, documents	Experimental, intuitive, communicated through face-to-face
Zack (1999)	Mathematical formulas, training manuals, product literature,	Shared through highly interactive conversation, storytelling, shared product literature, experience

Source: Holste and Fields, (2010:130).

Knowledge can also be organisational or personal (Dulipovici & Baskerville, 2007). According to Tsoukas and Vladimirou (2001:973) organisational knowledge is “the capacity members of an organisation have developed to draw distinctions in the process of carrying out their work, in particular concrete contexts, by enacting sets of generalisations whose application depends on historically evolved collective understandings”. Tsoukas and Vladimirou (2001: 979) go further to define personal knowledge as “the individual capacity to draw distinctions, within a domain of action, based on an appreciation of context or theory, or both.” In organisations, knowledge can be internally or externally generated. According to Frenz & Letto-Gillies (2009) internal knowledge is obtained from internal sources such as: employees, Research and Development department, sales department, and production department. External knowledge is normally obtained from external bodies such as experts, customers, suppliers and other organisations. In organisations where knowledge is articulated and disseminated, best practices are carried forward to improve municipal governance and effective service delivery. All these forms of knowledge need to be protected and shared between the employees for the benefit of the organisation, hence knowledge management becomes crucial.

1.7 Knowledge Management (KM)

When different types of knowledge are understood, it becomes important to explain how knowledge is managed in an organisation. In this study, knowledge management refers to the practice and techniques used by municipalities to identify, represent and distribute knowledge, know-how and expertise to leverage, reuse and share knowledge and learning throughout the municipalities. In brief, knowledge management is generally referred to as the way municipalities create, retain and share knowledge. Alshboul, *et al.* (2012:18) define knowledge management as the process of identifying and seeking the intellectual experiences and assets which individuals inside an organisation possess, and transferring and conveying them to an organisation through publications, or through the auxiliary systems for conveying knowledge, with a view to disseminating knowledge and improving performance of municipalities. Based on these definitions one can argue that knowledge is an important resource that need to be managed properly because it may determine whether an organisation achieve its objectives or not. Again people are important sources of knowledge, while information and communication technology is a critical enabler of knowledge management.

Fowler and Pryke (2003:255) point out that knowledge management applications are mainly found in the private sector, which utilises the knowledge management process to attain a competitive edge. However, knowledge management bears some relevance in Limpopo municipalities because it is argued that most public sector organisations now follow a businesslike approach where the focal point of service provision is responding to citizen needs and providing integrated and comprehensive service delivery (Binz-Scharf, 2003:5; Fowler & Pryke, 2003:258). The notion that knowledge management is

relevant in government is supported by the Department of Public Service and Administration (DPSA) (2005) by highlighting knowledge management as “an enabler for the 21 Century African public service to be a learning organisation in which people at all levels, individually and collectively are continually increasing their capacity to produce results, where the organisation encourages new ways of thinking, where the collective vision of creating the best is liberated, and where everybody continuously learns how to learn together”. DPSA (2005) further states that knowledge management is essential for the African civil service to lead Africa to attain the Millennium Development Goals because it offers new ways of doing business and continuously solving problems.

It has been stated that governments are adopting policies that recognise the information age (Fowler & Pryke, 2003:255) whereby knowledge and management thereof are critical to the survival of an organisation. In the knowledge economy, organisations place an increasing importance on their employees’ experience and know-how, i.e., their knowledge (Davenport & Prusak, 1998). Therefore, municipalities are faced with the challenges of creating and implanting processes that generate, store, organise, disseminate and apply knowledge produced and used within the municipality in a systematic, explicit and reliable way so that it is accessible to all stakeholders (Menolli, *et al.*, 2015:291). The researcher argues that knowledge management can help Limpopo municipalities to minimise these challenges. This is because the focus of knowledge management programmes in organisations is to develop accessible document repositories to support the digital capture, storage, recovery and distribution of the explicit knowledge documents of an organisation (Menolli, *et al.*, 2015:291). Knowledge management in Limpopo municipalities can integrate fragmented

knowledge and make it accessible. Furthermore, knowledge management can drastically improve service delivery in civil services the world over (Ondari-Okemwa & Smith, 2009:29).

Based on the definitions of knowledge management above, one may argue that proper knowledge management in Limpopo municipalities can facilitate knowledge sharing and ensure that employees get the right information at the right time for making informed decisions, solving service delivery problems and eliminating duplication of efforts. As knowledge is shared among employees, departments and even with other organisations outside the sphere of local government in an effort to devise best practices, service delivery may be improved. The researcher agrees that knowledge management is among the most modern management concepts, having a significant impact on the governance of municipalities because it can reduce the cost of operations and improve customer service (Cong & Pandya, 2003). In government, customer service relates to eight 'Batho pele' principles service standards. The eight 'Batho Pele' principles are consultation, service standard, access, courtesy, information, openness and transparency, redress and value for money. South African government introduced these eight principles with the purpose of transforming public service and improving service delivery (Mullon, 2004). With knowledge of these principles in mind, the researcher believes that knowledge management will enable government officials to render public service of the same standards across the board if they have access to and common understanding of standards processes and deliverables expected of them (Mullon, 2004), thus, quality service and satisfied communities. Additionally, knowledge management in a government can improve efficiency, efficacy and quality service delivery and assist in formulation and implementation of public policies (Riege &

Lindsay, 2006:16). Malkawi (2007) shares the same sentiments by stating that knowledge management helps organisations to achieve productive efficiency given that it enables members of an organisation to deal with a number of issues, especially new ones, for it supplies them with the necessary capability to take decisions efficiently and effectively. In a similar vein, Riege and Lindsay (2006:16) show that knowledge management maximises efficiency across all public services by connecting silos of knowledge across different levels of government and across borders. Knowledge management may lead to creation of new partnerships and connections among the employees within and across all Limpopo municipalities, thus leveraging efficiency and knowledge sharing.

1.8 Knowledge sharing

Depending on the lens used, knowledge sharing can be viewed from unidirectional or bidirectional perspectives. According to the unidirectional perspective, sharing involves the dissemination of knowledge in a single direction, from the provider to recipient (Yin, 2009). Some researchers refer to this perspective as knowledge transfer. According to Newman and Conrad (1999) knowledge transfer refers to activities associated with flow of knowledge from one party to the other. “Knowledge transfer” typically has been used to describe a directed flow of knowledge from point A to point B. Knowledge transfer can be regarded as ‘a process that achieves effective sharing of knowledge among individuals, business units, departments or even different branches (Lochhead & Stephens, 2004). The concept ‘knowledge transfer’ should not be construed to mean that the sender loses knowledge. Knowledge is a resource that multiplies when it is shared effectively (Davenport & Prusak, 2000).

Second perspective is used to describe a generic bidirectional flow of knowledge (Tohidinia & Mosakhani, 2010). The bidirectional perspective claims that knowledge sharing involves an exchange of knowledge between individuals through the actions of knowledge donating as well as knowledge collecting and it is a two-way process (Van den Hooff & De Ridder, 2004). Its main objective is to facilitate effective knowledge sharing among organisational members (Tagliaventi, *et al.*, 2010). Knowledge sharing refers to the communication of both explicit knowledge that is documented and captured as information and tacit knowledge that is in the form of skills and competencies (Abdul Rahman, 2011:212). Knowledge sharing is also defined as a social interaction culture, involving the exchange of employee knowledge, experiences, and skills through the whole organisation and the means by which an organisation obtains access to its own and other organisations' knowledge (Karemente, *et al.*, 2009:55).

In this study, knowledge sharing was conceptualised using Van den Hooff and De Ridder's (2004) definition that sharing involves an exchange of knowledge between individuals through the actions of knowledge donating and knowledge collecting. Van den Hooff and De Ridder (2004: 118) describe knowledge donating as the action of "communicating to others what one's personal intellectual capital is", and knowledge collecting as the action of "consulting colleagues in order to get them to share their intellectual capital". This definition is preferred because sharing is unidirectional, only if it occurs for instance between mentor and mentee. In such cases, the mentor will only donate and does not collect knowledge from mentee, who is still learning. Sharing becomes bidirectional if it occurs when the employees share their work-related experiences, thoughts, skills and know-how (Gangeswari, *et al.*, 2015:124). Knowledge sharing is crucial particularly when new employees are hired and leaving the employ of

the municipalities. Knowledge sharing depends largely on organisational culture and organisational learning.

1.9 Organisational culture and organisational learning

Park, *et al.* (2004) define organisational culture as the shared, basic assumptions that an organisation learns while coping with the environment and solving problems of external adaptation and internal integration that are taught to new employees as the correct way to solve those problems. Organisational culture is also defined as “shared beliefs, values, and practices of a group or groups within the organisation” (Anantatmula & Kanungo, 2010:242). According to Skyrme (1999:184) an organisational culture that fosters knowledge sharing and enhancement, displays the following characteristics:

- a dynamic learning environment,
- a continual quest for novel means of development and innovation,
- concentrated, transparent and extensive communication,
- periods of reflection, learning and experimentation,
- objectives and performance gauges that are synchronised across the organisation,
- communication and interaction across and within groups and
- inclination toward extensive knowledge sharing among individuals who make up the workforce (Skyrme, 1999:184)

Regarding organisational learning, Nonaka (1994:20) defines the concept as a process through which the knowledge held by individuals is amplified, internalised, and externalised as part of an organisation’s knowledge base. In other words, Limpopo municipalities would learn if they are able to retain and share knowledge. Through a

survey study Garvin (1993) established that organisations learn through five main activities namely:

- systematic problem solving,
- experimenting with new approaches,
- learning from their own experience and past history,
- learning from the experiences and best practices of others, and
- transferring knowledge quickly and efficiently throughout the organisation.

Employing these activities in Limpopo municipalities would possibly provide municipalities the agility to deal with service delivery problems and new ways to solve problems, sharing what is learned and using lessons learned to improve service delivery. Organisational learning hinges on commitment and support from top management which is partially provided in Limpopo municipalities. Regarding top management support in terms of knowledge management programmes a quantitative MBA study conducted by Khoza (2008) in South African Public sector revealed that senior officials and politicians do not understand what knowledge management means. As a result top management and workers, unlike private sector ones, do not have a clear appreciation of knowledge management in service delivery (Khoza, 2008:92).

Crossan, *et al.* (1999) states that learning within the organisation may take place at three levels: individual, group and organisation. These three levels of learning are distinct and interrelated. Individual learning is considered to be a prerequisite for organisational learning because “organisations learn only through individuals who learn” (Senge, 1990). However, individual learning would not guarantee organisational learning but without it no organisational learning would occur in municipalities. The latter requires, that individuals share their knowledge within the organisation, which needs

that groups have the capability of working effectively, and on the other hand, that the organisation is able to embed individual and group learning into organisational routines, practices and beliefs that outlast the presence of originating individual (Attewell, 1992).

In Limpopo municipalities culture of knowledge hoarding affect organisational learning and knowledge sharing. According to Ondari-Okemwa (2004) knowledge hoarding is directly related to a culture of secrecy that is still prevalent in government services in many countries in Africa. Based on exploratory qualitative study that included 10 Ministry of Justice lawyers in Zambia, Nabombe and Kanyengo (2009:34) found that knowledge hoarding arises out of government policies that do not generally promote a culture of knowledge sharing. The researcher attributes knowledge hoarding to bureaucracy in government because employees are afraid or unable to try or experiment new things or ways of improving service delivery. However, it is important to show that Limpopo municipalities are making some deliberate attempts towards organisational learning to learn new ways of doing things and best practices of providing effective and efficient service delivery. Interviewed managers reported that employees are taken for courses and benchmarking at other municipalities within and outside Limpopo Province in order to learn best practices. In so doing, knowledge sharing takes place.

It appears to the researcher that change in Limpopo municipalities is short-lived. This is informed by answers given by the interviewed managers. They revealed that some old and long serving members are reluctant and unwilling to study, change and learn new ways of doing things. In the absence of learning, municipalities and their staff members simply repeat old practices and same mistakes. For instance, most of these municipalities have repeatedly obtained qualified audit reports in five consecutive years.

The concepts organisational learning as understood here is that organisations draw lessons from history, interpret and put them into organisational routines (Ülkü & Cahit, 2014:959). Therefore organisational learning is an integral part of knowledge sharing because it supports learning organisation.

1.10 Learning organisation

A learning organisation simply refers to an organisation that facilitates the learning of its members and continuously transforms itself (Pedler, *et al.*, 1997). Taking from this definition, learning organisation would encourage Limpopo municipalities to shift to a more interconnected way of thinking. According to Senge (1990), a learning organisation exhibits five main characteristics namely, systems thinking, personal mastery, mental models, a shared vision, and team learning:

- **Systems thinking.** Learning organisations use this method of thinking when assessing their organisation and have information systems that measure the performance of the organisation as a whole and of its various components.
- **Personal mastery.** Simply this refers to the commitment of an individual employee towards the process of learning new things. Municipalities whose workforce can learn more quickly than the workforce of others stand a chance of gaining competitive advantage. Organisations should therefore be able to create conducive environments and conditions which can encourage and support staff to increase their personal mastery.
- **Mental models.** According to Ülkü, and Cahit (2014. 959) mental models are described as deeply imbedded assumptions, generalisations, or even pictures or images that influence the way people understand the world and how one takes

action. Simply put, mental models are the assumptions or beliefs held by individuals and organisations.

- **Shared vision.** It is important for individuals to share visions at all levels of the organisation. The development of a shared vision is important in motivating the staff to learn, as it creates a common identity that provides conducive environment for learning.
- **Team learning.** Team learning means learning together as a team. This requires members of a team to begin with dialogue, where members argue through and discover insights that cannot be easily obtained as individuals (Govender, 2009:368). Team learning improves the problem solving capacity of the organisation because of accessible knowledge and expertise.

1.11 Learning culture

Rebelo and Gomes (2011) define a learning culture as an organisational culture that is oriented towards the promotion and facilitation of workers' learning, its share and dissemination, in order to contribute to organisational development and performance. A culture of inquiry help employees to feel free to ask service delivery related questions. The central idea underlying this kind of culture, is that, the organisation, through culture, promotes and values individual learning with the objective that this good individual learning, through sharing processes, turns into group learning or organisational learning and in so doing can contribute to organisational success (Rebelo & Gomes, 2011:174). Therefore it is advisable that an organisation that wants to be a learning one should compel its workers to learn because in a learning culture, the acquisition of new

knowledge and skills is supported by aspects of the organisation's environment that encourages gathering, sharing, and applying new knowledge (Rebelo & Gomes, 2011).

An organisational culture oriented to productive learning leading to new and useful knowledge which in turn leads to innovative ways to solve problems and challenges, increases the probability of an organisation being successful. For the Limpopo municipalities, learning means effective implementation of projects, better strategies, policies, decisions, resource allocation, and financial management that would all lead to the municipalities' ability to render effective and efficient service. A learning organisation's culture would greatly influence how individuals gather, process, and share information in the Limpopo municipalities (Cummings & Worley, 2001). These authors state that this type of culture needs to be based on openness, creativity, and experimentation. Regrettably, this kind of culture seems not to exist in Limpopo municipalities. Employees are afraid to err or try new things for fear of breaking the rules of the organisation. For instance, some employees were still reluctant to participate in this study even though they were presented with a permission letter obtained from the Municipal manager.

To instill a learning culture, Limpopo municipalities should consider mistakes or errors as a normal part of the learning process wherein employees are able to learn from their failures and develop themselves as well as their organisations. In laying the foundation for a culture of learning within the Limpopo local government setting, the emphasis should therefore be on creating contexts and patterns of discourse that give rise to the cultural attributes associated with a culture of learning. Hopefully, once established the behavioural patterns that emerge would engender a mind-set that gives rise to a culture

of lifelong learning. It may be argued that a successful organisation would be the one that can rapidly learn, assimilate and transfer knowledge across the organisation.

1.12 Knowledge friendly culture

A knowledge management study conducted in government organisations in Kenya, Ondari-Okemwa (2006:16) found that a knowledge-friendly culture is a prerequisite for organisations where knowledge management thrives. Not all organisations have a knowledge friendly culture. The most knowledge friendly culture is performance culture that is based around team work (Gorelick, *et al.*, 2004:56). The nature of work in Limpopo municipalities is organised into projects and requires team work, but most often than not employees work in silos. It is expected that a knowledge-friendly culture should be established and nurtured in Limpopo municipalities if knowledge sharing was to succeed. However, culture does not build overnight. It takes a long time to build and it cannot be dictated. “Much as an organisation may wish to establish a culture which embraces knowledge sharing and learning, there are some cultural barriers which may prevent it” (Ondari-Okemwa, 2006:16). The fact that organisations employ employees with different beliefs that is a challenge on its own, as each one’s belief may affect the manner in which employees discharge their duties. Gorelick, *et al.* (2004:53) identify some of the common barriers that Limpopo municipalities are likely to face when creating a culture which embraces knowledge sharing and learning as follows: “Idea or knowledge was not invented here therefore we cannot adopt it, knowledge is power therefore sharing it with colleagues would make one’s knowledge obsolete or powerless, mentality that drives employees to focus only on their team and neglect others. Lastly, no time to share, whereby employees think sharing knowledge waste

time while in fact it saves them from costs of re-inventing the wheel”. These barriers stifle the flow of knowledge in an organisation. Therefore, Limpopo municipalities need to remain alert about them.

1.13 Information and knowledge society

Some authors use the concept “information society interchangeably with the newer concept of the knowledge society (Castells, 2011; Lor & Britz, 2007:392). This is the stance which the researcher adopted. The World Summit on the Information Society (WSIS, 2003) in Geneva defines the information and knowledge society as a society in which people interact with technology as a fundamental part of life and social organisation to exchange information on a global scale. On the other hand, Holmner (2008: 69) defines information and knowledge society as “a society that is reliant upon a sophisticated physical and information and communication infrastructure for the improvement of everyday living and working conditions”. This society values the importance of information as the key to economic wealth and prosperity, leading to an increase in information-related activities as well as an enhancement of intellectual capability. Information and knowledge ensures the freedom of information through the use of information and communication technologies”. Information and knowledge society is a learning society with knowledge and competences evolving continuously (Ciolan, *et al.*, 2014:415). The information and knowledge society offers enormous opportunities and benefits to people with regards to being able to access and use information (Jiyane, *et al.*, 2013:2) and possibly knowledge.

Information and knowledge society capture the discourses of society, embracing new social and economic changes through global technological structures where new forms

of information and communication technologies and their convergence present unlimited ways to reinvent corporate organisations, institutions, societies, social practices and norms by centering knowledge and information as vital resources (Castells, 2011). This type of society values the importance of information as crucial to creating wealth and prosperity, leading to an increase in information and knowledge-related activities. The importance of information and knowledge lies in the premise that many of the problems confronting Limpopo municipalities, could be alleviated if the necessary knowledge and expertise are shared efficiently through the use of information and communication technologies. This is to say; opportunities and benefits that individuals and local municipalities gain depend on the facilitation of information and knowledge sharing, access and use (Jiyane, *et al.*, 2013:2). Roszak (1988) contests that these ways of thinking about information, i.e. believing that information is the foundation of the social system or information and knowledge society. Roszak (1988) insists that the 'master ideas' which underpin civilisation are not based upon information at all. Principles such as 'my country right or wrong', 'live and let live', 'we are all God's children' and 'do unto others as you would be done by' are central ideas of our society but all come before information.

One might need to know if Limpopo municipalities have reached information and knowledge society status. Nassimbeni (1998) notes that very few operational definitions of the concept "information and knowledge society" exist, making it difficult to decide whether or not a country or community has moved forward in its quest to achieve this status. There are criteria that have to be met in order for a country or community to be considered an information and knowledge society. Holmner (2008: 70) identify such criteria as:

- *Economic criterion*

The economic criterion is work opportunities that lead to better income opportunities. The measure of the work opportunity indicator is the unemployment rate of a country. In South Africa, majority of people depend on government grants. People can use information and communication technologies to share job related information with each other and thus improving the economy of the country (Jiyane, *et al.*, 2013:3).

- *Spatial and technological criteria*

This criterion proclaims adoption of information and communication technologies to be the distinguishing feature of an information society. The technological criterion emphasises accessibility of information at any time without geographic limitations; a sound technological infrastructure is vital for information and communication technologies and integrated broadband networks. Connection to the internet via computers and smart phones allows people to access and share knowledge quickly and more easily. The researcher notices with disappointment that in Limpopo municipalities and many parts of the South Africa as the developing country, these networks are not yet in place or still in progress.

- *Political criterion and its indicators*

Political criterion is determined by how people enjoy the right to freedom of expression, intellectual property rights, and the freedom to access information. In a democratic country, people know that they have the right to access information. This promotes information and knowledge sharing (Jiyane, *et al.*, 2013:3). Through e-government and legislative framework such as Promotion to Access Information Act (PAIA) of 2000

citizens are able to exercise their human rights better and have access to government information more efficiently.

- *Social criterion and its indicators*

Information is viewed as a factor that enhances the quality of life within the information and knowledge society. As such, this criterion indicator emphasises that in the information and knowledge society, information should be available, affordable, timely, relevant, readily assimilated, and in a language the user can understand (Britz, *et al.*, 2006). The other indicator of the social criterion is education opportunities which are measured by looking at literacy levels. Another indicator of the social criterion include initiatives where government information is available and can be accessed online (Jiyane, *et al.*, 2013:3).

- *Cultural criterion and its indicators*

Culture is an important factor in knowledge sharing. It can either make or break knowledge sharing in an organisation. The indicators of the cultural criterion include linguistic diversity, cultural heritage, and the preservation of cultural legacy. According to Nassimbeni (1998), the information and knowledge society supports, serves and enriches culture by accepting linguistic, content and cultural diversity. The information and knowledge society promotes linguistic diversity where both local and global languages are promoted for the sharing of information and knowledge. In the studied municipalities, English language is predominatly used to share information and knowledge.

- *Physical infrastructure criterion and its indicators*

Information and knowledge society is underpinned by reliable and highly-sophisticated infrastructure such as proper roads, airlines, railway lines. The presence of the physical infrastructure promotes mobility and the delivery of people, goods and services from one place to another in a community or country. Although the physical infrastructure criterion does not have a direct impact on the interaction and exchange of information and knowledge, this criterion is still important because it has a direct bearing on some of the other criteria in the information and knowledge society, and therefore on information and knowledge exchange and sharing (Holmner, 2008:82).

- *Knowledge criterion and its indicators*

The indicators of the knowledge criterion include information and computer literacy, sophisticated information and communication technology infrastructure and the creation of local content and local e-content (Jiyane, *et al.*, 2013:3). These indicators address the issue of the flow of information to everyone everywhere due to the availability of information and communication technologies. It appears to the researcher, that access to information and communication technology infrastructure is still a major problem in the studied municipalities.

In short the criteria mentioned above can be applied to countries, and if a country meets the majority of these criteria, it can be deduced that the country or community has achieved the status of an information and knowledge society. However, most or all of the criteria are not met by a community or country, as is often the case with developing countries (Holmner, 2008: 69). In this case one can state Limpopo municipalities and the country as a whole are on the path to becoming an information and knowledge

economy. As such they may not be able to benefit fully from the advantages of being included within this society.

1.14 Knowledge economy

Knowledge economy involves consideration of networked economy and the role of information and knowledge in economic performance (Ondari-Okemwa, 2006:13). Production of ideas and not goods is the source of economic growth (Davenport & Prusak, 1998: 17). Technology facilitates the distribution of knowledge. There are certain characteristics that make knowledge economy. Weber (2011: 2590) states that knowledge economy is characterised by economic and institutional incentives for the use of knowledge and educational skills required for the creation, use of knowledge by individuals and an information and communications technology infrastructure. Britz, *et al.* (2006:27) contends that knowledge economy is characterised by a culture of knowledge production that is underpinned by a higher level of education with a focus on the use of modern information and communication technologies. Holmner (2008: 69) concurs that a knowledge economy is reliant upon a sophisticated physical and information and communication technologies infrastructure for the improvement of everyday living, working conditions and service delivery in the context of government agencies. In similar vein, Drucker (1993) indicates that knowledge economy is characterised by the provision of superior products and services, highly trained and educated people, and knowledge as opposed to traditional or natural resources of production, i.e. labour, land and capital. Based on these characteristics it can be said that knowledge economy is also characterised by high level of learning and training of

knowledge workers because, knowledge-based society depends on knowledge to compete favourably.

Based on the definitions of knowledge society one can deduce two things about knowledge. First, knowledge is the primary input in economic activities within the information. Second knowledge is regarded as having economic value in knowledge society. Characteristics of a knowledge economy highlight the role and importance of knowledge in the knowledge economy. Based on these characteristics of knowledge economy, one could argue that Limpopo municipalities show some of the attributes of this type of society. For example, the study revealed that large number of work force is well educated as they hold diplomas and degrees. The fact that Limpopo municipalities outsource most of their services to consultants also suggests that Limpopo municipalities have partially reached the stage of knowledge economy. Consultants are experts in their own right and they fully meet characteristics of knowledge economy (Evers & Menkhoff, 2004).

1.15 Knowledge worker

Drucker (1994) referred to an individual who works primarily with information or one who develops and uses knowledge in the workplace as the knowledge worker. Knowledge worker refers to a person that is able to acquire, manipulate, interpret and apply information to perform multidisciplinary, complex and unpredictable work (Knowledge Workers, 2013). A knowledge worker is a person who is able to perform, work on complex issue, find, access, re-call and apply information to acquire and improve their knowledge (Zhan, *et al.*, 2013). In simpler terms knowledge worker is the employee who engages in knowledge work. According to Vinson (2009), a knowledge worker is a

person who uses their brains more than their hands. Knowledge workers are professionals, office workers and managers. Example of knowledge worker is a Librarian, scientist, an engineer and IT specialist. As for Davenport (2005) knowledge worker refers to somebody who obtained good education qualification and experience. In other words, knowledge workers are not labourers who work as farmers in the field (Spiral, 2008).

Knowledge worker's job involves knowledge creation, sharing and applying the knowledge on their day-to-day job operations (Davenport, 2005). Some of the characteristics that knowledge workers have include the following: Possess some kind of theoretical knowledge; ability to find and access information; ability to apply the retrieved information, ability to communicate well; high motivation and have intellectual capabilities (Knowledge Workers, 2013). Zhan, *et al.* (2013) conclude that the greatest wealth of knowledge workers is the knowledge which they own. This is the very same knowledge that needs to be shared in organisations.

1.16 Governance and Knowledge sharing

Fourie (2009) defines governance as operational processes and systems which a public organisation requires in order to deliver services to the people. According to Fourie (2009) governance comprises eight key characteristics which include, consensus orientation, responsiveness, participation, rule of law, transparency, equity and inclusiveness, effectiveness and efficiency, and accountability. Taking note of international precedence, South Africa began exploring knowledge management as a governance tool early in 2000 with initiatives like those of the Department of

Communication to promote knowledge management among knowledge society' stakeholders (IK Magazine, 2015).

Knowledge sharing has potential of solving challenges facing municipalities currently. Local Government Turn-around Strategy (2009) outlines challenges faced by the Local Government sector in South Africa as follows:

- Limited resources – requiring that risk & cost must be managed effectively to provide the best development impact.
- High turnover of technical & professional staff.
- In some cases – a strong dependence on consultants which often leaves the municipalities in a position of having to consistently “re-purchase” advice and intellectual property.
- Inability in some municipalities to deliver on the core set of critical municipal services.
- Poor financial management such as negative audit outcomes.
- Corruption and fraud.

In an attempt to solve these challenges various strategies have been tried and tested but with no positive results. It is for this reason that the researcher thinks knowledge sharing could be a solution to challenges facing municipalities. Resolving these challenges would suggest good municipal governance and improvement of service delivery. Therefore, it is advantageous to have knowledge sharing as a tool for good governance in municipalities. According to SALGA and the City of Cape Town (2013) effective management and sharing of Municipal Knowledge can assist Limpopo municipalities to:

- Improve accountability through effective management of Municipal information and knowledge resources.
- Make informed decisions about municipal governance.
- Increase level of collaboration internally and externally.
- Enhance collaboration and strategic partnerships with stakeholders.
- Capture knowledge of retiring employees.
- Retention of the Municipality's institutional memory.

It is clear from the foregoing that knowledge sharing is an important ingredient in the work of municipalities. If knowledge is effectively and efficiently shared among the employees and across the municipalities, possibilities are that municipal governance would improve and this would result in improvement of service delivery. Therefore, sharing the know-how among the employees and municipalities seems to be a better solution for improving municipal governance and service delivery in Limpopo municipalities and South Africa as a whole.

1.17 The background of Municipal governance in South Africa

Historically, apartheid policy in South Africa dictated the establishment of local government legislation in which categories of municipalities were designated black or white local authorities. The Group Areas Act 41 of 1950 made provision for blacks/non-whites (i.e. Africans, Coloureds and Indians) to live separately. The democratisation of South Africa, which started during the early 1990s led transformation of the total government system in the local government sphere. The promulgation of the Local Government Transition Act 209 of 1993 has been an important provision regarding the restructuring of municipalities in South Africa. The proclamation of White Paper on Local

Government of 1998 was to ensure that the concept of a developmental local government was introduced and to promote an understanding of the role and responsibilities of local government. The promulgation of the Local Government: Municipal Structures Act 117 of 1998 has played a role in redefining the different categories of municipalities throughout South Africa. This redefinition included their types as well as their powers and functions. Finally, the Local Government: Municipal Systems Act 32 of 2000 presented prescriptions for the overall municipal functioning in order to guide service delivery appropriately.

Today, Local government in Limpopo Province which is predominantly rural comprises five district municipalities and 25 local Municipalities (South African Local Government Association; (SALGA, 2012:1). In total, there are 30 municipalities in Limpopo Province. Local municipalities comprises Aganang, Blouberg, Lepelle-Nkumpi, Molemole, Polokwane, Elias Motsoaledi, Ephraim Mogale, Fetakgomo, Makhuduthamaga, Greater Tzaneen, Baphalaborwa, Greater Giyani, Greater Letaba, Maruleng, Greater Tzaneen, Makhado, Musina, Mutale, Thulamela, Bela-Bela, Lephalale, Modimolle, Mogalakwena, Mookgopong and Thabazimbi. Local municipalities, also called Category B municipality serve as the third, and most local, tier of local government (Education and Training Unit, 2015). They are considered to be an arm of government as far as service delivery is concerned because they serve and represent a subdivision of the district municipalities. Local municipalities are directly mandated by the Constitution to render basic municipal services within their jurisdiction areas and to ensure sustainability of such services such as water, waste management, electricity reticulation, sanitation, roads, storm-water drainage, land use planning and control, and transport planning (Education and Training Unit, 2015). On the other hand district municipalities or Category C are on the second

level of administrative division, below the provinces and above the local municipalities. They consist of several local municipalities, with which they share the tasks of local government. Today, many tasks of municipalities are privatised or rendered through consultancy. District municipalities comprises Capricorn District, Greater Sekhukhune District, Mopani District, Vhembe District and Waterberg District” (SALGA,2012:1). District municipalities did not form part of the study because they fall outside the scope of local municipalities.

Although the study intended to study all 25 local municipalities; only seven of them formed part of the study. The remaining eighteen local municipalities did not participate in the study for various reasons. One municipality did not form part of the study on the basis that the municipality was busy and there was no time to accommodate any researcher to interact with staff because they did not want to be disturbed. Another municipality permitted the researcher to conduct the study, but later the permission was withdrawn. It emerged that this particular municipality was embroiled in political and internal administrative squabbles. Other municipalities simply did not respond to the researcher's written request to conduct research. Numerous attempts were made to get feedback from these municipalities but in vain. When the researcher enquired about his request to conduct research, they were all promising to respond within a day or so. The status quo remained the same until the researcher decided to continue with seven municipalities that permitted him to conduct a study in their municipalities. These local municipalities included the following: Aganang, Blouberg, Fetakgomo, Greater Letaba, Greater Tzaneen, Lepelle-Nkumpi, and Thulamela. The names and geographical location of Limpopo municipalities are shown on the map, Figure 1.1.

Figure 1.1: Municipalities in Limpopo Province



Source: http://capeinfo.com/blogs/wp-content/blogs.dir/akela/files/2009/05/limpopo_dlqhgovza.gif

These municipalities depend on annual government budget allocations to achieve their vision and mission. Generally, Limpopo Municipalities are characterised by rural settlement patterns, enormous backlogs in basic household infrastructure and services. Common to all municipalities is competition for staff. When staff member leaves an organisation, it means that tacit knowledge is lost to other organisation. The challenge for local government in South Africa is to transform itself into an effective governance system that is able to respond to the current challenges of development and fast-track service delivery (Netswera & Phago, 2011). In this regard, the survival of these municipalities depends on how they manage and share knowledge.

1.18 **Background information on knowledge management programmes and knowledge sharing facilities in Limpopo municipalities**

The subject of this study is to investigate how knowledge is managed and shared in Limpopo municipalities for improvement of municipal governance. Employees, particularly supervisors, managers, experienced staff and experts such as consultants are major sources of tacit knowledge as it has been stated that tacit knowledge reside in the heads of people. Not all information is stored inside the memory. Books, computer data, and writing pads are examples of external storage. Other people can be places of external storage for an individual too; this may be experts in particular field of study. Intranet, libraries, records centres and documents such as reports, business processes and procedures, newsletters and strategic plans are sources of explicit knowledge in Limpopo municipalities. These pieces of information that are externally stored can be found if employees know what they are and where they are.

According to Skyrme (2003) knowledge management programmes typically have one or more of the following activities:

- **Appointments of a knowledge leader** - promote the agenda, develop a framework.
- **Creation of knowledge teams** - people from all disciplines to develop the methods and skills.
- **Development of knowledge bases** - best practices, expertise directories, etc.
- **Enterprise intranet portal** - a 'one-stop-shop' that gives access to explicit knowledge as well as connections to experts.
- **Knowledge centres** - focal points for knowledge skills and facilitating knowledge flow.

- **Knowledge sharing mechanisms** - such as facilitated events that encourage greater sharing of knowledge than would normally take place.
- **Intellectual asset management** - methods to identify and account for intellectual capital”.

The visits to the Limpopo municipalities revealed that there are various knowledge management programmes that are currently in place even if it is difficult for some of the managers and staff members to define. Fetakgomo local municipality is one such example that has taken a lead in establishing its own knowledge forum with objectives of: encouraging exchange of knowledge within the municipality, promoting learning through sharing, increasing availability of benchmarking and good practice information, and improving service delivery.

As already indicated, this local municipality was one of the four local municipalities that passed the 2009/10 audit by the Auditor-General of South Africa, who deemed it to have a good governance. It is for this reason that the researcher links knowledge management to good governance and improvement of service delivery.

The other municipalities did not have any formal knowledge management programmes to extract and transfer tacit knowledge. However, they are endowed with tacit knowledge which help employees to perform knowledge management functions without realising it (Ondari-Okemwa 2006:3). For instance, it emerged from this study that municipalities did not realise that Municipal Managers’ (MMs) and Chief Financial Officer’s (CFO’s) forum they have is knowledge management practice. In these for a, Municipal Managers’ and Chief financial officers’ from all Limpopo municipalities collaborate to share best practices.

Organisations that have formalised knowledge management programmes have knowledge management departments in their structure and positions such as Chief Knowledge Officers, Knowledge Managers and Knowledge Officers who are responsible for managing knowledge and transfer thereof (Gaffoor & Cloete, 2010). This was not the case in Limpopo municipalities. As such, knowledge management gets little regard in terms of resources and support. By implication knowledge management, particularly knowledge sharing would suffer.

Even though there was no formalised knowledge management programmes, knowledge flow between employees and business departments in all municipalities. Some elements of knowledge management programmes were observed during data collection period. This includes availability of the libraries which are located some kilometers away from the premises of the municipal buildings. The visits to the libraries revealed that the sources available in these libraries did not include any document of whatsoever about the municipality. It emerged from this study that libraries are mainly used by the local communities and staff members use them for academic purposes. There are Librarians (personnel with Library and Information Science related degree) and Library Assistants (with grade 12 or no formal qualification) working in these libraries. In some instances, Library Assistants do the work of Librarian. Other, facets of knowledge management practices that were observed in all municipalities during data collection period include the use of notice boards, workshops and intranet to disseminate explicit knowledge. On the other hand, explicit knowledge is shared in a form of service delivery reports and newsletters, while tacit knowledge is shared through socialisation, new staff inductions, benchmarking and workshops. Records management centres or registries which are integral part of knowledge management were also observed in all municipalities.

Majority of staff members managing records did not have relevant tertiary qualifications. Due to a top-down- bureaucratic structure, knowledge was mainly flowing from seniors to juniors. Political affiliation determine how knowledge flow because members of opposition parties did not trust each other and could not share knowledge. There was little employment of Information and Communication Technology (ICT) to enable sharing of knowledge.

1.19 Information and Communication Technologies (ICTs) and knowledge sharing

Information communication technology is considered a major influencing factor in knowledge sharing and this could be attributed to a number of reasons such as the growing recognition of knowledge work and the ever-increasing complexity of jobs (Huysman & Wulf, 2006). As a major influencing factor on knowledge sharing, information and communication technology has been examined by various researchers (Jarvenpaa & Staples, 2000; Huysman & Wulf, 2006). A study conducted by Jarvenpaa and Staples (2000), revealed that individuals strongly believe that the use of computer-based information systems and electronic media contribute to providing valuable knowledge. The use of information communication technology has a direct and indirect influence on the motivation of sharing knowledge, because it can accomplish four different functions: to eliminate obstacles, provide channels to obtain information, correct flow processes, and identifies the location of knowledge carrier and knowledge seeker (Hedelin & Allwood, 2002). Possibly, proper use of information and communication technology can accelerate knowledge sharing in Limpopo municipalities. However, organisations considering employing technologies of knowledge sharing need to assess its current systems and cost-benefit of the tool in

order to determine the suitable one. When the cost-benefit of the tool is established, then it is most likely that it will be successfully utilised. Failure to do so, information communication technology may act as a barrier to knowledge sharing. Technology barriers highlighted by Riege (2005) are lack of integration of information and communication technology systems/processes, lack of technical support, lack of maintenance of integrated information communication technology systems, people's reluctance to use information communication technology systems and lack of training for familiarisation of information and communication technology systems and processes.

1.20 Statement of the problem

Many problems facing municipalities are knowledge related problems. For instance many municipalities obtain negative (qualified and disclaimer) audit reports from the Auditor General. It seems to the researcher that the knowledge that is available in municipal systems is not optimally shared among the employees and across the studied municipalities in Limpopo Province. A remarkable contribution of knowledge sharing is improving the quality of service delivery of service oriented organisations (Ismail & Yusof, 2010:1). However many employees apparently believe or do not know why knowledge should be shared. To the best knowledge of the researcher, no documented study or survey at selected municipalities had investigated why that was so and what needed to be done to improve it. Knowledge sharing in this study means the flow of both tacit and explicit knowledge among the employees and municipalities with the purpose of improving municipal governance. Types of knowledge that is available in municipalities' systems include both tacit and explicit knowledge. Ontology wise,

knowledge may be seen to exist on different levels, i.e. individual, group, organisation and inter-organisational (Nonaka, & Takeuchi, 1995). Knowledge sources may include databases, documents, policies and procedures, as well as the un-captured tacit expertise and experience stored in individual workers' mind. One of the difficulties in knowledge management is that knowledge sources are widely distributed and exist in many forms. As different sources of knowledge accumulate in the organisation, it becomes difficult for the employees who seek knowledge to locate and access the desired knowledge. Sources of tacit knowledge in these municipalities are employees, consultants and clients, while source of knowledge for explicit knowledge are libraries, records management centres/registries, reports and intranets among others. Both types of knowledge are generated through experience, trainings, interactions, business processes and reports among others. Knowledge is crucial for municipal governance and improvement of service delivery. As such, knowledge needs to be shared among the employees. Renzel (2002:1) points out that knowledge cannot be transferred like a package of materials and it is not used up when transferred but shared among the employees. Information communication technologies are considered to be enablers of knowledge sharing in organisations.

Presently, the efforts of Limpopo municipalities towards knowledge sharing are confronted by a number of challenges. These municipalities appear not to have relevant information communication technologies infrastructure to facilitate effective and efficient means of knowledge sharing. Other challenges are knowledge hoarding, organisational culture and employees' attitudes towards knowledge sharing. As a result, knowledge sharing in these municipalities remains a problem that affects municipal governance and quality of service delivery to Limpopo citizens. As such, the researcher was

prompted to conduct this study in order to identify the challenges and suggest solutions thereof. Municipalities create lots of knowledge which is stored in various formats but not optimally shared among the employees probably due to lack of knowledge sharing strategies. Therefore this study aimed to survey Limpopo municipalities to establish their knowledge sharing strategies and suggest some strategies that the municipalities could use to improve knowledge sharing. If these strategies could be identified and clearly defined, it is argued that municipalities would be in a better position to effectively share knowledge, enabling them to more efficiently achieve their mandate of rendering quality basic services. In this regard, the study would contribute significantly towards knowledge management literature in local governments. Furthermore, this study sought to produce information that can influence the government of South Africa to consider and adopt knowledge management as a means of improving municipal governance.

1.21 Research questions

Based on the problem statement above, this study attempted to answer the following questions:

- 1.21.1 What kind of knowledge management programmes are in place in the municipalities of Limpopo Province?
- 1.21.2 What is the extent to which municipalities in Limpopo Province encourage knowledge sharing among employees to support improvement of municipal governance?
- 1.21.3 What factors affect knowledge sharing in the Limpopo municipalities?
- 1.21.4 How municipalities in Limpopo optimise knowledge sharing?

1.22 Aim of the study

The aim of this study was to underscore the role of knowledge sharing in improving the municipal governance in the local government sector of South Africa.

1.23 Objectives of the study

The objectives of the study are to:

- 1.23.1 Find out the kind of knowledge management programmes are in place in the municipalities of Limpopo Province.
- 1.23.2 Establish the extent to which municipalities in Limpopo Province encourage knowledge sharing among employees to support improvement of municipal governance.
- 1.23.3 Determine factors that affect knowledge sharing in the Limpopo municipalities.
- 1.23.4 Propose recommendations and strategies that Limpopo municipalities may use to optimise knowledge sharing.

1.24 Scope and delimitations of the study

This study was conducted in South Africa's Limpopo municipalities in five districts. The study focused mainly on how knowledge sharing may lead to improvement of municipal governance in Limpopo Province. The research area was limited to local government which comprises the following local municipalities per district. Capricorn District: Aganang, Blouberg, Lepelle-Nkumpi, Molemole and Polokwane. Greater Sekhukhune District: Elias Motsoaledi, Ephraim Mogale, Fetakgomo, Makhuduthamaga and Tubatse. Mopani District: Baphalaborwa, Giyani, Letaba, Maruleng and Tzaneen. Vhembe District: Makhado, Musina, Mutale and Thulamela. Waterberg District: Bela-Bela, Lephalale, Modimolle,

Mogalakwena, Mookgopong and Thabazimbi. Although municipalities in Limpopo Province are under the auspices of the Department of Corporative governance, Human settlements and traditional affairs (COGHSTA) the study excluded the said department because it does not render municipal services.

1.25 Significance of the study

According to Marshall and Rossman (2006:33-34) significance of study offers the researcher an opportunity to discuss the contribution of the study. Many challenges that face municipalities and citizens are knowledge related. Therefore the study identifies and suggests solutions to knowledge sharing related problems. With the identified barriers at their disposal, municipalities would be able to improve knowledge sharing practices. This study also conscientises municipalities in Limpopo and other public entities in general about the importance of knowledge sharing practices and how it may be used to enhance their performance and subsequently improve municipal governance. Generally speaking, the study would assist any organisation, either government or non-government, to have a better understanding of knowledge sharing in an organisation.

1.26 Dissemination of research findings

The researcher will disseminate research findings as follows. Firstly a copy of research findings would be submitted to the University of Fort Hare library. Another copy would be submitted to the studied municipalities with districts and believe that the copy will be made available to the respondents. Journal articles generated from the dissertation would be published in South African Journal of Library and Information Science so as

to add to the body of knowledge in the field of knowledge management. Again, the researcher intends to present the empirical findings at conferences such Library and Information Association of South Africa (LIASA) and also prepare manuscripts for possible publication in refereed journals.

1.27 Organisation of thesis

Summary of chapters below outlines the way chapters are arranged in the thesis and briefly explain the contents covered by each chapter. The dissertation is structured according to the following seven chapters:

Chapter one: Introduction and conceptual background of the study

This chapter covers the background to the study, research problem, research purpose, research objectives, research questions, justification and significance of the study. It also provided readers with contextualised definitions of key terms.

Chapter two: Theoretical frame work

This chapter discusses knowledge management theories which were used to explain knowledge sharing in Limpopo municipalities. Some of the theories that were discussed include: The knowledge-based view of the firm, social network theory, diffusion of innovation theory, theory of planned behaviour, Social exchange theory and organisational knowledge conversion theory. The study is anchored on the organisational knowledge conversion theory.

Chapter three: Review of related literature

The chapter provides an overview of extant literature for studying knowledge sharing in Limpopo municipalities. The chapter covers the theoretical framework which underpins a study of knowledge sharing. In essence, this chapter reviews related literature from knowledge management field and other different fields such as public administration and social psychology. The review of related literature intended to put the study in context and highlight the important trends in knowledge management in general and knowledge sharing in particular. The review tied together various disciplines, drawing on public administration, organisational theory, social psychology, and sociology. Some of major issues and debates about knowledge sharing covered in the literature relating to topic under study included the state of service delivery in South African municipalities, importance of knowledge sharing in organisations and the role of information communication technologies in facilitating knowledge sharing in organisations.

Chapter four: Research methodology

This chapter discussed the research methodology applied in conducting this study. The discussion covered the following: the plan on the method used to conduct this study, research design, population sampled and studied, sampling methods as well as the data collection methods and instruments. The chapter justified the use integrated research approach to study the topic under discussion, and triangulation to collect data. The chapter also focused on the process of collecting and analysing data including the pilot testing, and data analysis techniques used. The chapter also discussed research ethics that the researcher adhered to.

Chapter five: Data Presentation and Interpretation

This chapter outlined a discussion about data presentation, analysis and interpretation. Quantitative data collected from the questionnaires were analysed through using SPSS version 23 and presented in a form of tables, figures and graphs. On the other hand qualitative data collected the interviews, observations and open ended questions were analysed and categorised according to themes.

Chapter six: Discussion of findings

This chapter discussed the findings. Results are discussed and linked to existing literature, research questions and objectives of the study. The major findings of this study were mainly consistent with literature reviewed.

Chapter seven: Summary of findings, conclusion and recommendations

This chapter summarises the key findings of the study. The summary covers findings with regards to the four research objectives. It also outlines the implications of this study for research and practice. Furthermore, the chapter makes recommendations based on the findings of the study. Again, the chapter discussed scope and limitations of the study and offered suggestions for areas of further research. Lastly, conclusions are drawn from the findings of the study.

1.28 Chapter summary

This chapter has discussed the following aspects of the study: background to the study, research problem, research purpose, research objectives, research questions, scope and delimitations and significance of the study. Types of municipalities: local municipalities and district municipalities are outlined. A brief background of those studied is provided. Furthermore the chapter outlines how chapters are organized in this study. The next chapter discusses knowledge management theories that are used to study knowledge sharing.

THEORETICAL FRAME WORK**2.1. Introduction**

The previous chapter introduced the reader to the study and covered the background, research problem, research purpose, research objectives, research questions, justification and significance of the study. It provided readers with contextualised definitions of key terms. This chapter discusses knowledge management theories that are used to study knowledge sharing. The chapter starts by explaining the concept of theory and its relevance in research. Creswell and Garrett (2008) view theory as an interrelated set of constructs (or variables) formed into propositions, or hypotheses, that specify the relationship among variables. Bryman and Bell (2011) regard theory as “observed realities, or what we see and accept around us,” suggesting it can be practical or abstract. Theory does much more than simply abstracting and organising knowledge. Academy of Management Review organisation (2015:1) reports that theory also signals the values upon which knowledge is built. Creswell and Garrett (2008) state that theory might appear in a research as an argument, a discussion, or a rationale, and it helps to explain (or predict) phenomena that occur in the world. In this study, theory assisted the researcher to assess scientific findings in relation to the theoretical perspective from which it derives and to which it may contribute (Silverman, 2000). The theories discussed in this study include knowledge-based view of the firm, theory of diffusion of innovations, theory of reasoned action, social exchange theory and organisational knowledge conversion theory. These theories emanate from various academic disciplines, such as information systems, public administration, social psychology, and

sociology. The fact that knowledge management theories emanate or borrow from various academic disciplines means that knowledge management is interdisciplinary and still a young academic discipline that is yet to develop its own theories. Before deliberating on some theories of knowledge management, it is important to reflect on epistemology and ontology of knowledge.

2.2. Epistemological and Ontological Reflections

Epistemology is the study of knowledge which includes what it is and how it is acquired. Nonaka and Takeuchi (1995) emphasise the need to understand what knowledge is, know how to manage it, and exploit it to increase an organisation's competitive advantage. They view every member in an organisation as knowledge workers where new knowledge always begins with an individual which can then be transformed into organisational knowledge. This study took on epistemological stance of interpretivism because a prime data source for this study was subjective meanings of individual employees. This study focused on the employees' own individual interpretations about knowledge sharing by examining the social world, social actors and how they are constructed. The ontological stance taken by the researcher was that of constructionism, which is also been referred to as taking on the position of either constructivism or relativism (Bryman, 2008). In this study, constructionism illustrates human knowledge as the outcome of human activity that can never be considered as ultimate truth.

2.3. Theories of Knowledge management and their purpose

In order to situate knowledge sharing in Limpopo municipalities, it is crucial to first discuss the theories relating to knowledge management. For the purpose of this study some theories that relate to knowledge sharing are explained. The theories were used to establish a theoretical grounding for investigating knowledge sharing in Limpopo municipalities.

2.3.1. Knowledge-based view of the firm

The knowledge-based view of the firm originates from the resource-based view of the firm. Knowledge-based theory of the firm by Grant (1996) explains certain premises regarding the nature of knowledge and its role within the firm. The theory explains the rationale for the firm, the delineation of its boundaries, the nature of organisational capabilities, the distribution of decision-making authority and the determinants of strategic alliances (Ekore, 2014:6). According to Knowledge-based theory of the firm, knowledge is the key productive resource of the firm as well as a principal source of competitive advantage (Nonaka, 1994). This is because, employees can use their competence to create value by transforming and converting knowledge externally or internally to the organisation they work for (Sveiby, 2001). An important aspect of the knowledge-based theory of the firm is that the source of competitive advantage resides in the application of the knowledge rather than in the knowledge itself. The central competitive dimension of the firm hinges on how the firm creates and transfers knowledge efficiently within an organisational context. Ekore (2014:6) contends that individuals are main holders of knowledge created and applied by firms in the production of goods and services. This implies that management is faced with the responsibility through the organisation's practice to help tap into employees' knowledge and

successfully transfer it to the organisation for optimal productivity and profitability. According to Ekore (2014), the organisational practice focuses on factors such as organisational culture; which describes the attitude, experiences, beliefs and values as well as specific collection of norms that are shared by individuals and groups in an organisation. Essentially, knowledge-based view of the firm theory is based on the following assumptions as outlined by Grant & Baden-Fuller (1995:18):

- “Knowledge comprises information, technology, know-how, and skills.
- Knowledge is the key productive resource of the firm in terms of contribution to value added and strategic significance.
- Knowledge is acquired by individuals, and in the case of tacit knowledge, it is stored by individuals.
- Due to cognitive and time limitations of human beings, individuals must specialise in their acquisition of knowledge.
- In an organisation production typically requires the application of both tacit and explicit knowledge”.

Even though, this theory views knowledge as a strategic resource for an organisation, the researcher contends that the knowledge-based view of the firm is not an appropriate lens to study government agencies such as municipalities. The theory is mainly focused on the concept of competitive advantage which is largely applicable in private sector organisations.

2.3.2. Social Network Theory (SNT)

Social network theory or analysis is a sociological paradigm to analyse structural patterns of social relationships (Wasserman & Faust 1994). It is composed of a series of social relations among connected behaviourists (nodes). Among these relations, the

node of the comparatively stable relations constitutes the social structure. The study of knowledge sharing in scientific groups must be related to interaction among members: both the socialised process of knowledge passed to the whole group via individual exchange and the internalised process of knowledge absorbed via communication with other members (Lei & Xin, 2011:80). Therefore, social network theory is used to study the relation structure between nodes as well as the behaviours of the nodes embedded in the network and the characteristics of the whole network. This theory provides a set of methods and measures to identify, visualise, and analyse the informal personal networks within and between organisations. Social network theory view knowledge management in terms of group relation network (Cross, *et al.*, 2002). Interpersonal relation network affect the production and sharing of the knowledge of the group and the social network is playing a significant role in the sharing of tacit knowledge. The social network theory states that through social network group members can acquire knowledge, information, resources and social support to identify and make use of opportunities.

Kanter (2001) avers that organisations that develop networks both internal and external to their organisation are able to deal with knowledge more effectively. In an organisation, networks may be formal or informal. In knowledge management the major focus is on informal networks because tacit knowledge flow freely in informal networks. According to Müller-Prothmann (2007), social network analysis can help support knowledge sharing by focusing on the following applications of knowledge management:

- identification of personal expertise and knowledge,
- research into the transfer and sustainable conservation of tacit knowledge,

- discovery of opportunities to improve communication processes and efficiency.

Thus, social network analysis provides a systematic method to identify, examine and support processes of knowledge sharing in social networks (Müller-Prothmann, 2007). In sum, social network analysis is the mapping and measuring of relationships and flows between people, groups, organisations, computers or other information/knowledge processing entities. In the context of knowledge management, social network analysis (SNA) enables relationships between people to be mapped in order to identify knowledge flows about: who do people seek information and knowledge from? Who do they share their information and knowledge with? In contrast to an organisation chart which shows formal relationships - who works where and who reports to whom, a social network analysis chart shows informal relationships - who knows who and who shares information and knowledge with who (Schunter, 2016, 2016). This may help Managers in Limpopo municipalities to visualise and understand the many relationships that can either facilitate or impede knowledge creation and sharing.

The appropriateness of this theory for studying knowledge sharing in municipalities was assessed and it was deemed to be inappropriate. The theory was rejected on the basis that it often ignores the individual agency which refers to the capacity of individuals to act independently and to make their own free choices (Barker, 2005:448). In knowledge sharing, an individual's capacity to make own decision (whether to share knowledge or not) is critical and important aspect. Therefore, the researcher found it inappropriate to anchor this study on this theory.

2.3.3. *Diffusion of Innovation Theory (DOI)*

Diffusion of innovations theory describes the social process of communication of a new idea among the members of a community over time (Roman, 2003). The theory focuses on awareness, knowledge, on attitude change and the decision making process that lead to the practice or adoption of an innovation. The objective is to explain the dynamics of social construction and gradual assimilation of an innovation. Roman (2003:56) indicates that the theory includes conceptual generalisations about the following:

- how and through what media an innovation is communicated,
- the attributes of innovations,
- the decision process that leads to adoption (or non-adoption),
- characteristics of adopters.

Many of the theory's principles appear to be useful for knowledge sharing in Limpopo municipalities. The theory describes a five-stage innovation-decision process, through which a "decision making unit" (an individual, group, organisation, etc.) moves from becoming aware of an innovation to confirming the decision to adopt or reject the innovation (Rogers, 2003):

- Step 1: **Knowledge** occurs when awareness of an innovation is gained, along with some understanding of how it functions.
- Step 2: **Persuasion** occurs when a favourable or unfavourable attitude towards the innovation is formed.
- Step 3: **Decision** occurs when a choice is made to adopt or reject the innovation.
- Step 4: **Implementation** occurs when an innovation is put to use.
- Step 5: **Confirmation** occurs when the decision to adopt or reject is reinforced or changed.

Individuals or groups may perceive innovation differently and act differently toward it. According to Rogers (2003:20) stages of innovation involves: early adopters, early majority, late majority and laggards. Individuals or groups may fail to adopt innovations mainly due to some psychological factors. Critical factors that need to be present for innovation to take place include: awareness of the need for an innovation, decision to adopt (or reject) the innovation, initial use of the innovation to test it, and continued use of the innovation (Tsui, *et al.*, 2006:15). Based on the five-stage innovation-decision process, it becomes clear that knowledge-sharing in Limpopo municipalities cannot be a passive process of putting knowledge “out there” and expecting it to be adopted automatically. Rather, successful knowledge sharing could include efforts to make audiences aware that evidence is available, to persuade them that this evidence can be useful and relevant to their work, to support the implementation and use of this knowledge when a decision has been made to adopt the new information, and to understand why a decision to adopt or reject evidence is reinforced or changed (Tsui, *et al.*, 2006).

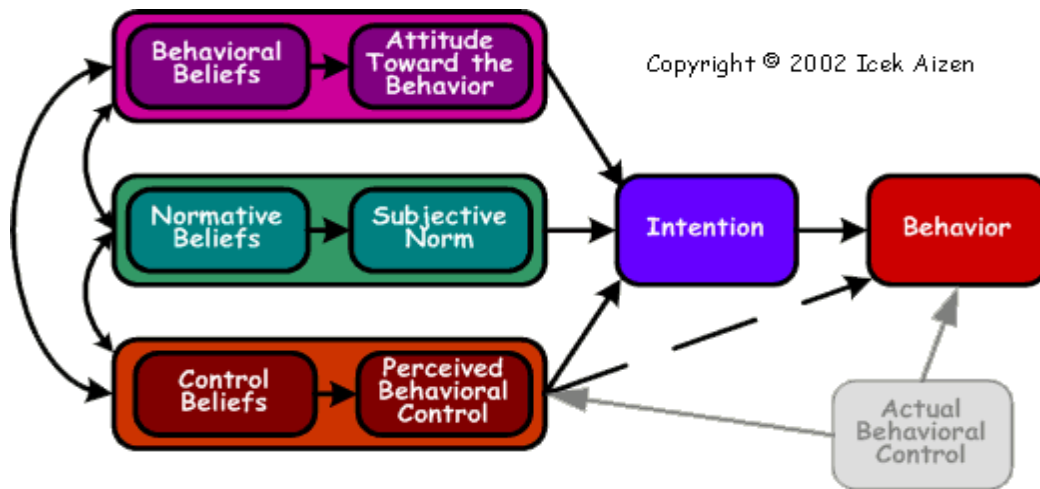
Although Diffusion of innovation theory bears some relevance to this study, it has some short falls that could not make it the most suitable for the study. One of the short falls is that it does not take into account an individual's social support to adopt the new behaviour (or innovation) and lack of empirical evidence to support its application for knowledge sharing in the public sector (Tsui, *et al.*, 2006:15). As stated by Rawjee (2003:18), this theory is founded largely on the empirical observations of various forms of planned communication. Furthermore, this theory appear to be having innovation favoritism. It favours people who have better access to information than those that do not have. This may widen the information gap between these two groups. Therefore

anchoring this study on this theory would defeat the purpose of the study because the study attempts to ensure equitable distribution of information and knowledge within and across the municipalities. As such, applying it in this study would have been largely questionable.

2.3.4. Theory of planned behaviour (TPB)

The theory emanate from the theory of reasoned action (Ajzen & Fishbein, 1980). According to the theory of reasoned action, attitudes toward a specific behaviour and the subjective norm in a social setting combine to form the principal determinants of behavioural intentions such as the intentions of individuals to engage in knowledge sharing. Intentions, in turn, are seen as the primary predictor of a behavioural action. The theory of planned behaviour was introduced subsequently in response to the realisation that an intention to act in a certain manner is not a sufficient determinant of actual behaviour, particularly if an individual is inhibited by limits on personal ability or constraints within the context of action. Hansen and Avital (2005:7) explain that the theory of planned behaviour accounts for limitations to one's control over his or her actions by introducing an additional determinant, perceived behavioural control. The theory of planned behaviour (Ajzen, 1991) aims to provide a framework for explaining and predicting the deliberate behaviour of individuals within specific social contexts. The components of the theory of planned behaviour model are described and presented in Figure 2.1.

Figure 2.1 Theory of planned behaviour



Source: Ajzen (1991: 182. Theory of planned behaviour

2.3.4.1. *Attitude*

The theory of planned behaviour, states that an attitude towards a behaviour is formed by the collection of beliefs one has about that particular behaviour. According to Ajzen (1991), an individual's behavioural beliefs entail expected outcomes that one associates with that behaviour. Therefore, a person's attitude toward the focal action is the result of cumulative salient beliefs about the outcomes of that action.

2.3.4.2. *Subjective norm*

Hansen and Avital (2005:7) indicate that a subjective norm involves the beliefs one has about a particular behavioural standard while normative beliefs according to Ajzen (1991:195) are "concerned with the likelihood that important referent individuals or groups approve or disapprove of performing a given behaviour". The theory stipulates that subjective norms that contribute to one's intention to take a certain action are based on their beliefs about the degree to which others, who they feel are important within a

given setting, want them to take that action. In an organisation this construct would reflect social norms and values of each municipality since each organisation has its own unique social context.

2.3.4.3. Perceived behavioural control

Perceived behavioural control refers to the degree to which an individual employees in an organisation believes he or she is capable of engaging in the focal behaviour (Hansen & Avital, 2005:7). The perceived limits are based on control beliefs, including beliefs about one's own skills or competencies, as well as "the presence or absence of requisite resources or opportunities" (Ajzen, 1991:196). It may be argued that the control beliefs incorporate a social element since they are usually based on the experiences and input of others within the social setting such as municipality. "Theory of planned behaviour stipulates that, perceived behavioural control has both a direct and indirect impact on performance of a behaviour. Along with attitudes and subjective norms, perceived behavioural control is a primary determinant of an intention to act" (Hansen & Avital, 2005:7).

2.3.4.4. Intention

According to Ajzen (1991:181) "intentions are assumed to capture the motivational factors that influence behaviour; they are indications of how hard people are willing to try, or how much of an effort they are planning to exert, in order to perform the behaviour. As a general rule, the stronger the intention to engage in a behaviour, the more likely should be its performance." Behavioural intentions are regarded as a predictor of actual performance of a relevant behaviour. Hansen and Avital (2005:7) note "that the link

between intention and behaviour requires volitional control. For intentions to be relevant, an individual must be free to choose whether or not to act in a certain way.”

The theory of planned behaviour bears some relevancy in this study, the researcher could not anchor this study on this theory. It can provide a theoretical lens for an investigation of knowledge sharing behaviour within the context of knowledge management. The reviewed literature shows that theory of planned behaviour is used mostly as a framework to study knowledge-sharing behaviour (e.g., Bock, *et al*, 2005; Cabrera & Cabrera, 2005). Theory of planned behaviour would have been more relevant if the study was about predicting deliberate behaviour of individuals. Since this study is not about attitudes towards behaviour, the theory was found to be inappropriate to study how knowledge sharing may lead to improvement of municipal governance in Limpopo municipalities. Another reason for not anchoring this study on this theory was that it is based on the assumption that human beings are rational and make systematic decisions based on available information and disregard unconscious motives (Ajzen, 1991) which may have a detrimental effect on knowledge sharing.

2.3.5. Social exchange theory

According to social exchange theory individuals interact with others based on a self-interest analysis of the costs and benefits of such an interaction. Knowledge sharing could be regarded as a kind of social exchange (Bock, *et al.*, 2005) with people sharing their knowledge and skills with their colleagues and expecting, reciprocally, to receive others' knowledge in return. The core of the theory is the principle of reciprocity to which the interpersonal relationship adheres (Jinyang, 2015:172). In other words individuals evaluate the perceived ratio of benefits to costs and base their decisions on the

expectation that it will lead to social incentives such as appreciation, respect, reputation or even altruism and tangible incentives (Weber, *et al*, 2004). Future reciprocity, status, job security, and promotional prospects are also perceived benefits that may regulate people's knowledge sharing behaviour, says Davenport and Prusak (1998). Research (Liu, *et al.*, 2011) shows that to maximise the gained resources, individuals may build social relationships with others by sharing their knowledge. In literature, the effect of organisational rewards on knowledge-sharing behaviour is inconsistent. Lee, *et al.* (2006) found that reward systems were significant variables that affected employee knowledge-sharing capabilities. Lin (2007), however, found that organisational rewards did not have an effect on employees' willingness to share knowledge with their colleagues. As a result, these contradictory findings often cause problems in both theoretical interpretation and practical implementation.

Knowledge sharing with other members tends to be the biggest challenge for individuals. Perhaps this could be attributed to the notion that knowledge sharing is usually not natural (Davenport & Prusak, 1998). However, Bock, *et al.* (2005) note that people share what they knew when their interests outweigh the costs of knowledge contribution. People consider their knowledge as important and as such may be suspicious of the knowledge from others. In view of Jinyang (2015:172) it is only when each party can get useful information or knowledge from the other party, the two parties will continue to cooperate with each other. The researcher links this theory to capitalist society. In this type of society, there is nothing for free. It is a give and take situation. In every situation, people help others with the expectation of gaining something in return. As such, employees in Limpopo municipalities engage in an interaction with the expectation of reciprocity (Liu, *et al.*, 2011:23). Based on this perspective, knowledge

sharing in Limpopo municipalities will be positively affected when an individual expects to obtain certain future benefits through reciprocation (Cabrera & Cabrera, 2005), but if individuals know that they will not derive any benefit, knowledge sharing may be negatively affected. Rusman, *et al.* (2012) point out trust is an essential requirement to moderate the relationship of benefits and costs with the actual behaviour. This implies that, the impact of costs and benefits of sharing knowledge in municipalities would be influenced by the levels of trust and confidence involved among the employees sharing knowledge.

The researcher did not find social exchange theory to be appropriate for this study, simply because the theory is more relevant for explaining the knowledge sharing behaviour. Liu, *et al.* (2011:22) support this assertion by stating that Social exchange theory is commonly used for investigating individual's knowledge-sharing behaviour. This contradicts the main task of this study, which is explanation of social phenomena, not behaviour among individuals. Moreover, its application to research on knowledge sharing intentions has occurred mostly in the information systems literature than in Library and Information Science. Another reason for not anchoring this study on this theory is that it is centered on competitive advantage which is more applicable in private sector organisations. Simply put, its applicability in the public sector, particularly in municipalities is not known or supported by a scientific literature. Therefore, anchoring this study on this theory was likely to yield inconclusive results.

2.3.6. Organisational knowledge conversion theory

This study is anchored on Nonaka and Takeuchi's (1995) organisational knowledge conversion theory. According to this theory the interaction processes of tacit and explicit

knowledge is critical to knowledge management in organisations. This theory was selected to provide a structured means of discussing knowledge sharing in Limpopo municipalities. The main criteria for selecting a framework for this study were; that, it is used most widely in literature and it is most consistent with the latest holistic frameworks. Moreover, other theories are generic in nature and do not provide detailed discussion about the contexts of knowledge transfer implementation as well as the mechanisms by which the knowledge transfer process is carried out. The researcher anchored this study on Nonaka's (1994) organisational knowledge conversion theory because scholars have accepted the theory as a highly integrative knowledge management approach bringing together a wide range of knowledge processes of generating, codifying, storing, sharing and utilising knowledge (Aurum, *et al.*, 2008; Mikic, *et al.*, 2009). The theory by far, is the most referenced source in the Knowledge management field (Grant & Grant, 2008: 577). Another reason for anchoring this study on organisational knowledge creation theory is technologically orientated (Nasser, 2012:37). Information and communication technology facilitates knowledge sharing in an organisation.

Organisational knowledge creation theory defines knowledge in three parts, indicating that it has complementary properties (Nonaka & Von Krogh, 2009:636): First, knowledge is justified true belief. Individuals justify the truthfulness of their beliefs based on their interactions with the world. Second, knowledge is the actuality of skillful action (people recognise that someone has knowledge through their performance of a task) and the potentiality of defining a situation so as to permit (skillful) action. In an organisation, knowledge allows employees to define, and learn to solve work related problems. Third, human knowledge can be classified in to two categories namely tacit

and explicit. Explicit or codified knowledge as coined by Polanyi (1966) refers to knowledge that is transmittable in formal, systematic language. This is Knowledge that is uttered, formulated in sentences, and captured in drawings and writing (Nonaka & Von Krogh. 2009:636). Explicit knowledge is accessible through consciousness hence Nonaka (1994:17) opined that it can be captured in the records of the past such as libraries, archives and documents. On the other hand tacit knowledge is Knowledge tied to the senses, tactile experiences, movement skills, intuition and unarticulated mental models. In organisations, tacit knowledge is rooted in action, procedures, routines, commitment, ideals, values and emotions. Tacit knowledge has personal quality which makes it hard to formalise and communicate (Nonaka, Toyama & Konno, 2000). Tacit knowledge also indwells in comprehensive cognisance of the human mind and body (Polanyi, 1966).

According to Nonaka and Takeuchi (1995:9) the most important ideas about these two forms of knowledge comes from their dynamics because: “For tacit knowledge to be communicated and shared within the organisation, it has to be converted into words or numbers that anyone can understand. It is precisely during this time this conversion takes place – from tacit to explicit, and, back into tacit – that organisational knowledge is created”. Developing and valuing explicit knowledge is characteristic mainly for the Western culture, while developing and using successfully tacit knowledge is a characteristic of the Eastern culture which explains the success of Japanese companies (Nonaka, 1994; Nonaka & Takeuchi, 1995). There are two dimensions for knowledge creation: epistemological dimension and ontological dimension. Nonaka (1994) explains that the first dimension relates to the conversion of knowledge from tacit level to explicit level, and from explicit level to the tacit level, while the second dimension

relates to the conversion of knowledge from individuals to groups and further to organisation. Nonaka (1994) argues that combination of these two motions results in spiral model for knowledge creation and processing. According to organisational knowledge creation theory “knowledge is created through conversion between tacit and explicit knowledge. Nonaka, (1994:19) states the four different modes of knowledge conversion as follows:

- from tacit knowledge to tacit knowledge.
- from tacit knowledge to explicit knowledge.
- from explicit knowledge to explicit knowledge.
- from explicit knowledge to tacit knowledge.

2.3.6.1. *Socialisation.*

The first process, of creating tacit knowledge through shared experience is called socialisation. It is the conversion of part of a person’s tacit knowledge to the tacit knowledge of another person and occurs through the sharing of experiences between people (Menolli, *et al.*, 2015:292). It should be noted that tacit knowledge can be acquired without using any formal language. The key to acquiring tacit knowledge is experience. Through socialisation in a traditional apprenticeship, apprentices learn the tacit knowledge needed in their craft through hands-on experience, observation and imitation from their masters rather than from written manuals or textbooks” (Nonaka, Toyama, & Konno, 2000:9). Some activities that may encourage the socialisation process in Limpopo municipalities include the involvement of employees in joint projects, job rotation, as well as formal meetings and training programmes informal meetings between employees during break or during social gatherings outside the work place (Martín-de-Castro, López-Sáez, & Navas-López, 2008). During social meetings

tacit knowledge mental models and mutual trust are created and shared. During socialisation process, tacit knowledge of an individual is shared and become tacit knowledge for other party. This means flow of organisational knowledge among the individuals and across the municipalities.

2.3.6.2. Externalisation

The second process of transforming tacit knowledge into explicit knowledge is called externalisation. Externalisation is defined as the conversion of tacit knowledge into documented knowledge (Nonaka & Takeuchi, 1995). Some activities that can help Limpopo municipalities to externalise tacit knowledge include the documentation of experiences shared during meetings and training sessions such as workshops. This may also include the documentation of findings and consultations with external bodies such as citizens, consultants and other stakeholders. According to Nonaka, Toyama, & Konno (2000:9) when tacit knowledge is made explicit, knowledge is crystallised, thus allowing it to be shared by others. In Limpopo municipalities, externalisation occurs when tacit knowledge is codified into documents such as reports, manuals, business processes etc. and stored in a central place such as the records centres/registry and intranet so that it can be accessed and shared more easily amongst the employees.

2.3.6.3. Combination

The third process involves creating explicit knowledge from explicit knowledge and is called combination. Nonaka, Toyama, and Konno (2000:10) refers to combination as the process of converting explicit knowledge into more complex and systematic sets of explicit knowledge and it involves the use of social processes to combine different bodies of tacit knowledge held by employees in an organisation. In the studied

municipalities, individuals exchange and combine knowledge through processes such as meetings, telephone conversations, and document exchanges. This reconfiguration of existing knowledge leads to the creation and sharing of new knowledge (Nonaka, 1994). Explicit knowledge may be collected from inside or outside the municipalities and then combined, edited or processed to form new knowledge. When a municipal manager collects reports from all units and puts it together in a context to make an annual report, that report is new knowledge in the sense that it synthesises knowledge from many different sources in one context. The new explicit knowledge is then disseminated among the members of the organisation through the use of information and communication technologies. In Limpopo municipalities, the combination mode of knowledge conversion can also include the 'breakdown' of concepts such as a corporate vision into operationalised business concepts which also creates systemic explicit knowledge (Nonaka, Toyama, & Konno, 2000:10).

2.3.6.4. Internalisation

The fourth knowledge conversion mode is internalisation which is about conversion of explicit knowledge back into valuable tacit knowledge for individuals. Internalisation occurs through some form of 'learning by doing' that is through trial-and error processes. Nonaka (1994:19) associate the conversion of explicit knowledge into tacit knowledge, to the traditional notion of learning. Trainees can internalise the explicit knowledge written in such documents to enrich their tacit knowledge base by listening and reading manuals about their jobs and the organisation, and by reacting upon them (Nonaka, Toyama, & Konno, 2000:10). When knowledge is internalised to become part of an individuals' tacit knowledge base in the form of shared mental models or technical know-how, it becomes a valuable asset.

Tacit knowledge accumulated at the individual level can then set off a new spiral of knowledge creation when it is shared with others through socialisation” (Nonaka, Toyama, & Konno, 2000:10). Murray and Myers (1997) add that helping employees to perform their work involves the use of knowledge and this could be considered as one mechanism of the internalisation process that facilitates knowledge sharing. It is also possible to create and share knowledge at inter organisational level, meaning across the municipalities. It is clear that Nonaka’s theory is not only about how to create organisational knowledge, but also about how knowledge may be shared within and across the organisation. This is supported by Ines, Lazer and Binz-Scharf (2008:20) when he states that knowledge sharing occur when all four modes form a continuous cycle. To this end, Martín-de-Castro, López-Sáez, and Navas-López, (2008: 228) elaborate that combination and socialisation are pure knowledge transfer of explicit and tacit knowledge, respectively. Anchoring this study on the organisational knowledge conversion theory does not imply that the theory perfect and free from criticisms.

2.4. A critical analysis of organisational knowledge conversion theory

Mikic, *et al.* (2009) indicates that the theory has faced some criticisms in management and organisational studies. Organisational knowledge conversion theory has been heavily criticised for being based on Japanese culture, which may not necessarily be applicable to other cultures. However a study by Weir and Hutchings (2005) found that organisational knowledge conversion theory can actually be applied in non-Japanese culture. The researcher believes that the principles described by this theory are applicable to any organisation, either economic or social, private or public,

manufacturing or service, in the coming age despite their field of activities as well as geographical and cultural location” (Nonaka, 1994:34).

Levina (1999) asserts that the organisational knowledge conversion theory has also been criticised for regarding tacit and explicit knowledge as separate categories and mutually exclusive, not complementary entities. Haag, *et al.* (2010) explains that knowledge is neither completely and fully tacit nor completely and fully explicit. According to Nonaka and Takeuchi (1995: 66) “externalisation holds the key to knowledge creation, because it creates new, explicit concepts from tacit knowledge.” This statement contradicts Polanyi’s (1966: 16) assertion that people can know more than they can tell. This implies that converting tacit into explicit knowledge has limitations because some tacit knowledge, even if critical, cannot be made explicit (Mikic, *et al.*, 2009). The researcher concurs that if some tacit knowledge cannot be articulated, then it may not be made explicit. Therefore, possible limitation on the effectiveness of the externalisation process can be expected. In spite of these criticisms, Martín-de-Castro, *et al.* (2008) and Carrillo *et al.* (2010) investigated the use of the organisational knowledge conversion theory in several knowledge intensive organisations and found that the use of this theory is important to support general performance in organisations.

2.5.Organisational knowledge required to improve municipal governance

The improvement of municipal governance depends on different types of organisational knowledge. Organisational knowledge is defined by Tsoukas and Vladimirou (2001: 973) as the capacity members of an organisation have developed to draw distinctions

in the process of carrying out their work, in particular concrete contexts, by enacting sets of generalisations whose application depends on historically evolved collective understandings. Knowledge in organisations is classified into two types, tacit and explicit. Tacit knowledge is obtained by internal individual processes and stored in human beings. Such knowledge is sometimes described as experience, reflection, or individual talent. Tacit knowledge is hard to formalise and communicate because it is personal and specific for a certain context. Explicit knowledge on the other hand is stored in a device such as documents or databases. This knowledge is more useful if it is shared and used among the community that works together using information and communication technology.

Chapter summary

This chapter has discussed various knowledge management theories relating to knowledge sharing in organisations. The discussed theories are: the knowledge-based view of the firm, theory of diffusion of innovations, theory of reasoned action, social exchange theory and organisational knowledge conversion theory. Each of these theories was discussed and assessed for its appropriateness and relevancy for studying knowledge sharing in Limpopo municipalities. The researcher found Nonaka and Takeuchi's organisational knowledge conversion theory to be appropriate theory for studying knowledge sharing in Limpopo municipalities. The chapter also discussed kinds of knowledge that needs to be shared in an organisation. The next chapter discusses literature review in line with aim and objectives of the study.

CHAPTER THREE:

REVIEW OF RELATED LITERATURE

3.1 Introduction

The previous chapter discussed some theories that relate to knowledge sharing in organisations. This chapter provides an overview of the extant literature for studying knowledge sharing in organisations, particularly in the public sector. Literature review is that part of the thesis where there is extensive reference to related research and theory in the field of focus; it is where connections are made between the source texts that one draws on and where the researcher positions himself and his research among the sources (Ridley, 2012:2). Literature review serves to put the researcher's efforts into perspective, situating the topic in a larger knowledge pool. It creates a foundation, based on existing related knowledge (De Vos, *et al.*, 2011:134). The purpose of building upon earlier research is two-fold. Firstly, the aim is to clarify which research had previously been carried out that could provide answers to the research questions. The second rationale is to establish if this research is needed and to choose an appropriate methodology for this study. Drawing on public administration, organisational theory, social psychology, and sociology discipline, the literature review discussed major issues and debates about knowledge sharing and its role in organisations. The reviewed literature was organised according to the objectives and research questions of the study as outlined in Chapter one. To have a better understanding of knowledge sharing framework, the researcher outlines the relationship between data, information and knowledge.

3.2 Relationship between Data, Information and Knowledge

Some people view data, information and knowledge to mean one and the same thing. The relationship between data, information and knowledge is usually depicted as a hierarchy consisting of data at the bottom, followed by information, and with knowledge on top. This is to say that knowledge is derived from information, in the same way that information is derived from data (Roberts, 2000). However, the human being plays an essential role in processing and transforming information into knowledge and this involves a level of understanding obtained via experience, familiarity and personal learning (Davenport & Prusak, 2003). Data, information and knowledge are related but not interchangeable. Subsequent paragraph define and distinguish between data, information and knowledge.

3.2.1 Data

Data simply refers to unexamined facts. Alshboul, *et al.* (2012:19) define data as raw facts, which are of no importance in their primary form unless connected and processed to become understandable and beneficial information. Generally, data refers to symbols that are not yet interpreted and understood. In an organisation, symbols and messages that are not interpreted have less value for the organisation. Raw facts in Limpopo municipalities may be as a result of Governments producing huge volumes of information and documentation (Minishi-Majanja & Ondari-Okemwa, 2009:20).

3.2.2 Information

In an organisation information can be viewed as a flow of meaningful messages (Nonaka & Takeuchi 1995). Similarly, Alshboul, *et al.* (2012:19) view information as the set of data which are organised and coordinated in a suitable manner, whereby they

provide a particular meaning, and a coherent formation of ideas and concepts, enabling an individual to benefit from them. Benefit in this regard could mean realising a particular aim such as making a decision in an organisation (Alshboul, *et al.*, 2012:19). Benefit could also be in terms of municipalities using information for solving service delivery problems, discovering and creating new knowledge.

3.2.3 *Knowledge*

In literature, knowledge is viewed from three perspectives, namely economical, technological or organisational perspectives. The researcher views, knowledge from the organisational perspective that aims to amplify individual knowledge to be a part of the knowledge network of the organisation (Nonaka & Takeuchi, 1995). Organisational knowledge is habitually embedded in organisational artefacts such as documents, databases, organisational processes and practices and employees' minds. Knowledge also exists in people's minds and is expressed through their behaviours. Davenport & Prusak (1998) define knowledge as a mix of experience, values and contextual information and is rooted in the human mind. Nonaka, Toyama and Konno (2000) state that, "Information becomes knowledge when it is interpreted by individuals and given a context in the beliefs and commitments of individuals". This denotes that knowledge is different from information in the sense that it is restricted to context, is more subjective and is connected to behaviour. A common agreement in literature is that knowledge is a vital resource for organisations' success and an important element in human life because unlike other organisational resources, knowledge tends to increase when used or shared: ideas breed new ideas and shared knowledge stays with the giver while it enriches the receiver (Davenport & Prusak, 1998). The next section discusses types of knowledge.

3.3 Importance of knowledge in Limpopo municipalities

The concept knowledge has already been defined and now it is necessary to discuss its importance in an organisation, particularly in municipalities of Limpopo Province. Nahapiet and Ghoshal (1998) consider knowledge to be the most strategically important resource for any firm – irrespective of location, size (small, medium, or large organisation) and type (public or private). Gold et al. (2001) examined an empirically effective knowledge management model from the perspective of organisational capabilities. This perspective suggests that a knowledge infrastructure consisting of technology, structure, and culture along with knowledge process architecture of acquisition, conversion, application, and protection are essential organisational capabilities or preconditions for effective knowledge management. Knowledge has been identified as the most strategically significant resource for organisations to gain competitive advantage and superior performance (Gold, *et al.*, 2001). Although competitive advantage is more relevant to private sector, it can be extended to the public sector by including ‘serving the public’ because it is its ultimate objective (Ines, *et al.*, 2008). Today, public organisations are also known as knowledge-based organisations thus; knowledge is as critical a resource to public sector organisations as it is to private sector firms (Willem & Buelens, 2007). Employees need to share task knowledge on how to do their jobs and knowledge about the plans, policy and procedures of the organisation. In Limpopo municipalities a large part of this knowledge is shared top-down. On the other hand leaders need to know how the organisation is performing and such knowledge flow from the bottom up. Employees also need to know and share knowledge about human resources matters regarding pension, trainings, and leave. If these kinds of knowledge are matched with existing knowledge, provides people in

organisation with new knowledge (Despres & Chauvel, 2000) that should be shared to benefit both individual and organisation itself. In the studied municipalities, many jobs require people to think, plan, solve problems, or make decisions, rather than hard labour work. This kind of work requires the know-how which may be embedded in both tacit and explicit knowledge.

Knowledge is an essential resource of the government because functioning of government relies on knowledge of different individuals from different organisational units and external service providers, to render service delivery (Binz-Scharf, 2003:3). The government enacts laws and administers them as per needs of the citizens. It is in this context that knowledge assumes special importance in Limpopo municipalities as it is the fundamental resource that is fed into the system to deliver effective services to the public. Knowledge is the primary element of municipal business process, because a tangible deliverable cannot come to pass without adequate knowledge (Taylor, 2007:20). Thus, it is essential to recognise what knowledge is required to progress towards creating the information and records which invariably reveal that a business process has been concluded (Taylor, 2007:20). This is more relevant in municipalities wherein government do appoint contractors to provide services to citizens. Knowledge shared by individual members in municipalities becomes organisational knowledge that would enable an organisation to benefit from past learning even though an expert leaves. Lastly, one may argue that knowledge is crucial to the operations of businesses in the Limpopo municipalities to: predict outcomes of events such as service delivery protests, to understand and solve challenges of service delivery, and to appreciate good things that municipalities have successfully achieved.

3.4 Kinds of knowledge required in Limpopo municipalities

As explained in chapter one, 1.6.2, explicit knowledge refers to knowledge that is transmittable in formal, systematic language. In the context of municipalities, these kinds of knowledge include the information contained in reports, manuals, processes, policies and procedures, files, computer memories and databases. Accordingly, such knowledge is stored within the organisation in physical records (Oliver, 2008:3). Records are created by all sorts of people and institutions as a result of an activity being undertaken (Van der Walt & Rodrigues, 2011:6). For example, during community consultations and awarding of tenders, minutes of meetings and reports are created and filled for future use.

The need for records and the role of record keeping may operate in three different domains, namely: the business domain, the accountability domain and cultural domain (Wamukoya, 2000:25). Firstly, in business domain municipalities need records to conduct their business and to support further service delivery. According to Van der Walt and Rodrigues (2011:6), business processes that involve the creation and transmission of documents routinely result in the creation of records as evidence of those processes and decisions made. For municipalities, records may serve as means of providing evidence of business activity such as tender awarded or of remembering events such as meetings that have occurred.

Secondly, Wamukoya (2000:25) states that accountability domain relates to creation and keeping of records as legal and regulatory requirements for municipalities. For instance, Promotion of Access to Information Act (PAIA) 2000 makes provision for

community members to access any information held by government. Therefore, records are an indispensable ingredient in organisational accountability, both internal (such as reporting relationships) and external (to regulators, citizens, stakeholders and the law). Records show whether the organisation or individuals in it have met defined legal, organisational, social or moral obligations in specific cases (Wamukoya, 2000:25). In all accountability forums, records are consulted as proof of activity by senior managers, auditors, etc. (Van der Walt & Rodrigues 2011:6). It is evident that management of explicit knowledge will enhance accountability in municipalities, thus improved municipal governance.

Thirdly, cultural domain, demands that records are preserved and made available to society for posterity and for historical research (Wamukoya, 2000:25). This provides the basis for writing a country's cultural and national history. This is when records are used for any purpose beyond the support of the business activity which created them or for accountability for that business activity. Records may be regarded as becoming part of the resources available to society to account for its collective behaviour such as pictures of service delivery protests. In this way, it can be said that records can also function as the memory of individuals, organisations and society (Thomassen, 2002:376) and to achieve this, municipalities need trustworthy records to serve as reliable evidence of decisions taken, rights acquired and commitments made. By implication, without proper records management, municipalities may not be able to determine whether employees and contractors have actually performed the duties that they are supposed to perform or whether they have done the things which they were not supposed to do. Therefore, it is appropriate to argue that proper records management may contribute to improvement of municipal governance.

Municipalities also require tacit knowledge for service delivery. This is intangible information residing within individuals demonstrated by actions watching and doing, innately understood and used (Zack, 1999). In municipalities, this type of knowledge is embedded in specific actions, skills and activities of employees (Nonaka, 1994). As already stated, tacit knowledge is the knowledge that people have in their minds. In organisations, tacit knowledge may be in the form of skills and competencies. Therefore, municipalities need employees who possesses the know-how of rendering effective and efficient service delivery, but most importantly people who are willing to share knowledge. Effective flow of knowledge within and across municipalities would result in distribution of skills and competencies or knowhow of doing things would be shared. Employees, who know how to execute their tasks better, will also know what to do or who to consult when faced with service delivery challenges. If employees are equipped with knowledge of this nature possibilities are that service delivery would be improved.

3.5 Justification of knowledge sharing in Limpopo municipalities

Knowledge sharing among employees in an organisation is widely regarded as a crucial component in business (Jasimuddin, *et al.*, 2012). Knowledge sharing is important for enhancing the competitive advantage of an organisation (Jasimuddin, 2006), improved work efficiency and better decision making. For Ibragimova (2006), knowledge sharing activities may promote transparency in public administration through provision of information to the public. Most part of today's work is knowledge work (Drucker, 1993). Therefore knowledge sharing practices coordinate organisational knowledge bases with knowledge workers and vice versa (Nonaka & Konno, 1998). Knowledge sharing is essential across the boundaries of government agencies such as municipalities and

levels of government (Zhang, *et al.*, 2005: 549). For Limpopo municipalities to improve on service, they need to leverage and share their existing knowledge because knowledge residing with only selected individuals deprives the organisation as a whole of effective and efficient work practices and limits new knowledge generation opportunities (Ibragimova, 2006). From the sharing of knowledge arise innovation and growth of value. Table 3.1 shows some of the perceived benefits of existing knowledge sharing.

Table 3.1: Perceived Benefits of Existing Knowledge sharing programmes

<i>Process outcomes</i>	<i>Organisational Outcomes</i>
Communication: Enhanced and faster communication, more visible opinions and increased participation.	Financial: Increased service, decreased cost, and higher profitability.
Efficiency: Reduced problem solving time, shortening proposal times, faster results and greater overall efficiency.	Marketing: better services, customer focus, targeted and proactive marketing.
	General: accountability, continuity, consistency, improved project management.

Source: Lin (2007:316)

If municipalities learn from their mistakes and share lessons learned, they may be in a better position to respond more quickly to changing needs of the citizens. Bevan, *et al.* (2012:309) share the same sentiments by pointing out that, effective functioning of government rests on effective sharing and use of knowledge by public sector employees at various levels, central or local. The work force that is steadily ageing and approaching retirement and increasing trends in job hopping represents the loss of crucial organisational knowledge and this has made organisations realise the importance of knowledge sharing among organisational members (Sandhu, *et al.*, 2011:209).

Research about the importance of knowledge sharing in the public sector tends to be a mixed one. A comparison between public and private sector employees in Ireland found out that respondents from the public sector were more positive in their views on the importance of knowledge sharing. A study conducted in Kuwait McAdam and Reid (2000) on the importance of knowledge sharing revealed less satisfactory results. The results show that most of the respondents agreed that there is a knowledge sharing strategy and there is a growing awareness of the benefit of knowledge sharing in the organisation. However, it was worrying to know that some respondents indicated that knowledge sharing is not important to the organisation. A similar study conducted in selected Malaysian universities explored knowledge sharing practices among academics in a private university in Malaysia, i.e. Multimedia University. The findings would provide useful insights for policy makers and administrators at academic institutions to plan and implement effective research and knowledge sharing practices among academics. The study found out that almost all academic staff showed positive views towards the importance of knowledge sharing.

According to Bevan, *et al.* (2012:309) effective knowledge sharing enhances individual learning because new knowledge is created when one's knowledge is combined with the knowledge of others. Therefore one may argue that knowledge sharing provides a basis for organisational learning in municipalities. Knowledge sharing between employees and within and across teams allows organisations to exploit and capitalise on knowledge-based resources (Cabrera & Cabrera, 2005; Davenport & Prusak, 1998). Research (e.g. Lin, 2007; Mesmer-Magnus & De Church, 2009) has shown that knowledge sharing is positively related to reductions in production costs, faster completion of new product development projects, team performance, firm innovation

capabilities, and firm performance including sales growth and revenue from new products and services. Knowledge sharing is important to municipalities for various reasons. Reid, (2003) points out that knowledge sharing creates opportunities to maximise organisational ability to meet those needs and generates solutions and efficiencies that provide a business with a competitive advantage. This means municipalities would be in a better position to provide quality service. Through knowledge sharing, departments working in silos are able to work together and where people work together there is great flow of knowledge and expertise. Maruta (2012) emphasises that through knowledge sharing, individuals are able to access appropriate knowledge resources from others, and then create new knowledge by combining existing knowledge with their intrinsic insights. Islam (2010) adds that knowledge sharing plays an essential role in the organisational process because it helps an organisation to transfer new ideas or solutions between individuals and across the municipalities.

In service organisations such as municipalities the output is intangible, citizens often participate actively in the service delivery process and that requires municipalities and contracted service providers to be more creative and constantly offer new ways of doing business and this task may be impossible to accomplish without sharing relevant knowledge among business units or functions of municipalities. Research shows that when workers within an organisation share knowledge, they are more efficient (Grant, 1996) and make fewer mistakes (Argote, *et al.*, 2000). To reap these benefits of knowledge sharing, organisations should be ready to deal with some challenges associated with knowledge sharing.

3.6 Challenges of knowledge sharing in Limpopo municipalities

If Limpopo municipalities wish to enjoy benefits of knowledge sharing mentioned in Table 3.1 they will have to consider a number of key challenges associated with knowledge sharing. Knowledge sharing in Limpopo municipalities faces some specific challenges, such as budget restrictions; data privacy and confidentiality, and related security issues, which, due to mandatory regulations, are a top priority for government. Municipalities operate in high political terrain. As such, political influence may posit serious barriers to the effectiveness of inter organisational knowledge sharing.

Limpopo municipalities need to know that employees' tacit knowledge, by its very nature, is difficult to transfer. Knowledge sharing is typically voluntary and as such employees cannot be compelled to share their knowledge (Lin, Hung & Chen, 2009). Furthermore, Limpopo municipalities may find it difficult to transfer internal knowledge because knowledge is "sticky." The concept of 'stickiness' is used by (Szulanski, 1996) to explain why knowledge is not shared within an organisation, claiming the barriers to imitation to be the recipient's lack of absorptive capacity (the ability to exploit outside resources of knowledge), and causal ambiguity (the lack of transparency about what the factors of production are and how they interact during production). This explains the situation whereby "knowledge often adheres to particular people and is hard to move to another location without a great deal of effort. Knowledge is sticky because the person who holds the knowledge may be unmotivated to do the work to transfer it to someone he or she does not know well or may explicitly decide not to transfer it for fear of losing power or status" (Brown & Duguid, 2001). Limpopo municipalities should also be careful to unwittingly impede knowledge transfer by making it difficult for individuals to find

knowledgeable others by creating environments that encourage competition among co-workers. Competition may lead to devaluing or refusal of knowledge coming from other sections of the organisation. It is against this backdrop that, knowledge often becomes stuck in a particular place or with a particular person, even when it is in the organisation's best interest for it to flow.

Limpopo municipalities should be aware that, knowledge can also be leaky (Brown & Duguid 2001:199). "Leakiness" by contrast, generally focus on the external and undesirable flow of knowledge, in particular the loss of knowledge across the boundaries of the organisation to competitors. Limpopo municipalities to remain competitive, they should guard knowledge from leaking. Dyer and Nobeoka (2000) refer to this unwanted flow as "knowledge spillovers". This means unauthorised flow of ideas, insights, inventions, and practices to other organisations. Therefore, Limpopo municipalities need to realise that the knowledge sharing is not straightforward processes. Certain factors are required to enable knowledge sharing in an organisation. Some critical factors that are mentioned in literature are discussed below.

3.7 Enablers of knowledge sharing in organisation

3.7.1 Rewards and incentives

The willingness to share knowledge may be challenged by different organisational structures and cultures and may need to be supported by specific knowledge strategies and efforts from management (Petrescu, *et al.*, 2010). Linking knowledge sharing to the concept of 'Ubuntu' can encourage knowledge sharing in organisations. The term "Ubuntu" means different things to different people. "Ubuntu" can be described as humaneness philosophy which includes mutual support and respect, interdependence,

unity, collective work and responsibility (Taylor, 2014). It involves a common purpose in all human endeavour and is based on service to humanity'. Letseka (2014: 547–548), however, proposes that: Ubuntu is a moral theory that is associated with humaneness or being humane' and then later 'the essence of Ubuntu as humanness is thus a requirement to act humanely towards others.

It can be deduced from these definitions that the term 'Ubuntu' has been used to define how people and communities should behave in their interactions. Khoza (2006) states that "Ubuntu" is characterised by a range of values, such as caring, reciprocity, sharing, compassion, hospitality, cohabitation, cooperation and tolerance. Khoza (2006) also observes that a good example of "Ubuntu" is communities coming together to resolve problems 'so as to promote peace, love, respect and working together in social harmony', Therefore, "Ubuntu" may encourage knowledge sharing and improve municipal governance. This is because sharing and collaboration are important aspects of knowledge sharing, the researcher believes that "Ubuntu" is capable of creating and facilitating a culture of knowledge sharing in an organisation because the concept of 'Ubuntu' emphasises sharing and provision of assistance to 'other people.'

Empirical studies on how to encourage people to share knowledge has also been conducted. For instance, Wang, *et al.* (2014) investigated how to motivate knowledge sharing in an organisation, arguing that knowledge sharing will be greater for employees who are encouraged, evaluated and rewarded because knowledge is power and no one is willing to give it away freely without being recognised. Wai Ling, *et al.* (2009) is of the view that the most effective method to promote knowledge sharing in an organisation is to link it with rewards and performance appraisal.

The influence of reward on knowledge sharing behaviour, appears to be inconsistent in the reviewed literature. Some studies report that individuals' knowledge sharing behaviour is positively affected by the potential for organisational rewards (Burgess, 2005) or coworker reciprocity (Kankanhalli, *et al*, 2005; Lin, 2007). Based on both social exchange and social capital theories, organisational rewards such as promotion, bonus, and higher salary have been shown to be positively related to the frequency of knowledge contribution made to Knowledge management systems especially when employees identify with the organisation (Kankanhalli, *et al.*, 2005). Similarly, Jahani *et al.* (2013) agree that there is a significant relationship between reward system and knowledge sharing in organisations. A study by Wai Ling, *et al* (2009) in an American Multinational Company (MNC) in Malaysia examined the views of executives about knowledge sharing, barriers to knowledge sharing, and strategies to promote knowledge sharing. A detailed field-base case study of the knowledge sharing conceptualization in a large MNC was performed based on a sample of 81 employees. The study revealed that the most effective method to promote knowledge sharing is to link it with rewards. Wai Ling, *et al.* (2009), found that monetary rewards are more effective than non-monetary rewards in promoting knowledge sharing in the organisation. Wai Ling, *et al.* (2009) identified non-monetary reward as less effective in an American multinational in Malaysia while Sutton (2006) regards non-monetary rewards, such as recognition or training as more effective compared to financial rewards.

Another study conducted in Belgium by Willem and Buelens (2007) focused on specific characteristics of public sector organisations that increase or limit interdepartmental knowledge sharing. Data were collected by a questionnaire survey in the public sector. The sample consists of 358 cooperative episodes between departments in more than

90 different public sector organisations. The study revealed that incentivising employees is an important factor that can encourage knowledge sharing. Oliver and Kandadi (2006) conclude that organisational rewards motivate employees towards knowledge sharing and foster a knowledge culture. Therefore, Limpopo municipalities may need to consider linking knowledge sharing to their performance management system. Particularly the interviewed managers reported that employees do not want to do anything outside their performance contracts because the function would not be rewarded.

Other studies (Bock, *et al.*, 2005; Lin, 2007) suggest that reward has no effect on knowledge sharing. Lin (2007) examined the influence of individual factors (enjoyment in helping others and knowledge self-efficacy), organisational factors (top management support and organisational rewards) and technology factors (information and communication technology use) on knowledge sharing processes and whether more leads to superior firm innovation capability. The survey was conducted based of 172 employees from 50 large organisations in Taiwan. The results indicate that employee willingness to both donate and collect knowledge enable the firm to improve innovation capability. Zhang *et al.* (2010) concur that rewards do not significantly influence employee attitudes and intentions toward knowledge sharing. For instance, Alony, *et al.* (2007) demonstrated significance of knowledge sharing to organisational performance, by exploring the contribution of tacit knowledge sharing to the success of projects in the Australian Film Industry (AFI). The results showed that knowledge workers in the Australian Film Industry were not motivated by financial reward to share their knowledge. In another study, Oliver and Kandadi (2006) established that the indirect rewards such as appreciation and recognition play a greater role than the monetary incentives in knowledge sharing. If knowledge sharing could be rewarded (appreciated

and recognised) in Limpopo municipalities, possibilities are that municipal employees would derive satisfaction and enjoyment from sharing knowledge in order to engage in the process of knowledge sharing. To achieve this, municipalities may conduct annual organisational awards in rewarding those who demonstrated the willingness to help and share expertise with others. Therefore, the researcher has a reason to believe that effective reward system is required in Limpopo municipalities in order to motivate employees to share knowledge among themselves, between different departments and across the municipalities. Organisational culture and trust also play an important role in knowledge sharing.

3.7.2 Organisational culture and trust

Another factor that seems to have a considerable impact on knowledge sharing is organisational climate. Lindner and Wald (2010:11) assertion that “knowledge culture is by far the most important factor of success. Therefore, creating a knowledge sharing culture is one of the main concerns for knowledge sharing (Reid, 2003). Without a proper atmosphere in organisations, other attempts to share knowledge might be pointless (Tohidinia & Mosakhani, 2010:612). It is argued that a meagre social climate in an organisation might lessen the level of engagement in knowledge sharing (Van Den Hooff, *et al.*, 2004). It is the responsibility of managers to create a favourable climate for knowledge sharing. One way of doing this is to encourage staff members to consult with their colleagues regarding problems or uncertainties rather than taking the challenge to a manager. Without conducive environment, competition may affect knowledge sharing in Limpopo municipalities. Employees compete to be the best employee, wanting promotion exist in all organisations (Chow & Chan, 2008). This would of course cause knowledge hoarding, which could affect knowledge sharing adversely as knowledge is

considered as a powerful resource that could create advantage. For instance, in Northern Sotho there is a saying that “*kgomo ga e ntšhe boloko ka moka*”. Loosely translated, it means that a person cannot and should not share his or her entire knowledge with others for fear of losing power. Tohidinia and Mosakhani (2010:612) elaborate that the fear of not performing well in an organisation or the fear that other employees would perform better and be promoted or get a raise when knowledge is shared, would ultimately restrict sharing of knowledge. Schepers and Van den Berg, (2007) explain that an organisational environment that emphasises individual competition pose a barrier to knowledge sharing whereas cooperative team perceptions help create trust, a necessary condition for knowledge sharing.

Trust between co-workers is an extremely essential attribute in organisational culture, which is believed to have strong influence on knowledge sharing (Al-Alawi, *et al.*, 2007). Chow and Chan (2008) aimed at understanding of social capital in organisational knowledge sharing. A measurement tool was developed and then a theoretical framework in which three social capital factors (social network, social trust, and shared goals) were combined with the theory of reasoned action; their relationships were then examined using confirmatory factoring analysis. Hundred-and ninety managers were surveyed from Hong Kong firms. The study found out that when there is trust among the employees, whereby the increased performance of a colleague is not seen as a threat by another colleague, knowledge is much easier to be shared. Andrews and Delahay (2000) indicates that when people trust each other, they become more willing to provide useful knowledge and to listen and absorb each other’s knowledge. Accordingly, individuals who trust the people they interact with are ‘more likely to participate in sharing of knowledge. Trust is needed because a large dimension of the knowledge that

is to be shared is of a tacit nature. It is important to note, it is the level of trust that exists between the parties sharing knowledge that greatly influences the amount of knowledge that flows between individuals. Employees in the studied municipalities appear to have developed culture of mistrust. It was revealed that political affiliation is a major cause of the mistrust culture. For example, most municipal employees do not feel free to share their views and insights with colleagues belonging to other political parties. The issue of lack of trust in municipalities is confirmed by former Minister of Cooperative Governance and Traditional Affairs, Pravin Gordan (City Press, 21 September 2014:8). According to the Minister, people have lost trust in the system of local government because citizens believe that municipalities are not capable of delivering on their mandates. If distrust is present within an organisation, knowledge sharing cannot, and will not, succeed because when fear is present, people will not contribute in sharing critical information and will be suspicious regarding their organisation's true intentions (Davenport & Prusak, 2000). Due to this lack of trust in municipalities, communities embark on the so called service delivery protests in order to raise concerns about poor service delivery. In this regard, management support is required to ensure that knowledge sharing harmonise with organisational culture (Davenport & Prusak, 1998).

3.7.3 Management support

If the knowledge sharing approach is to be relevant and really geared towards assisting the Limpopo municipalities in improving work processes, efficiencies and therefore service delivery, support of both political and administration leadership is a prerequisite. The introduction of a knowledge management program can be a major organisational change and for this reason, the involvement of leadership is considered very important (Davenport & Prusak 1998). Organisations that implement knowledge management

programmes may along the way make mistakes that cost money and time. As such, a successful knowledge management in an organisation depends largely on leadership that values “trial and error”. The leadership plays a major role in knowledge sharing in the organisation, therefore the organisational goal of knowledge sharing for competitive advantage is facilitated by the practices that leadership implements (Singh, 2008). Essentially, leadership is responsible for ensuring that knowledge sharing objectives are in line with organisation's business strategy. Wai Ling, *et al.* (2009) believe that top management support is vital to ensure the success of knowledge sharing in the organisation.

Lin, (2007) states that management support for knowledge sharing has been shown to be positively associated with employees' perceptions of a knowledge sharing culture (e.g., employee trust, willingness of experts to help others) and willingness to share knowledge. Gorry (2008) conducted two case studies on knowledge sharing in the public sector in the United States of America (USA). This qualitative case study aimed to explore and describe the academicians' knowledge sharing motivations. A single case study was conducted with the aim to gather deeper insights on the knowledge sharing motivation. Data were collected through semi-structured interviews. Content analysis method was used to extract the knowledge sharing motivations from the qualitative data. The study found out that lack of institutional commitment (lack of leadership and top management support) are main barriers to knowledge sharing. Another study by Lee *et al.* (2006) reviewed qualitative and quantitative studies of individual-level knowledge sharing. The study discussed the theoretical frameworks used and summarised the empirical research results. The study established that top management support affect both the level and quality of knowledge sharing through

influencing employee commitment to knowledge management. On the other hand, the exploratory study by Cabrera, Collins and Salgado (2006) investigated, some of the psychological, organisational and system-related variables that may determine individual engagement in intra-organisational knowledge sharing. Results from a survey of 372 employees from a large multinational show that self-efficacy, openness to experience, perceived support from colleagues and supervisors and, to a lesser extent, organisational commitment, job autonomy, perceptions about the availability and quality of knowledge management systems, and perceptions of rewards associated with sharing knowledge, significantly predicted self-reports of participation in knowledge exchange. The study concluded that perceived supervisor and co-workers support and their encouragement of knowledge sharing also increase employees' knowledge exchange and their perceptions of usefulness of knowledge sharing (Cabrera, Collins & Salgado, 2006). Regrettably, it seems as if Limpopo municipalities fail to leverage knowledge due to the lack of commitment of top leadership in sharing organisational knowledge. In this regard, one may suggest that management support and leadership is required to create a climate that encourages the distribution of knowledge, so that people feel safe to contribute towards knowledge sharing in every way possible. Lastly, knowledge sharing in Limpopo municipalities requires adequate support and dedication from top management as this influences how resources and time are allocated for executing the knowledge management plan (Yeh, *et al.*, 2006:797).

3.7.4 Organisational structure

Syed-Ikhsan and Rowland (2004:101) define organisational structure as the manner in which individuals and posts are organised to make the performance of the organisation's work possible. Government agencies such as municipalities are typically

hierarchical and bureaucratic organisations that make sharing of knowledge difficult (Sandhu, *et al.*, 2011:210). Bureaucracy is an organisational structure where power and authority are centralised in higher management levels (Lee, *et al.*, 2006). Centralisation has a significant negative impact on knowledge sharing in an organisation. Lee, *et al.* (2006) point out that centralisation can hinder initiatives of inter-group information exchange and collaboration. This may affect knowledge sharing because employees always need approval from supervisors regarding most decisions. Governments have a top-down bureaucratic structures which are not conducive to the process of creating knowledge within an organisation, as only top management have the power and ability to create knowledge which they use as a mere tool instead of a tangible product (Nonaka, 1994:30). Equally so, a bottom up organisational model whereby only lower-level and middle-level employees are responsible for knowledge creation and sharing are not favourable. A functionally segmented structure is likely to inhibit knowledge sharing across functions and communities of practices (Tagliaventi & Mattarelli, 2006).

Knowledge sharing may be facilitated by having a less centralised organisational structure creating a work environment that encourages interaction among employees such as through the use of open workspace and job rotation and encouraging communication across departments and informal meetings (Lee, *et al.*, 2006). Gaffor and Cloete (2010) assessed enablers of knowledge sharing and how they impacted on an organisation's KM efforts. Stellenbosch Municipality was used as a case in point. The study further examined how local governments were able to effectively implement KM practices as strategic tools used to achieve service delivery and operational goals. The study concluded with a number of recommended strategies, (1) to develop the KM enablers that were present in organisations and (2) to aid the implementation of

successful organisational KM initiatives. According to Gaffoor and Cloete (2010:4) what is required, however, is a model that takes into account all organisational members who work together collectively to generate knowledge. The organisational structure must therefore promote communication across and within organisational boundaries and strengthen interdependence of teams and networks (Skyrme, 1999:185). In other words organisations such as municipalities should create opportunities for employee interactions to occur and employees' rank, position in the organisational hierarchy, and seniority should be deemphasised to facilitate knowledge sharing (Gaffoor & Cloete, 2010:4). Using descriptive correlational method, Allameha, *et al.* (2011) examined the relationship between different kinds of organisational culture and different dimension of knowledge management. For analysing the findings of the research and accepting or rejecting the proposed hypothesis, statistical techniques like step by step regression as well as pearson correlational coefficient has been used. The study concluded that an organisation that is willing to benefit from knowledge sharing must identify these enablers in order to provide the necessary infrastructure and support. Otherwise they may turn out to be barriers of knowledge sharing in an organisation.

3.8 Knowledge sharing strategies

Most modern organisations have realised that their knowledge asset has to dynamically flow between employees in order to gain the full potential of this asset. There are various strategies that organisations may employ to share knowledge. For the purpose of this study the following strategies are discussed. Such strategies are: Community of practice (CoP), Newsletters, Storytelling and mentoring. These strategies were selected because of their dominant usage in literature.

3.8.1 *Community of practice*

Community of practice is one of the strategies of knowledge sharing which is supported by research (Majewski, *et al.*, 2011). The term community of practice was coined by Lave and Wenger(1991) to describe an activity system that includes individuals who are united in action and in the meaning that action has for them and for the larger collective. Brown and Duguid (2001) define community of practice as people bound by informal relationships who share common practices. This definition implies that community of practice are not formal structures such as departments in an organisations. They are informal entities, which exist in the minds of their members and are bound together by the connections the members have with each other and by their specific shared problems or areas of interest (Ardichvili, *et al.*, 2003). Through community of practice Knowledge is generated and shared when members participate in problem solving. In the context of this study, members of community of practice may be among the employees of a particular municipality who may identify a particular topic and share their ideas around it or across the municipalities. In this way, community of practice can facilitate sharing of ideas, best practices and knowledge. Today community of practice is expanding from the face-to-face, off-line setting to the distributed, on-line workspace (Jeon, *et al.*, 2011: 124). The use of information and communication technology facilitates functionality and knowledge sharing in community of practice irrespective of members being geographically dispersed. Information and communication technology can be used to enable and enhance collaboration but it cannot not make knowledge sharing happen automatically.

It is important to mention that the successful functioning of a knowledge sharing community of practice depends on members taking an active role in sharing knowledge.

Hayes and Walshaman (2000) argue that for community of practice to be truly active, there should be an active participation of members in other knowledge sharing activities such as engaging in live chats, question and answers sessions, providing asynchronous feedback on previous postings. However posting of knowledge entries and other active contributions by some members of a community represent only one side of the equation which is the supply of new knowledge (Ardichvili, *et al.*, 2003). According to them for a community to be vibrant, there should be also an active participation on the demand side. To do this members need to visit the community of practice website and post questions when they need some advice or knowledge. The benefits of community of practice seem to be significant. This include the facilitation of greater variety in the knowledge domains of the members (De Carolis & Corvello, 2006), overcoming barriers to sharing knowledge that conventional, technology-based knowledge management systems often encounter (Dixon, 2000). An example given by Dixon (2000) is that people who are reluctant to contribute when asked to write something up for the database are willing to share knowledge when asked informally by their co-workers.

There are some challenges that organisations face when using community of practice. Experience and research show that knowledge for designing online community of practice is limited (Barab & Kling, 2004). As such, many community of practice are not sustainable. They fall apart soon after their initial launch due to lack of sufficient energy and synergies or by adopting a short-term opportunity driven behaviour, both of which lead to uncertainty and mistrust between the members and consequently to low quality of shared work results (Bettoni, *et al.*, 2007). Sharing of knowledge in community of practice can also be affected by factors such as organisational culture, trust, rewards, members' perception towards community of practice as a tool of knowledge sharing and

most importantly the willingness of members to share knowledge. In this regard, Khuzaimah and Hassan (2012:347) suggest that organisations should instill the culture of trust and mutual respect among members. Despite some limitations of using community of practice as a tool for sharing knowledge, it remains a dominant tool for knowledge sharing in literature studies. The use of newsletter as a tool for sharing knowledge has its own share in literature.

3.8.2 *Newsletters*

Many organisations have their own newsletters to transfer organisational knowledge. Tsui, *et al.* (2006) define newsletters as a collection of articles on organisational activities and related topics, can be useful for raising awareness of new ideas and innovations, and also to promote knowledge-sharing activities. According to Tsui, *et al.* (2006), newsletters can reach a broad audience, especially if available both in print and electronic versions. All the municipalities that have been researched have newsletters which are published at least quarterly and which are available in both print and electronic formats. Depending on the content, electronic newsletters are uploaded either on the municipal website or intranet. Limpopo municipalities publish these newsletters, with intent to highlight the municipalities' achievements, activities and to inform readers of other events such as Mayoral events. Organisations who need to use newsletter for knowledge sharing need to be aware of time and financial constraints involved. Newsletters are published at certain intervals, and this may result in information being obsolete by the time the next issue is published. People may not be willing to contribute their knowledge towards the newsletter. It is also costly to print the newsletter. Organisations may close this gap or weakness by using organisational storytelling.

3.8.3 *Story telling*

Story-telling has always been one of the most popular and effective ways of knowledge transfer (Botha, 2007:35). It is a human-centred way of transferring knowledge. Botha, (2007) indicates that organisational stories are told mainly during staff induction, formal and informal gatherings in tea rooms and organised labour meetings. Story-telling in the context of this study can be defined as a detailed narrative of past management actions, employee interactions or, other key events that have occurred and that have been communicated informally (Swap, Leonard & Mimi Shields, 2001). Organisational storytelling and stories are often used to promote knowledge sharing, inform and/or prompt a change in behaviour, as well as to communicate the organisational culture and create a sense of belonging (Dalkir & Wiseman, 2004: 58). There are a number of conditions that must be available in order to ensure that story telling becomes successful in an organisation. First and foremost, stories are best experienced orally and they are likely to lose much of their effectiveness when simply read as a text. For storytelling to be successful in municipalities, the story has to be compelling, concise; relevant, capture the imagination and open the creative participation of the listener, (Botha, 2007:43) so that the moral of the story or the organisational lesson to be learned can be easily understood, remembered and acted upon. Another key prerequisite condition for effective knowledge sharing through storytelling is the existence of a culture of trust. In an organisation. According to Fullmer (1999) people have to trust the information they receive is the best that can be sent to them and those that send it to them have to be able to trust that they will use the information in an appropriate manner.

Benefits associated with the use of storytelling as a tool for transferring knowledge in an organisation are enormous. In view of Botha (2007:35), “story-telling provide a useful

tool for capturing and disseminating knowledge in organisations because of its ability to capture SECI mode: Socialisation- where knowledge and values that emerge from the story may stick for a long time in the behavior of people, externalisation-where tacit knowledge is explicitly exposed, Combination of explicit knowledge especially if the story is written down and Internalisation- where explicit knowledge is turned into tacit knowledge”. For instance, a storytelling approach was used by the governing African National Congress (ANC) during the launch of its manifesto and its election campaign (ANC, 2013:1). The party used the "good story to tell" slogan to highlight and share its achievements in the past 20 years. Most of these achievements were about municipalities, including those in Limpopo Province. Story-telling is a natural way for human beings to interact and can be easy to remember; they can also contain embedded lessons. Organisational stories have an ability to prevent similar mistakes from being repeated and promote organisational learning and adoption of best practices stemming from organisational knowledge base (Dalkir & Wiseman, 2004).

Story-telling can work well to transfer knowledge in Limpopo municipalities because: “are rich in metaphor, embed ethics, are often constructed around role models, simplify complex issues, are full of humor, carry messages of embedded values, reflect on experience of the story-teller, show a certain will to achieve, carry the beliefs of the culture from where they originate, have a large factual component, demonstrate commitment from the characters in them, are personalised to the listener and around the teller, are full of perception, carry myths, are told and received with passion, have unique style that is often remembered long after the facts are forgotten, hold a large level of credibility if transferred by someone who has experienced them first-hand, are peppered with anecdotes and lastly represent a specific culture” (Botha, 2007:35). It is

on this basis that the researcher is of the view that story telling may enhance the flow of organisational knowledge in municipalities. There are a number of limitations that must be taken into consideration in order to ensure that story telling become successful in an organisation. Stories are likely to place more demands on listeners, because the sharing of tacit knowledge in the form of stories is more likely to be hindered by a lack of motivation or lack of absorptive capacity of listeners (Szulanski, 2000). Listeners may also raise questions regarding the validity, plausibility and relevance of organisational stories. Dalkir and Wiseman (2004) shows that the listeners of stories may also reject knowledge sharing but for different reasons (i.e., the "not-invented-here" syndrome, which is characterised by general doubt about the validity and reliability of the knowledge). They further state that the shared understanding of the content by both story teller and listener may prove problematic due to prevailing attitudes toward mistakes (i.e., "who is to blame" culture designed to prevent career damage).

Dalkir and Wiseman (2004: 61) contend that cultural differences can also pose a challenge, as some participants may not get it, "or may be unable to interpret the often highly contextual, idiomatic description of the critical event in question. According to them these challenges can range from linguistic problems (stories, are not always easily translated) to more sophisticated challenges posed by differences in value and belief systems. Organisations should take steps to ensure that both story teller and listener have the necessary knowledge base to learn, and to understand each other. To achieve this organisations can hid to Dalkir and Wiseman's (2004: 63) advice:

- provide training in creativity and experimentation to help overcome lack of motivation, absorptive capacity, and retentive capacity

- ensure that individuals and groups who need to interact and work together have similar knowledge capabilities.
- invest time and resources in training to ensure building of closer relationships between the transmitter and recipient of knowledge.

3.8.4 *Mentoring*

Research reveals that mentoring enables senior employees to transfer their knowledge, wisdom, specific insights and skills to their junior employees (Dubin, 2005). Beazley, *et al.*, (2002) assessed the loss of knowledge as a serious threat. This study was on the usefulness of mentoring to professions indicate that mentoring contributes to knowledge sharing. Beazley, *et al.* (2002) state that mentorship entails the pairing of an experienced member of staff with a new employee in order to assist the new employee acquire new knowledge and skills to operate. There is much to gain by introducing mentorship programmes in an organisation. It offers opportunities to pass on knowledge, skills and experiences. Sharing knowledge through mentoring would ensure flow of knowledge in municipalities and its availability even after an experienced and knowledgeable staff member were to part ways with the organisation. The use of this tool also has some challenges that need to be taken into consideration. Main challenges emanate from pairing employees, i.e. mentor and mentee. For example Developers surveyed by Begel and Nagappan (2008) perceived working with someone with different skills as one of the main challenges. Pairing experts and novices can be problematic as novices may slow down experts. Furthermore some experts might be reluctant to engage in mentoring.

3.8.5 Information and communication technologies and knowledge sharing

Information and communication technology is central to the maintenance and organisation of knowledge management efforts (Yeh, *et al.*, 2006:799). Information and communication technologies refers to the technology infrastructure and its capabilities of supporting the knowledge management architecture (Allameha, *et al.*, 2011:1216). It is an important tool for managing information and knowledge in an organisation. This is the reason why most organisations in both private and public sector are investing in information technology. Organisations such as IBM, Intel, and SAP have adopted, for instance, weblogs to facilitate internal communication and external customer interactions (Wang & Chuan-Chuan Lin, 2011). South African government has also adopted intensive use of information and communication technology to deliver service to citizens, hence the rise of the concept e-government.

There is a need for suitable information technology infrastructure in order to facilitate sharing of knowledge in Limpopo municipalities. According to Alavi and Leidner (2001:114) “the group of information and communication technology tools that are utilised for the purpose of knowledge management are known as knowledge management systems and are classified into two types, namely: communication technologies (emails, video conferencing, electronic bulletin boards and computer conferencing) and decision making technology (decision support systems, expert systems and executive information systems)”. It has been observed that Limpopo municipalities rely on one category of knowledge management systems which is communication system. Within this category they mainly use emails, telephones, faxes and intranet.

Limpopo municipalities may not be able to invest in information technology if they are not sure about the benefits of using information technology. Information and communication technology has an active role and is a key enabling factor in knowledge management (Davenport & Prusak, 1998). The role of information and communication technology in knowledge sharing has been studied by communication theorists. For instance, Yates, *et al.* (1999) analysed how a firm adopted and used a new electronic medium, identifying different types of communication, or genres, that groups shaped according to their needs and found that these patterns both reinforced and changed the social interactions within groups. Information and communication technology makes searching, storing, accessing and disseminating of information easier. Sharing knowledge and information through enablers provides strategic advantages for municipalities to improve decision-making and enhance the quality of services and programmes (Zhang, *et al.*, 2005:549). Information and communication technology is pervasively used in the organisation, and thus qualifies as a natural medium for the flow of knowledge in the organisation (Allameha, *et al.*, 2011:1215) and it determines the knowledge accessibility in the organisation (Gaffoor & Cloete, 2010:4). Information and communication technology facilitates the transfer and sharing of knowledge by easing communication channels within an organisation.

Information and communication technology infrastructure is capable of facilitating knowledge flow and eliminating barriers to communication within Limpopo municipalities. Information and communication technology application systems, such as groupware, online databases, intranet, virtual communities, and others can facilitate knowledge sharing processes. For example, Huysman and Wulf (2006) indicate that information and communication technology applications enable rapid search, access

and retrieval of information, and can support communication and collaboration among organisational employees and between organisations. This is consistent with Yeh, *et al.* (2006:799) who explain that information and communication technology supports knowledge management by facilitating quick searching, access to and retrieval of information, which in turn encourages cooperation and communication between members of an organisation. The use of information and communication technology for Knowledge sharing allows Limpopo municipalities to overcome geographical boundaries. In essence information and communication technology plays a crucial role in ensuring successful knowledge management initiatives because it is a vital component in collecting and processing data, storing it in databases and making it widely accessible through the use of intranet (Gold, *et al.*, 2001).

The negative side of using information technology in Limpopo municipalities may relate to costs of IT infrastructure itself and that of training employees in order to equip them with new skills for using the new technologies. Information and communication technologies are limited to the transfer of explicit knowledge and not of tacit knowledge which happens to be very important in any organisation. Availability of information and communication technologies may not guarantee that employees may use it. There might be a resistance to adopt new technologies which may result in new technologies becoming white elephant in an organisation. This implies that organisations need to assess the willingness of the employees towards adopting technological changes. Benson (1998: 32) argues that the information age will fracture societies, make businesses less profitable, undermine cultures and create mass ignorance on a scale not encountered before. Benson's contention is that any form of communication other than direct face to-face contact is an impoverished form of communication depriving

cultures and communities of the texture and richness that traditional modes of communication provide. A study by McAdam and Reid, (2000) found that lack of technology was a major barrier to knowledge sharing in the public sector. Limpopo municipalities are no exception in this regard. This problem is also prevalent in other countries. Gorry (2008) who conducted two case studies on knowledge sharing in the public sector in the USA found that inadequate technology is the main barrier to knowledge sharing. The results that emerged from the said case studies further found that public sector organisations are loosely organised and this creates a stumbling block to the creation of Knowledge sharing culture. Although, information and communication technology can be supportive of more efficient coordination and communication processes, it can also stand in the way of efficiency if it is not properly integrated in an organisation. Therefore, organisational performance in Limpopo municipalities would depend largely on how knowledge is shared using information and communication technologies.

Technology is only an enabler of knowledge building and sharing of knowledge but it does not motivate employees to share their knowledge (Ramirez, 2006). Knowledge management is more about people and organisational culture. If an organisational culture does not support a knowledge management programme, the programme is not likely to succeed. It is not clear whether organisational culture in Limpopo Province would support the use of information and communication technologies. Therefore this study investigated how Limpopo municipalities use information and communication technologies as tools and enablers of knowledge sharing. Technology in Limpopo municipalities is underdeveloped. Information and communication technologies in these municipalities is maintained by state information technology agency (SITA). It has been

stated that in twenty first century, knowledge is the most critical asset to be managed for business growth and survival (Halawi, *et al*, 2005) in which information and communication technologies play an important role for the success of any organisation in knowledge society.

3.9 Information and Communication Technology that may be used to support knowledge sharing

3.9.1 Intranet

Stenmark, (2002) regards intranet as an information silo or a repository of unstructured information. This definition elucidates the information-centric perspective of intranets. There are enormous benefits that may derive from using intranet as a knowledge management tool. Of more importance is that it provides a context where dialogue, reflection, and perspective making could occur. This is similar to what Nonaka and Konno (1998) describe as “*ba*”. According to “them”, “*ba*” is a Japanese word to describe a shared space of physical, virtual, and/or mental nature and they view intranet as an example of such an environment. Intranet is a powerful tool for communication and collaboration that presents data and information and the means to create and share knowledge, in one easily accessible place (Sayed, *et al.*, 2009:228). Furthermore, intranet offers organisations the ability to centrally find and access organisational information and knowledge to support knowledge workers and knowledge sharing (Averweg, 2012:1). Information and knowledge that can be located in a municipality’s intranet may include reports and business processes, strategic plans, policy documents, etc. Through intranet these documents can be made available electronically and be centrally accessible. Therefore an intranet is therefore well suited for the distribution of data, information and knowledge in Limpopo municipalities.

The intranet can also facilitates organisational communication and knowledge sharing. Sayed, *et al.* (2009:229) opined that knowledge sharing can be significantly augmented by the use of the intranet when dealing with organisational communication (e.g. virtual meetings, chats, email transactions, conferencing, official memoranda, etc.). Brelade and Harman (2003) state that intranets can be used on a 'push' basis, where information is presented to employees, and on a 'pull' basis, where employees may seek out and retrieve information for themselves. The intranet as a knowledge sharing environment can be seen from three perspectives, namely: information, awareness and communication (Masrek, *et al.*, 2008: 92). According to these authors, the information perspective explains that the intranet gives employees access to both structured and unstructured information in the form of databases and documents; the awareness perspective keeps users of intranet well informed and connected to information and fellow employees in the organisation; while the communication perspective enables employees to collectively interpret available information by supporting a variety of channels for negotiations and conversation. The studied municipalities have deployed intranet as one of Knowledge management tools. Stenmark (2002) highlights that "the large amount of information available on the intranet can result in information overload, and to avoid such a situation and maintain the awareness perspective, tools to assist the organisational member by prompting when new and relevant information is added must be developed." Another tool that organisations can use to share knowledge is social web 2.0 technologies.

3.9.2 *Web 2.0 technologies*

"Web 2.0" or "social web" (also called social computing) are social networks for creating and maintaining social connections among individuals (Kerstin, 2010:381). The term

“web 2.0” was coined by O’Reilly (2005). It refers to a perceived second generation of web applications that facilitate interactive information sharing, user-centred design, interoperability, and collaboration on the worldwide web. According to Standing and Kinitin (2011) the term “Web 2.0” refers to technologies that allow individuals to interactively participate with information and with other individuals, and to build networks based on mutual personal or professional interest. Boyd (2006) state three features that characterise Web 2.0 technologies as follows:

- Support for conversational interaction between individuals or groups ranging from real-time instant messaging to asynchronous collaborative teamwork spaces.
- Support for social feedback that allows a group to respond to the contributions of others.
- Support for social networks to explicitly create and manage a digital expression of people’s personal relationships, and to help them build new relationships.

Essentially one may characterise web 2.0 by considering the extent to which they support communication, collaboration, connection, completion and combination of ideas. The advent of the web 2.0 revolution, has enabled a host of new services and possibilities on the internet. Among many new possibilities, Standing and Kinitin (2011) avers that “blogs (like Blogger), video sharing (like YouTube), presentation sharing (like Slide Share), social networking service (like Facebook, LinkedIn), instant messaging service (like Skype) and groupware (like Google Docs) - foster a more socially connected platform”.

Wagner and Bolloju (2005) argue that they can facilitate knowledge management processes from knowledge creation and storage to knowledge use and refinement.

Since these processes are carried out “conversationally”, that is, through a discussion forum where participants contribute to the discussion with questions and answers, or through a blog which is typified by a process of storytelling or through a wiki using collaborative writing, these technologies present a knowledge management solution that is inexpensive, fast and supports the collaboration of people in distributed locations. Web 2.0 technologies, have been proposed as a way to overcome the problem of managing tacit knowledge in organisations (Standing & Kinitin, 2011:288). “Web 2.0 applications in general can be considered as communication enablers promoting horizontal knowledge sharing and a sense of community for its members. It should be noted that web 2.0 communities are not just discussion groups; they offer up-to-date content and continuous community control with regard to member satisfaction” (Kerstin, 2010).

The advent of web 2.0 for example is believed to be the antidote to many barriers in knowledge sharing (Pei Lyn Grace, 2009). For instance Wikis embody the highest attainable information-sharing dream, where a group of members voluntarily and unselfishly are collaborating, creating knowledge and working towards a common goal. “When deliberately used in virtual project management environments they can become an important enabler for knowledge storage and knowledge sharing. Wikis can be used in project management to generate project documentation, including requirements documents, project plans and schedules, as well as reports and published deliverables” (Kerstin, 2010). The use of web 2.0 or social computing as a tool for knowledge sharing is supported by research. Paroutis and Al Saleh (2009) investigated the key determinants of knowledge sharing and collaboration using Web 2.0 by exploring the reasons for and the barriers to employees’ active participation in various web 2.0

platforms within a large multinational firm. The study was based on a case study design where 11 in-depth interviews were conducted. In addition, secondary data was collected. The authors revealed four determinants of knowledge sharing using Web 2.0 technologies, namely, “history (established way of doing things), outcome expectations (perceived benefits and rewards, information overload), perceived organisational/managerial support (earlier web 2.0 use, lack of knowledge and training about the tools and their benefits) and trust (quality and accuracy of information, confidential data and reciprocated knowledge sharing)”.

It is clear that adoption of web 2.0 technologies may facilitate knowledge sharing to a great extent. However, it has been noted that the implementation of these technologies is introduced by an individual employee or a small group within the organisation without the support of management (Standing & Kinitin, 2011). As a results the implementation lacks a strategic intent. An activity that is not linked to business strategy is likely to fail. Another challenge of web 2.0 use in organisation relate to management concerns. A survey conducted by Hasan and Pfaff (2007) used Activity Theory to analyse the Wiki as a tool that mediates employee-based knowledge management activities leading to the democratization of organisational knowledge. The study revealed that activities supported by social technologies such as Wikis, may provide capability for tacit knowledge sharing. The study found out how management rejected the use of wikis in organisations because they perceived it as a challenge to top-down organisational structure whereby communication is hierarchical, as such management was not willing to share knowledge with their subordinates. The study also identified lack of motivation and a culture that is not open to sharing of knowledge as major factors that impede collaboration and knowledge sharing in organisational social computing. Hasan and

Pfaff (2007: 7) further explain that the open nature of the wiki makes it prone to vandalism which is defined as “editing the wiki in a willful and destructive manner to deface the website or change the content to include irrelevant content.” Activities of this nature may put an organisation into a disrepute and force management to discontinue with the use of such technology. Social media are a highly social tool and require a culture of collaboration and the willingness to share knowledge. If there is low levels of participation in the use of web 2.0 technologies organisations may not be able to derive value from these technologies.

The literature on knowledge sharing reflects that there is flow and sharing of knowledge in Limpopo Municipalities. However, sharing occurs in informal way. There are some efforts on the side of government to implement knowledge management practices in the South African public sector, but such efforts are faced with major challenges. In Limpopo municipalities there are no formal knowledge management sharing strategies to share knowledge. Formal knowledge management practices enable organisations to systematically capture and organise the wealth of knowledge and experience of staff, clients, stakeholders, beneficiaries and partners, thereby leveraging the available knowledge in the organisation. There are many benefits associated with sharing organisational knowledge, such as preserving organisational knowledge of an experienced employee. Organisations invest in technologies and tools to enable knowledge sharing. However, the use of these technologies is not always well integrated with the general business strategies. In this regard, Davenport and Prusak (1998) noticed that the challenge of taking advantage of knowledge sharing processes and tools is to integrate them with different aspects of the business: strategy, process, culture, and behaviour. The success of knowledge sharing depend on certain factors.

Factors necessary to motivate knowledge sharing among the employees include conducive environment and an appropriate organisational culture that support knowledge sharing success. Various ways to create an enabling environment necessary for motivating knowledge sharing is by linking knowledge sharing goals with the organisation's vision. In addition, management support and rewarding employees for knowledge sharing are also the key factors influencing knowledge sharing in an organisation. The overall review suggests that there is a connection between performance, quality service and knowledge sharing activities in both private and public sector.

3.10 Chapter summary

This chapter provided a review of literature on knowledge sharing in organisations. The review was presented in the following order. It started by outlining the relationship between data, information and Knowledge. This was followed by discussion on types of knowledge available in organisations and importance thereof. Subsequent section focused on the concept: Knowledge Sharing and its justification in Limpopo municipalities. The chapter went further to discuss challenges and factors influencing knowledge sharing in organisations. Strategies of knowledge sharing were also explored. The last part focused information and communication technology that may be used to support knowledge sharing. The review revealed different perspectives for from which knowledge and knowledge sharing are perceived in organisations. An integrated approach comprising both quantitative and qualitative data collection methods appeared to be appropriate for this study for studying knowledge sharing in Limpopo municipalities. Methodological issues of this thesis are discussed in the next chapter.

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1. Introduction

Welman, *et.al.* (2005:2) defines a research methodology as a concept that considers and explains the logic behind research methods and techniques. Simply put research methodology may be defined as the study of methods by which knowledge is gained. This chapter covers the methods of research followed in conducting this study. Section 4.2 explains research paradigms relevant to this study. Subsequent sections explain research approach for this study, sampling methods used, data collection methods and techniques, the validity and reliability of instruments that were used to collect data and challenges faced in the field. Section 4.20 focuses on the process of analysing data by explaining approaches used to analyse the collected data. Lastly, the remaining section, 4.21 discusses the ethical considerations.

Considering the fact that knowledge management is interdisciplinary in nature, the researcher used a survey research design. A survey design provides a systematic approach to study the relative incidence, distributions and interrelations of a number of variables that are not manipulated but, which occur in a natural setting (Ondari-Okemwa, 2006:143). A survey was appropriate for this study because it afforded the researcher an opportunity to ask many respondents about many things or questions at one time (Neuman, 2006:222). In addition, a survey design was deemed relevant for this study because the researcher was interested in collecting original data for describing a population too large to observe directly (Babbie, 2010). A survey had its own weaknesses such as being inflexible, use of standardised questionnaire with all

respondents that may result in missing what was appropriate to many respondents (Babbie, 2010). Although survey provides an effective method to examine the products of social activities, they are not the ideal method to use to examine the activities themselves (Bailey, 1994:288). Additionally, (Ondari-Okemwa, 2006:144) criticises survey design for considerable dependency on a respondent's understanding of the situation as well as possible subjective bias that both the investigator and respondent might introduce. According to Ondari-Okemwa (2006:143) "these problems are encountered in most social science research methods and the best means of resolving them are to be fully aware of their existence and to offset the adverse effects. Respondents should, further be encouraged to fully participate and identify themselves with the value of the research project".

The researcher integrated research methods. Although, collecting data through two or more methods means more data to collect and analyse, resulting in more time, financial resources, effort and technical expertise (Kumar, 2014: 29), in this study data instruments were triangulated. The researcher mostly used a questionnaire with little employment of interviews and observation. The reason for using more than one type of instrument is that both instruments have different advantages. Therefore their concurrent usage complemented each other. The advantage of using a questionnaire in this study was that it was made to be self-explanatory, so that it could be completed in privacy, at their convenient time and without supervision, thus ensuring anonymity. Questionnaires saved time as the researcher was able to collect data from many respondents within a very short space of time as compared to interviews which are performed sequentially. Questionnaire collected mainly quantitative data. The weaknesses of the questionnaire were closed by interviews which were held with

managers. Interviews yielded more qualitative data. The advantages of the interviews were that “the researcher could observe the surroundings, use non-verbal communication and could probe. The main weaknesses of the face-to-face interviews were interviewer bias and besides, the appearance, tone of voice and wording of questions at times influenced the answers” (Dewah, 2012). Nonetheless, the interviews complemented and supplemented the quantitative data that were gathered using the questionnaire. Qualitative data was further collected through observations. Observations enabled the researcher to systematically and selectively watch and listen to an interaction or phenomenon as it took place (Kumar, 2014:173). Essentially, triangulating instruments yielded an in-depth analysis of knowledge sharing at Limpopo municipalities. Research methodology was chosen in line with research paradigm which is further discussed in section 4.2.

4.2. Research paradigm

Research paradigm is a comprehensive belief system, world view, or framework that guides research and practice in a field of study (Willis, 2007: 8). Research paradigm is an important part of research methodology in order to collect data in effective and appropriate manner. According to Johnson and Christensen (2004), research paradigm is a perspective that is based on the set of shared assumptions, values, concepts and practices. Research paradigm is a combination of two ideas that are related to the nature of world and the function of researcher. Johnson and Christensen (2004), explains the purpose of research paradigm as to help the researcher to conduct the study in an effective manner. The dominant research paradigms that surround research are positivism, interpretivism and the critical paradigm (Bertman & Christensen, 2014:22).

4.2.1. *Positivism paradigm*

Positivism is an epistemological position which asserts that knowledge of a social phenomenon is based on what can be observed and recorded rather than subjective understandings (Mathews & Ross, 2010:478). This 'scientific' research paradigm strives to investigate, confirm and predict law-like patterns of behaviour, and is commonly used in research to test theories or hypotheses. Positivists see the world as having one reality of which we are all a part (Quinlan, 2011:13). Within the positivist paradigm, researchers believe that there is an external reality and there are patterns and sense of order in the world that can be discovered.

Positivists believe that the world exists "out there" and thus the relationship between things can be measured. Evidence is collected through observations or experiments. Positivist researchers aim to avoid being biased by not allowing their own values and beliefs to interfere with the research (Bertman & Christensen, 2014:23). Generally its focus is on the objectivity of the research process. The positivist researchers generally work in large sample sizes which they consider more likely to produce generalisable facts and they make use of the experimental method which uses a pretest and posttest in order to establish the impact of particular intervention such as knowledge management practices in Limpopo municipalities (Bertman & Christensen, 2014). Positivists follow the quantitative methodology that involves survey, longitudinal, cross-sectional, experimental methods (Neville, 2007). Strengths of positivism lies with the fact that theory can be generalised at a larger degree, with which the data for the same issue with different social context can be collected. "Can generalise a research finding when it has been replicated on many different populations and subpopulations; useful for obtaining data that allow quantitative predictions to be made", (Johnson &

Onwuegbuzie, 2004). Another strength is that quantitative data paves a way to further scientific research. “Quantitative data provides objective information that researchers can use to make scientific assumptions” (Johnson, 2014). The precision of the parsimony helps making it useful for studying large number of people, therefore saves time (Cohen *et al.*, 2007). There are some grains of weakness found in empiricism and objectivity, that empiricism and objectivity are not suitable in social phenomenon which tests human behavior; excessive confidence in its claims to objectivity and empiricism do not stand up to scrutiny when used in both the social and natural sciences and thus it cannot be truly considered to work” (Houghton, 2011). “Empiricism is the theory that the origin of all knowledge is sense experience. It emphasizes the role of experience and evidence, especially sensory perception, in the formation of ideas, and argues that the only knowledge humans can have is based on experience” (Mastin, 2008). Its further weakness is that “it fails to take account of our unique ability to interpret our experiences and represent them to others” (Cohen *et al.*, 2007:18). Lastly, Johnson (2014) laments that inaccuracy in scientific data is likely to alter the research results because the participants may choose random answers not providing with the authentic responses and the researcher has to abide by the findings anyhow.

4.2.2. *Interpretivist paradigm*

Interpretivism is an epistemological position that prioritises participants’ subjective interpretations and understandings of social phenomena and their own actions (Mathews & Ross, 2010:476). As stated by Quinlan(2011:13) “the interpretivists hold that reality is unique to each individual and to the manner in which individuals, given their own unique set of circumstances and life experiences, constructs, experiences and/or interprets their world.” For the interpretivists, the purpose of social research is to

understand the meaning which informs human behaviour. They hold the belief that there is not a single reality or truth about the social world but rather a set of realities or truths which are historical, local, specific and non-generalisable (Guba & Lincoln, 1994). There are many possible interpretations of events and situations. Thus, it is recognised that research results are not “out there” waiting to be found or discovered by the researcher, but they are created through interpretation of data (Guba & Lincoln, 1994). In this regard, researchers make interpretations with the purpose of understanding human agency, behaviour, attitudes, beliefs and perceptions. This influences the methods that they choose. It makes sense that meaning can only be understood in the interaction between researcher and respondents. Thus understanding that the relationship between the researcher and the respondents would be subjective.

Qualitative research is conducted within an interpretivist paradigm framework. Within the interpretivist paradigm any method would be considered acceptable, even quantitative procedures (Willis, 2007). The difference between them and the positivists is essentially in the way they analyse results from the research; whatever method has been used, they start from the assumption that the results are always subjective and cannot be used to describe a uniform and standard reality (Willis, 2007). One of the limitations to interpretive research is that it abandons the scientific procedures of verification and therefore results cannot be generalised to other situations. Another criticism of interpretivism is that the ontological assumption is subjective rather than objective. The strongest criticism of interpretivism is that it neglected to acknowledge the political and ideological influences on knowledge and social reality (Mack, 2010).

4.2.3. *The critical paradigm*

The critical paradigm sees reality as shaped by social, political, cultural, economic, and other dynamics. Thus what people claim to know about the world is always subjective, influenced by own place in society and values. Researchers do not believe that it is possible to be an objective outsider and collect “objective” or “neutral” knowledge. No researcher can be neutral or impartial because everyone has a particular position in society (Usher, 1996:23). Thus, researchers recognise that their own starting point is informed by their values. Research in this paradigm focuses on bringing about some kind of social change that will benefit those groups who are understood to have little power, or fewer opportunities or choices open to them. Crucial to this perspective is an understanding of the ways in which power works in society. Researchers subscribing to this paradigm believe that the world is characterised by unequal power relations. This leads to certain group of people holding power and others being oppressed. The way in which people understand the world is informed by values and positions people hold in society. Thus, people always see things differently and subjectively, meaning neutral or objective position is not possible. Researchers aim at unpacking the structural, historical and political aspects of reality in order to arrive at change of an emancipatory nature research (Bertman & Christensen, 2014:28). In line with this assertion, it may praise the paradigm for its role in maintaining social justice in society.

Critical theory is criticised for its elitism. By assuming that everyone needs to be emancipated, critical theorists assume that they have been emancipated and therefore are better equipped to analyse society and transform it than someone else (Mack, 2010). Furthermore, there is a lack of evidence that illustrates what happens when you become emancipated and gain a critical consciousness. Moreover, this paradigm is being

criticised critical for its deliberate political agenda and failure to remain an objective neutral researcher (Mack, 2010).

4.3. Rationale for choice of research paradigm for this study

It has been observed that no single research methodology is intrinsically better than any other methodology (Benbasat, *et al.*, 1987). As some authors (e.g. Kaplan & Duchon, 1988) are calling for a combination of research methods in order to improve the quality of research. Similarly, some have tended to adopt a certain "house style" methodology (Galliers, 1992). Conforming to a particular methodology potentially compromises a methodology best suited to answer research questions (Pervan, 1994). The researcher has tried to avoid the insistence on using a single research method because the researcher believes that all methods are valuable if used appropriately. Clarke, (2000) concurs that research can include elements of both the positivist and interpretivist approaches, if managed carefully. The concern is that this research should be both relevant to research questions, as set out in chapter one (C.f 1.20) and rigorous in its operationalisation. Therefore an interpretivist approach is required for this purpose, i.e. the understanding of how knowledge is managed and how employees use of information and communication technology as an enabler of knowledge management. This research is about knowledge management, a young discipline that was not officially recognised or known in some of the studied municipalities. This required the researcher to play a part in introducing the concept knowledge management to municipal employees. Furthermore, the researcher took part by making some recommendations on how knowledge sharing may be used for improvement of service delivery in Limpopo municipalities. Practically, to do all these things without being involved would be impossible. However, recognising the lack of objectivity sometimes associated with

interpretivist research methods, the researcher adopted a positivist, quantitative approach to the development of our key research instrument (Clarke, 2000). This approach yielded an objective information that researchers can use to make scientific assumptions about knowledge sharing in Limpopo municipalities (Johnson, 2014).

The positivist approach was used on the basis that it is used by many researchers in service quality (Schembri & Sandberg, 2002). Therefore, it was found to be relevant because the current study is on improvement of service delivery in Limpopo municipalities. The positivist approach was successfully used to study the role of *knowledge management in enhancing organisational performance in selected banks of South Africa* (Chigada, 2014). Most importantly, the researcher followed a positivist approach because the positivist tradition has taken a firm hold (Dickson & DeSanctis, 1990). Hence Orlikowski and Baroudi (1991) noted that 96.8% of research in the leading US information science journals conform to this paradigm. Pellissier (2008:15) posits that the research strategies generally fall within a continuum of positivist, which is quantitative, scientific experiment, and a traditional approach, which views reality as a concrete structure. Pervan (1994), in a review of 122 articles in the social science literature, observed that only 4 (3.27%) could be described as interpretivist. In sum, combination of research approaches yielded a rich data and provided a direction for this study.

4.4. Research approach

There are several research methods or approaches that are applied in conducting the scientific research. Research method is a technique for gathering data and uses instruments such as a questionnaire, interview and observation and can be used with

any research design (Becker & Bryman, 2004:186). A research method can either be quantitative or qualitative. The differences between the two lie in the nature of the data collected and method of analysis (Remler & Van Ryzin, 2011). Each method has its own strengths and weaknesses and should be seen as an option not competing with the other (Terre Blanche, *et al.*, 2006). The choice between the two methods depend on the nature of the study and the type of data required.

4.4.1. *Quantitative and Qualitative research methods*

The researcher used an integrated approach comprising both quantitative and qualitative data collection methods. However a quantitative paradigm was the dominant data collection strategy with a small component of the overall study being drawn from the qualitative paradigm. The rationale underpinning an integrated approach in this study was primarily based upon the following advantages stated by (Kumar, 2014: 28):

- Enhancement of research possibilities in situations that a researcher has multiple objectives to achieve in a research study and if not all the objectives lend themselves to be explored with one method, the use of this method offered a way to find answers to all research questions. For instance the first and second objectives of this study have two dimensions “nature” and “extent” of knowledge management programmes. “Nature” can be explored well through qualitative methods, whereas “extent” may be explored through quantitative methods.
- The use of integrated approach enriched data for this study. The researcher collected quantitative data through questionnaires and supplemented it with another set of data, i.e. qualitative data which was collected through interviews, observations and document analysis. The aim was to primarily look at the issues from a different perspective. In this study, the weaknesses of the quantitative

paradigm were found in the strengths of the qualitative paradigm and vice versa (Stangor, 2011).

4.4.1.1. Quantitative research

Quantitative research is descriptive research that uses more formal measures of beliefs, attitudes, intentions, behaviour, including questionnaires and systematic observation of behaviour that is subjected to statistical analysis (Stangor, 2011:15). Quantitative approach is one in which the researcher primarily uses positivist claims for developing knowledge(i.e.,cause and effect thinking, reduction to specific variables and hypotheses and questions, use of instrument and observation, the test of theories),employs strategies of inquiry such as experiments and surveys and collects data on predetermined instruments that yield statistical data(Creswell,2009). According to Creswell (2014:4) quantitative approach is used for testing objective theories by examining the relationship among variables. These variables in turn can be measured typically on instruments so that numbered data can be analysed using statistical procedures. In this study, quantitative research method measured the situation based on statistical information such as how many people supported or did not support certain issues or statements and interpret the results (Fidel, 2008). Moreover, quantitative method facilitated the measurement of knowledge sharing and effects of organisational culture and information communication technology on knowledge sharing. Furthermore, the use of this method in this study placed emphasis on quantification in the collection and analysis of data which was expressed in numbers, percentages, and tables (Babbie, 2010: 35). Research methods in a quantitative study include experiments, surveys, content analysis and existing statistics (Neuman, 2011:22). As such, the method

enabled the researcher to summarise quantities of data by using charts and numbers such as values and percentages.

The major attraction of the quantitative design is that it is the oldest type of research approach that can describe, predict and explain a research phenomenon (Locke, *et al.*, 1998:124). The strengths of quantitative data analysis lies in its ability to arrange large amounts of confusing data in graphical form or numerical summaries, thus satisfactorily answering research questions posed (Ngulube, 2009). The disadvantages of this method is that, there is little room for flexibility in quantitative studies because of the prescribed procedures researchers have to follow. Moreover, Remler and Van Ryzin (2011:16) identify that quantitative studies are able to reveal the relationship that exists between two variables but do not contribute much to our understanding of what is responsible for the relationship as qualitative research methods do.

4.4.1.2. Qualitative research

According to Morse and Richards (2002), evidence of opportunities, experiences, beliefs, challenges can be easily missed when only quantitative methods are used. Hence the use of qualitative research was imperative to complement the quantitative method. Stangor (2011:15) defines qualitative research as descriptive research that is focused on observing and describing events as they occur, with the goal of capturing all of the richness of the everyday behaviour. According to Maree (2012:14) qualitative research is a method designed to scientifically explain events by using words and phrases and does not depend on numerical data to make conclusions. Qualitative research aims to explore sociological elements and describe reality as experienced by the respondents. This means that qualitative researchers are interested in

understanding the meaning people have constructed, that is, how people make sense of their world and the experiences they have in the world (Merriam, 2009:13). Qualitative researchers study things in their natural settings, attempting to make sense of or interpret, phenomena in terms of the meanings people bring to them (Creswell & Miller, 1997). In quantitative research the questionnaire is the main data collection tool, whereas in qualitative research interviews, document analysis and observation are the main data collection tools (Chigada, 2014:93). The data forming the basis of qualitative research include field notes, audio or video recordings (Stangor, 2011:15) and is presented in narrative form which tries to capture the flavour of the natural setting (Ngulube, 2009). Qualitative research involves the use of qualitative data such as in-depth interviews, document and participant observation, and ethnography to understand and explain social and cultural phenomena (Ngulube, 2009). In this study, the researcher used some qualitative techniques such as interviews, observations and document analysis to gather qualitative data.

Qualitative research offers a number of advantages. It is unstructured and this offers flexibility to the researcher to probe respondents when a new and interesting issue comes up (Leedy and Ormrod, 2010:95). As indicated by Fidel (2008:265); qualitative research method explores information in a form of quality such as explanations, descriptions and narratives. Therefore, qualitative research method afforded respondents in this study an opportunity to give their views by describing and explaining the situation as they understand. Qualitative data helped the researcher determine the experiences and perceptions of employees and managers regarding knowledge sharing in their municipalities. Qualitative research is of specific relevance to the study of social relations (Flick, 2006:11). In this case, the study specifically focused on knowledge

sharing in municipalities. There are some disadvantages of qualitative method. It is more subjective because it does not employ statistical analysis and may not fully maintain the neutrality of the researcher from the research process (Stangor, 2011). Other disadvantages are that qualitative data gathering techniques such as in-depth interviews, observations and content analysis are time consuming and associated with researcher bias. Therefore, the quantitative technique of using questionnaires catered for this weakness of the qualitative research technique (Dewah, 2012). The use of both methods in the study was to improve the reliability and validity of the data collected and this culminated in the collection of a rich set of data (triangulation).

4.5. The triangulation method

The concept triangulation means examining the research issue or phenomenon from more than one perspective. Triangulation is the use of two or more instruments to collect data on a phenomenon under study (Stangor, 2011). Triangulation is typically perceived to be a strategy for improving the validity of research or evaluation of findings (Hussein, 2009:8). There are four types of triangulation namely; data triangulation, investigator triangulation, theory triangulation and methodological triangulation. Hussein (2009:2) explains these types of triangulation as follows: Data triangulation refers to using several data sources for validation purposes, for instance, including more than one individual as a source of data. Investigator triangulation is described as the use of more than two observers in any of the research stages in the same study. It involves the use of multiple observers, interviewers, or data analysts in the same study for confirmation purposes. Theoretical triangulation is defined as the use of multiple theories in the same study for the purpose of supporting or contesting findings since different theories help

researchers to see the problem at hand using multiple lenses. Methodological triangulation refers to the use of multiple methods in the examination of a subject under study.

In triangulating this study, the researcher engaged triangulation of measures, theory and methods in order to obtain quality data and valid results. Thorough combination of methods, the research achieved the best of each while overcoming their unique deficiencies (Hussein, 2009). As stated by Marty (2008:25) using different methods to investigate a certain practice permitted the researcher to understand the subject under spotlight from different viewpoints, providing complementary information. The researcher used interviews, questionnaires, observations and study of institutional documents. This study used a quantitative survey questionnaire and followed up with an interview to gather data that was analysed statistically. The researcher obtained quantitative data through questionnaires while qualitative data were obtained through observations and interviews with managers. Hussein (2009:9) explained that the use of several methods may result in inconsistent and contradictory data. However, obtaining inconsistent and or contradicting results should not be perceived as a weakness or a drawback because inconsistent and contradictory findings assist researchers to understand the subjects under study (Marty, 2008:32). Therefore the researcher embraced triangulation, the idea that looking at something from multiple points of view to improve accuracy (Stangor, 2011) and strengthening confidence in research findings.

4.6. Survey research

Survey research involves acquiring information about one or more groups of people about their characteristics, opinions, attitudes or previous experiences by asking them

questions and tabulating their answers(Leedy & Ormrod 2010:186). This research project used a survey research design to gather data necessary to answer the research questions as well as to meet the research objectives. Surveys are mostly used to capture the thoughts of a large population and collect descriptive information(Stangor,2011: 6.107) and it is the best method to the social researcher who is collecting original data (Barbie, 2010). Survey research seems to be the most common in the field of Library & Information Science and it is the best study design as it uses more than one research method (Kemoni & Ngulube, 2007:125). Survey research is perhaps the most frequently used research design in social sciences. The researcher found it suitable to employ the survey method in this study as surveys are chiefly used in studies that have individual people as the unit of analysis (Barbie, 2010:254). The main aim of a survey is to produce a picture of the opinions, attitudes and behaviours of a group of people at a given time (Stangor, 2011:107).

As pointed out by Aldridge and Levine (2001) surveys employ a variety of methods such as questionnaires, face to face interviews and observation to gather information. In line with this statement, the researcher used a strategy called triangulation (C.f 4.6). Therefore, survey methodology provided an important advantage of enabling the use of both quantitative and qualitative methods of data collection (Aldridge & Levine 2001). Triangulation method enabled the researcher to corroborate data obtained through three different instruments, giving a more holistic understanding of knowledge management practices in Limpopo municipalities. Other considerations were that surveys are efficient and economical as far as the time spent and costs. This was an important advantage for the current researcher, as the study was conducted with limited budget. Aldridge and Levine (2001) concur that surveys are capable of obtaining

comparable information from large samples of a population, over a short period of time. Surveys are able to extract data that are near to the exact attributes of the larger population. The fact that questions in the survey should undergo careful inspection and standardisation, they provide uniform definitions to all the subjects who answer the questionnaires. Thus, there is a greater accuracy in terms of measuring the data gathered.

As with all research methodologies, survey research strategy has some disadvantages. The use of this method required the researcher to have some statistical knowledge, to process and interpret results (The Health Communications Unit, 1999). The researcher attended SPSS workshops to augment his quantitative analysis skills. Again it has been said that the data collected through surveys may be superficial (Edwards & Talbot, 1994:37). Data errors due to question non-responses may exist. The number of respondents who choose to respond to a survey question may be different from those who chose not to respond, thus creating bias. To overcome this shortcoming, the researcher visited municipal employees at their work place where they render service delivery.

4.7. Research design

Bless, Higson-Smith and Kagee (2006:71) describe research design as “the specification of the most adequate operations” conducted with the aim of testing a particular hypothesis under the study or to answer the research questions. According to Hernon and Schwartz (2009:1) research design covers the population or sample studied, design type whether exploratory or correlational or experimental or descriptive, data collection duration and reliability and validity of threats. The research design

provides the reader with the information: the strategy used, conceptual framework, study population and subject, as well as the tools and procedure adopted for data collection and analysis (Punch, 2014:114).

This study employed the descriptive survey research design. A descriptive survey research design aim at describing how certain variables are related, without providing explanations for the relationship, and they describe the frequency or possible determinants of a condition (Bordens & Abbott, 2011:43). Therefore the researcher used the said research design to answer questions about the current state of affairs, describing the thoughts, feelings, and behavior of individuals (Stangor 2011:14). The success of previous studies (Sandhu, *et al.*, 2011) that used the descriptive survey research design influenced this study to adopt the method. The selected research design assisted the researcher to answer the research questions. This approach was appropriate for this study because it enabled the researcher to ask respondents about many questions at one time (Neuman, 2006:222).

The present descriptive survey research design enabled the researcher to collect original data for describing a population too large to observe directly (Babbie, 2010). This method provided the researcher with scientific methods for analysing and examining the source materials, by analysing and interpreting data, and by arriving at generalisation and prediction (Salaria, 2012). In descriptive survey, researchers rely on self-report data. Therefore, respondents tell researchers what they believe to be true or, perhaps what they think researchers want to hear. Some respondents may intentionally misinterpret facts in order to present a favourable impression to the researcher (Leedy & Ormrod, 2010:188). This was particularly difficult during interviews. Respondents may

also refuse to provide answers to questions they view to be too personal or difficult. Therefore, privacy and confidentiality are the primary weaknesses of descriptive research. Furthermore, the idea that someone is watching can turn an observation into an event where people are acting how they perceive they should act. An additional consideration in descriptive research survey is the possibility for error and subjectivity (Leedy & Ormrod, 2010). To overcome a research bias, the researcher was conscious of his influence on the outcome of the research.

Research designs are characterised as either cross-sectional or longitudinal. According to Babbie (2007:98) cross-sectional studies involve either observations or a single sample or phenomenon or a single examination of a cross-section of population at one point in time; while longitudinal studies observations of the same phenomenon are repeated in the same population over an extended period of time (Babbie, 2007:99). This study adopted a cross-sectional approach. "The advantage of conducting a cross-sectional study was that it was easier for the researcher to collect all the needed data at a single time. Another advantages, was that people from several different age groups were sampled and compared" (Leedy & Ormrod, 2010:186). Hence survey was cross-sectional study, data on all variables was only collected once and all factors or variables were measured simultaneously. Cross sectional design has its own share of disadvantages. For one thing, the different age groups sampled may have been raised under different environmental conditions. Second disadvantage, a cross-sectional design as observed by Leedy and Ormrod (2010:186) is that the researcher cannot compute correlations between characteristics at different age levels. However, advantages of this method outweigh the disadvantages of, hence the researcher employed the method.

4.8. Population of the study

A population is the entire group of people that the researcher desires to learn about (Stangor, 2011:110). The population of this study was employees of local municipalities in Limpopo Province of South Africa. The population was selected with great care bearing in mind the selection criteria, the desired size and the parameters of the survey (Powell 1997:66). The research population for this study was 2189 employees from seven municipalities (Aganang, Blouberg, Fetakgomo, Greater Letaba, Greater Tzaneen, Lepelle-Nkumpi, and Thulamela). These seven municipalities were included in the study because they permitted the researcher to conduct research. District municipalities were excluded as they do not provide direct municipal services to the citizens. Table 3.1 provides a summary of the population and sampling thereof. Given that, knowledge flows in every section of the municipality, the study target population was all municipal employees working in different sections. In particular the sections were:

- Administration
- Finance
- Information technology
- Maintenance
- Library and information services
- Marketing and communication
- Supply Chain Management
- Legal services
- Technical services
- Transport

The criterion for their selection was based on their role as knowledge creators, custodians, users and key informants. However, it was impossible for the researcher to involve all employees from these units. This is supported by Punch, (2005: 101) who says that no study can involve everything or everyone. Therefore a sample was drawn from the population. The procedure of selecting a sample is called sampling method or technique. Subsequent sections present sampling, sample frame, sample size and techniques that were relevant in the selection of appropriate sample for the study.

4.9. Sampling frame

Drawing a probability sample requires that the researcher first obtains a complete sample frame for all the people in the population of interest (Stangor, 2011). A sampling frame provides a detailed foundation where the research sample can be drawn (Johnson & Christenson, 2004). In this way, a sampling frame is a list of units of analysis, from which a researcher takes a sample and to which a researcher generalises the findings. The researcher obtained a staff establishment, i.e. sampling frame from Human Resource division from each local municipality. The staff establishment lists all employees of an institution, according to their units and position/level or designation. The staff establishment was used to stratify and randomly select respondents in different levels to participate in this study (Powell & Connaway, 2004: 100). The sampled participants served as representatives of the whole population (Welman & Kruger, 2001:47-48).

4.10. Sampling procedures

For practical and cost reasons, it was not possible to collect information about the entire population in which the researcher was interested. Therefore, a subset or sample of the population was selected for study in its place. A sample is a selection of individuals drawn from the target population which is intended to reflect this population's characteristics in all significant respects (Brewerton &, Millward, 2001:114). Generally, sampling procedures are categorised into probability and non-probability samples. The methods that fall under probability sampling methods include simple random sampling, systematic sampling, stratified random sampling and cluster sampling; while those falling under non-probability sampling include: convenience sampling; quota sampling; snowball sampling and purposive sampling (Leedy & Ormrod, 2005). Probability sampling aims at drawing a representative sample from the population so that the results of studying the sample can be generalised back to the population. In non-probability sampling the likelihood of each research participant being selected is not known. Therefore, some members of the population have little or no chance of being sampled Leedy and Ormrod (2005), implying that the sample may not be representative. The population of this study was sampled through the probability sampling method known as stratified random sampling. Dane, (2011) defines stratified random sampling as a method of sampling that involves the division of a population into smaller groups known as strata. To achieve this, the researcher ordered the sampling frame into non-overlapping groups according to their districts, municipality, rank and field of work (Dane, 2011: 86). The researcher then applied stratified random sampling within the grouped population for each institution (Burton *et al.*, 2005:104). Stratified random sampling was preferable because it was more likely to produce representative sample

and also enable estimates of the sample's accuracy to be made (Brewerton &, Millward 2001:115). Additionally, using a stratified random sampling permitted the researcher to achieve greater precision because the strata have been chosen in order to ensure that members of the same stratum were as similar as possible in terms of the characteristic of interest (Crossman, 2016). A drawback of using stratified random sampling was that it was more complex to organise and analyse the results compared to simple random sampling (Crossman, 2016). Through assistance of experts and training received, the researcher was able to overcome this shortcoming.

Twenty one managers (three from each municipality) were purposively selected to participate in the interviews. In purposive sampling, the researcher chooses a sample based on who they think would be appropriate for the study (Chaturvedi, 2009). Wamundila (2008:25) describes purposive sampling as a non-probability sampling technique in which the researcher purposively identifies respondents as source of data. According to Leedy and Ormond (2010) cases included in the sample are chosen for a particular purpose which is directly linked to the study or they are chosen and included because they represent diverse perspectives on an issue. Therefore, when employing purposive sampling, the researcher identifies and targets individuals whom they believe to be typical of the population being studied, and who fall in categories of interest to the researcher (Davies, 2007). In line with this, managers from the following sections were purposively selected:

- Records and information management
- Municipal Manager's office
- Information technology

These were selected from the already-delineated sample perceived by the researcher to be key individuals who would give invaluable insight and more detailed answers to the research questions. The selection was also based on the fact that records and information management managers are responsible for management of records and knowledge while managers in the Municipal Manager's office hold an influence as top management. Managers responsible for information technology were selected because information and communication technology is an important enabler of knowledge sharing. Owing to the fact that sampling depends on the researcher's knowledge about the participants in question (Kumar, 2014) and on the basis of knowledge of a population or its elements (Babbie, 2007: 184); subjectivity and biasness are major drawbacks of using purposive sampling. However, the researcher has carefully selected the relevant cases or respondents for the interviews with serious consideration.

4.11. Specific sample size

The issue of sample size has been debatable amongst the research methodologists. According to Ngulube (2005:130), there are no rules for a sample size. Cooper and Schindler (2008: 385) recommend a larger sample as better because of a lower random sampling error. According to Hair *et al.* (1995) the sample size should be 100 or larger in order to be an effective sample to generalise the findings. Hair *et al.* (1995) suggest a minimum sample size of 50, but preferably a 100 to maintain the statistical power of multiple regression results. For Ngulube (2005:134) a minimum of 10% of the sample, especially for a large population, is good to draw a valid and reliable data. Table 4.1, provides details of the sample sizes per district and name of the municipality.

Table 4.1: Sample size of municipalities. (N=438)

District	Name of Municipality	Total population	Sample
Capricorn	Aganang	105	21
	Blouberg	207	41
	Lepelle-Nkumpi	236	48
Mopani	Greater Letaba	215	43
	Greater Tzaneen	690	138
Sekhukhune	Fetakgomo	86	17
Vhembe	Thulamela	650	130
Total		2189	438

4.12. Data collection instruments

Data gathering techniques for the current study included structured observations, questionnaires and structured interviews. This means that both qualitative and quantitative methods of data gathering techniques were employed. Quantitative data, which entails information on statistical details on how many people supported or did not support certain issues or statements was collected using questionnaires and observation schedules. On the other hand, qualitative data which entails explaining the understanding and interest of the population was gained through observation, interviews and reading documentations.

4.12.1. Questionnaires

Kumar (2014:178) defines a questionnaire as a written list of questions, the answers to which are recorded by respondents. Thus, the respondents read the questions, interpret what is expected and then write down the answers. The questionnaires were self-administered and they were mainly used to collect quantitative data.

4.12.1.1. *Advantages of a questionnaire*

In this study, the use of questionnaire had the following advantages as stated by (Kumar, 2014:178):

- It is less expensive. As the researcher did not have to interview the respondents face-to-face, he saved time, human and financial resources. The use of questionnaires, therefore, is comparatively convenient and inexpensive especially when it is administered collectively to a study population.
- It offered greater anonymity. As there are no face to face interaction between respondents and the interviewer because respondents completed questionnaires without the presence of the researcher.
- The responses were gathered in a standardised way, so questionnaires were more objective, certainly more so than face-to-face interviews.
- Generally, it was relatively quick to collect information using a questionnaire.
- Much information was collected from a large portion of a group (Kumar, 2014:178).

4.12.1.2. *Disadvantages of a questionnaire*

The use of the questionnaire was not without limitations. Some of the disadvantages encountered in this study are stated by (Kumar, 2014:178) as follows:

- Self-selecting bias. Since not everyone received a questionnaire, completed and returned it, possibilities are that there was a self-selecting bias. Those who returned their completed questionnaires might have attitudes, attributes or motivations that are different from those who do not.
- Questionnaires were costly in terms of materials to be used, such printing (Bless, *et al.*, 2006).

- The response to a question may be influenced by the response to other questions. As respondents could read all the questions before answering, the way they answered a particular question might be affected by their knowledge of other questions.

4.12.1.3 Questionnaire design and layout

As advised by Kumar (2014:178) the layout of the questionnaire was easy to read and pleasant to the eyes and the sequence of the questions was easy to follow. According to Babbie (2010:262) a questionnaire should be spread out and uncluttered, therefore the researcher designed an attractive professional questionnaire that had boxes adequately spaced apart to persuade and encourage the respondent to complete it. The questions were clear and easy to understand because each question was preceded by clear, basic instruction to help the respondents understand and complete the questionnaire without problems (Babbie, 2010:266). As a results, the study achieved 68% response rate.

The questionnaire for this present study contained pre-developed closed-ended items and a rating scale with pre-determined response options. The questionnaire also contained few open ended questions. The rationale for using both closed ended and open ended questions was in line with Neuman (2006)'s argument that a total reliance on closed questions can distort results. By mixing closed and open ended questions, the researcher was able to obtain both quantitative and qualitative data. Moreover, the researcher was able to close the disadvantages of closed questions with the advantages of the open ended questions and vice versa.

The questionnaire comprised five sections. Section A covered respondents' Profile, Section B: Organisational Structure, section C: Knowledge management programmes, section D: Knowledge sharing and municipal governance and lastly section F covered: recommendations.

According to De Vos, *et al.* (2011), the covering letter is an integral part of the questionnaire. Taking from this notion, the researcher wrote a covering letter and attached it to the questionnaire (refer to Appendix 1). The covering letter outlined the nature of the study, that participation was voluntary and the value of the respondents' participation. This was followed by a consent letter form to be signed by those who agreed to participate in the study.

4.12.2. Interviews

An interview is a particular type of conversation between two or more people. Usually the interview is controlled by one person who asks questions (Matthews & Ross, 2010:219). The interview is essentially a qualitative data gathering technique that finds the interviewer directing the interaction and inquiry in a very structured or unstructured manner, depending on the purpose of the interview (Denzin & Lincoln, 1994:365). Interviews were carried out with managers of the selected municipalities to assess their opinions and perceptions about knowledge sharing in their municipalities. Interviews were used to supplement and validate the information obtained from the questionnaires. Some selected managers from the following sections were interviewed:

- Library and information services
- Human resource
- Municipal Manger's office

- Information technology

These managers were perceived by the researcher to be key individuals who would give invaluable insight and more detailed answers to the research questions. The kind of work they do has more to do with knowledge management. The researcher also used semi-structured interviews. All respondents received the same questions in the same order, delivered in a standardised manner. This was in line with Cooper and Schindler (2008) advice that in interviews, one should use a guiding structured questionnaire in order to ensure that participants are asked similar questions. In this kind of interview, flexibility and variation are minimised, while standardisation is maximised (Punch, 2014:146). The interview schedule was divided into four sections: Section A: Background Information, Section B: Section C: Knowledge management business processes and Section D: knowledge management systems. When deciding on an interview schedule, the researcher took into account the advantages of the interview schedule as pointed out by (Kumar, 2014:182).

4.12.2.1. *Advantages of interviews*

- Interviewing was useful for collecting more and in-depth information from the respondents, as there were no limited space like in the questionnaire or observation schedule.
- Information can be supplemented. As such the interviewer was able to supplement information obtained from responses with those gained from questionnaires and observation.
- Questions could be explained. It is less likely that a questions were misunderstood as the interviewer could either repeat a question or put it in a form that is understood by the respondent.

- The interaction between the interviewer and interviewee reduced the chance of participant planning about lying in their response.

4.12.2.2. Disadvantages of interviews

In this study, collecting data through the interviews the researcher encountered the following disadvantages:

- Time consuming and expensive. In this study researcher had to reschedule the interviews due to continuous unavailability of managers.
- Through facial expressions, the interviewer noticed that some respondents refrained from expressing their real opinions or views. In such instances, the researcher reassured respondents that the answers they provide will remain anonymous and confidential.
- The fact that the researcher did not use voice recorder, improper recording of answers and incomplete data was possible. The researcher asked respondents not to speak too fast in order to capture everything they were saying.

4.12.2.3 Recording interview data

The researcher considered recording as data collection technique in order to make the most accurate direct measurements (Schmuck, 1997). For more open ended interviews, the possibilities include tape recording, video and note taking. These various possibilities were assessed in relation to the practical constraints of the situation, the cooperation and approval of the respondents, and the type of interview selected. The researcher then decided to use note taking recording method. Although, interviewees were comfortable with this method, the researcher was at times struggling to keep up with some of the interviewees as they were speaking very fast. To close this

shortcoming the researcher had to ask the interviewees to slow down. The data was captured and transcribed by the researcher in order to ensure that everything was written as presented on the notes taken.

4.12.3. *Observation*

Observation refers to a purposeful, systematic and selective way of watching and listening to an interaction or phenomenon as it takes place (Kumar, 2014:173). Observation was integrated with the primary methods of data collection. This method was used to complement or confirm data obtained from the literature review, analysis of documents and interviews. The aim of observations was to gain a deeper and fuller understanding of the subject (Babbie, 2010), i.e. discovering patterns of flow of knowledge and gaining an understanding of the role of knowledge sharing in enhancing organisational performance in the selected municipalities. The observation were conducted at municipal offices. They took place between 09h00-16h00. Observations were lasting between 25 minutes to one hour. It was noticed that knowledge flow mostly in one way direction, i.e. from the supervisor to junior staff members in a form of instructions.

The researcher used non-participant observation which is when a researcher does not get involved in the activities of the group but remain a passive observer, watching and listening to its activities and drawing conclusions from this (Kumar, 2014:174). The researcher observed people using the libraries and going to the notice boards to catch up with the newest postings. The researcher further observed the knowledge behavior of the respondents while distributing the questionnaires and interviewing the respondents. The aim was to study knowledge management practices. All notice boards

were full of notices or messages from sectional heads and top management to general staff. Municipal websites were also accessed and studied. The researcher noticed that all municipalities used their websites to communicate with the public and that they had intranet which was access controlled. The researcher also observed that many of the municipalities have information resource centres even though some were not located in the same yard.

The researcher requested to make an observation of meetings and workshops/ training but in vain. The authorities argued that, meetings and workshops/ training were exclusively for staff members. Other reasons cited were that meetings discuss confidential matters, while one need to pay for attending trainings. The use of observation method had its own advantages and disadvantages. Some of those advantages and disadvantages are discussed below.

4.12.3.1. Advantages of non-participant observation

- “The observer was detached and unbiased during observations and as such the objectivity or neutrality was maintained.
- The method enabled the researcher to carefully judge the merits and demerits of each and every phenomenon or interaction under study.
- As non-participant observer the researcher always maintained his impartial status” (Choudhury, 2015).
- The method was useful in exploiting and observing knowledge management practices that respondents were not familiar with or not comfortable to discuss (Creswell, 2009).

4.12.3.2. *Disadvantages of non-participant observation*

- In non-participant observation the observer did not have an opportunity to clear his doubts by asking various questions to the group members. Therefore he had to simply understand and interpret what he sees and this might have made some of his findings biased (Choudhury, 2015).
- Observation seemed inadequate because the observer could observe only those interactions which took place in front of him (Choudhury, 2015).
- Employees appeared uncomfortable after realising that their behaviour was critically analysed by the researcher. As such their behavior might have changed (Choudhury, 2015).

4.12.3.3 *Recording observational data*

The general possibilities for recording observational data range from the use of video and audio visual equipment to the use of field notes (Punch, 2014:155). Based on the same principle used to select method of recording the interview, the researcher used narrative recording. The researcher made brief notes while observing the interaction and then soon after completing the observation, made a detailed notes in narrative form. In the narrative recording, the researcher was recording a description of the interaction and phenomenon in his own words, thus interpreting and drawing conclusions from the interactions. Essentially, the researcher recorded all the observations and then used the data to compile the research findings.

4.12.4. Documentary analysis

Document analysis is a social research method and is an important research tool in its own right and is an invaluable part of most schemes of triangulation (Yin, 2009:103). The use of documentary methods refers to the analysis of documents that contain

information about the phenomenon a researcher wishes to study (Bailey, 1994). Payne and Payne (2004) describe the documentary method as the techniques used to categorise, investigate, interpret and identify the limitations of physical sources, most commonly written documents whether in the private or public domain. In the event that a social scientist use documentary research methods, it is only to supplement information collected through social surveys and in-depth interviews, but seldom as the main or principal research method (Mogalakwe, 2006:222).

The researcher also used documentary analysis to supplement information collected through survey. Documentary analysis involves reading and interpreting lots of written material by the researcher to give voice and meaning around an assessment topic. These documents consist of published and unpublished/internal documents. Examples of such documents include minutes of meetings, board resolutions, training manuals, interdepartmental memos, reports; business documents; communications and presentations, to name but a few (Mogalakwe, 2006:223). List of documents that formed part of the sample include annual performance plans, strategic plans, business processes, reports, newsletters, circulars and notices. Websites and notice boards were also accessed and studied in addition to documentary analysis for this study.

4.13 Data collection procedures

There are standard data collection procedures that researchers follow to carry out investigations. The researcher followed the following procedures. First and foremost, the researcher applied for Ethical Clearance certificate from the University of Fort Hare. After getting the certificate the researcher went on to each municipality to apply for

approval to conduct research. Every Municipality that granted approval, provided the researcher with an official who was responsible for facilitating access to the respondents, coordinating the distribution and receipt of completed questionnaires from the respondents. This study used a combination of interviews, observations and questionnaires to collect data. This integration was adopted to cater for the weaknesses of one methodology over another. Different researchers, (Stangor, 2011; Babbie, 2010; Neuman, 2006) point out that the weaknesses of the quantitative paradigm are found in the strengths of the qualitative paradigm and vice versa. During the process of data collection, the following two general points as raised by Punch (2014:242) were borne in the researcher's mind: The researcher ensured that the respondents were approached professionally and within limits, fully informed about the purpose and context of the research, about confidentiality and anonymity and about what use would be made and by whom, of the information they provided. This kind of assurance made respondents cooperative and knew clearly what they were being asked to do. This resulted in improved quality of data. Second, the researcher was in control of the data collection procedure, rather than leave it to others. Thus, face-to-face administration was preferred.

The questionnaire was completed by both general employees while face-to-face interviews were conducted with managers from all the seven Limpopo municipalities. Observations lasting between 25 minutes to one hour were used during the five months period of gathering data at Limpopo municipalities. Face-to-face administration minimised the number of lost and misplaced questionnaires. However, there were some questionnaires that were collected some days and weeks after distribution as participants requested for more time. The researcher granted extension because he

wanted to achieve a high response rate and at the same time did not want to disturb their work performance. Arrangements were made with the personal assistants in Municipal managers' office to receive the completed questionnaires that were submitted late. Then the researcher liaised with these Personal Assistants for collection of the completed questionnaires. Thereafter, the researcher went on to hold face-to-face structured interviews with some selected heads of sections. Majority of managers did not feel comfortable with voice recorder. Managers came from the following three sections which were considered to have more influence and knowledge about knowledge management:

- Library and information management services
- Municipal Manger's office
- Information technology

These managers believed that, the use of voice recorder would compromise the anonymity principle, leading to some people recognising their voices. Therefore all the interviews were recorded manually on the note books for consistency purposes. On many occasions, managers were not available for the interviews, owing to the nature of their tight schedules of work. The interviews were postponed several times hence, the data were collected over a period of five months. During this period, the researcher kept in touch with the coordinators who were facilitating the process of returning the questionnaires and confirming the dates for rescheduled interviews.

4.14 Pilot Study

Survey research should always be subject to a pilot study before the main survey takes place (Litwin, 1995). A pre-test or pilot study is a small-scale trial of the data-collection instrument to determine clarity of questions and whether the instrument elicits the

desired information (Polit & Beck, 2006:296). The pilot study aims to check whether questions are relevant to all members of the particular sample, whether respondents understand all the questions, whether any questions are ambiguous, and whether any useful ideas arise to develop the survey instrument (Johns & Lee-Ross, 1998). Essentially, pretesting is conducted in order to identify possible weaknesses in the research instruments. The researcher used e-mail to distribute forty (five to each municipality) questionnaires to be completed by general staff.

A pilot study for the interviews was conducted telephonically with sixteen managers (two from each municipality). The selected sample share the same characteristics with the population of the study. Furthermore, the instruments were also given to two academic staff working in the field of Library and Information Science to participate as experts in order to solicit their inputs and guidance over the tools. A pilot study was conducted to check on a number of aspects so as to improve on the data collection instruments. According to Escalada (2009) aspects that a researcher need to check in a questionnaire to ensure the benefits of administering a pre-test include the following:

- Check the clarity of the instructions
- Improve the wording of the questionnaire if it is unclear or ambiguous.
- See whether there are any major omissions in the questionnaires.
- Check whether the layout is clear and attractive.
- Identify potential confounding variables that need control.
- Provide information on possible ethical problems previously overlooked.
- Estimate the time needed to conduct the interview.

The researcher therefore pre-tested the questionnaire taking into consideration the points mentioned above. The participants indicated that the response time for the

questionnaire was approximately 20 minutes. Through, the pilot study, it came out that there was a divergence of technical terms used by the researcher and participants. The researcher's "theoretical" language on knowledge sharing was not fully compatible with the language used by participants on daily basis in the Limpopo municipalities. They suggested correcting some spelling mistakes and some concepts to achieve a level of higher clarity in the context of municipalities. For example, participants suggested that "social software, knowledge brokers and knowledge mapping" were not clear and therefore be unpacked by providing some explanations in the brackets. The variances of this nature and other information obtained from the pilot study assisted the researcher to refine the questionnaire and the interview schedule (Neuman, 2006:312).

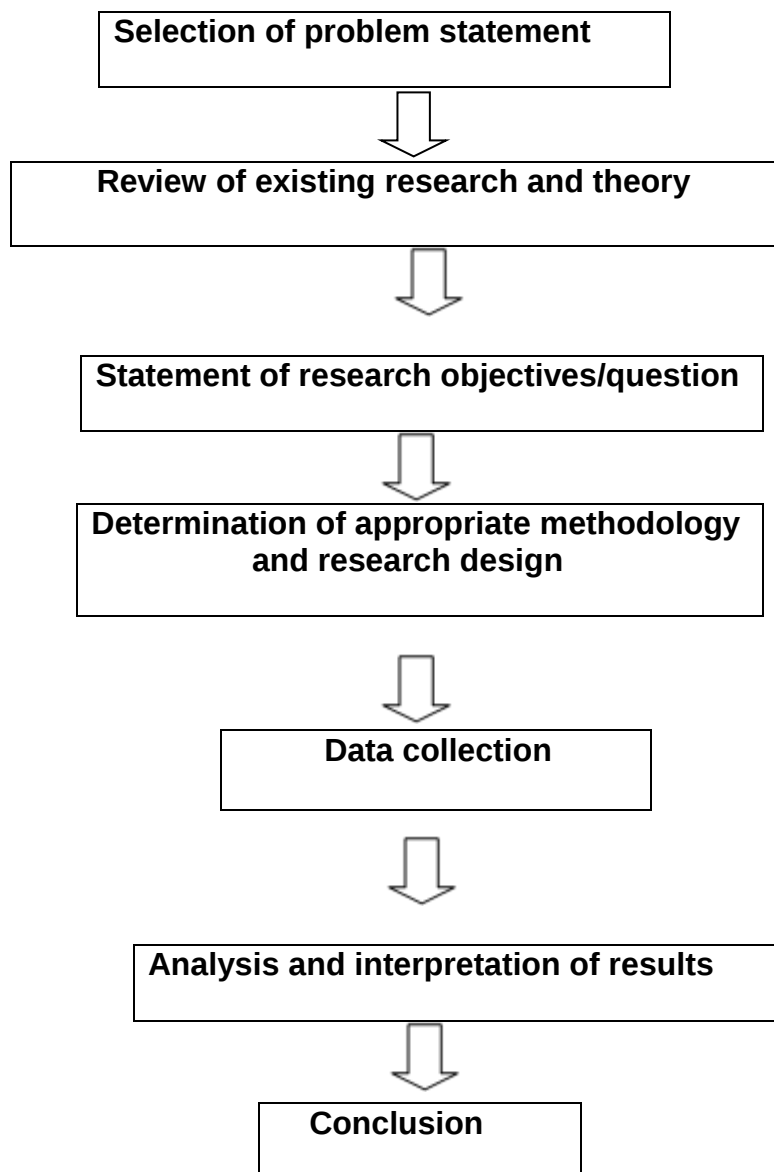
The richness and complexity that emerged from the pilot study afforded the researcher an opportunity to set clear boundaries for the unit of analysis in terms of size and focus. Hence, it was stated that the study initially focused on Records and Knowledge management units or divisions but ended up covering all the units or divisions of the municipality. The pilot study enabled the researcher to have a clearer picture of the requirements that the researcher would be looking for and a better understanding of the situation in municipalities. In essence, the outcome of the pilot study was used to revise questions to ensure that they were clear and unambiguous. The data collected during the pre-test did not form part of the study. In other words, pre-testing of instruments was done to determine their validity and reliability.

4.15 Executing the empirical study

For research to be of Ph.D. standard, all institutional regulations require it be 'original' and significant. Execution of empirical study denotes the originality of the study. Guetzkow and Lamont (2004) identified seven types of originality frequently used in social, human sciences research: original approach, understudied area, original topic, original theory, original method, original data and original results. Similarly, Francis (1976) in Phillips and Pugh (2005) argues that one can be original by setting down a major piece of new information and testing somebody's idea.

The researcher based the originality of the study by setting down a major piece of new information and testing of somebody's ideas, thus Nonaka and Takeuchi's (1995) organisational knowledge conversion theory. To the best knowledge of the researcher, this is the first study that investigated the role of *Knowledge sharing as a means of improving municipal governance in Limpopo municipalities*. Thus make this study original. To execute this empirical study the researcher followed the prescribed steps outlined by (Tayie, 2005:10). Such steps are shown in Figure. 4.1

Figure 4.1: Steps for conducting empirical study



4.16 Validity and reliability

Owing to the fact that questionnaire and interview instruments are supposed to provide accurate and repeatable measures of the research hypotheses, validity and reliability tests are used to establish the quality of any empirical social research (Yin, 2009).

4.16.1 *Validity*

The concept of validity is explained in terms of measurements procedures, which is the ability of an instrument to measure what it is designed to measure (Kumar, 2014: 213). Validity refers to the potential of a design or an instrument to achieve or measure what it is supposed to achieve or measure (Brynard, *et al.*, 2014: 50). The following types of validity measures were taken in to consideration in this study, namely face and content, concurrent validity and construct validity.

4.16.1.1 *Face validity*

Face validity is concerned with the way an instrument appears to the participants (Brynard, *et al.*, 2014: 50). For example, do they view it as so simple, boring or does it appear so difficult? In essence, face validity is based on the subjective judgment of the researcher and respondents. Face validity was maintained by designing a questionnaire pleasant to an eye and constructing only questions relevant to the study.

4.16.1.2 *Content validity*

Content validity refers to the correctness and appropriateness of the questions included in a questionnaire (Brynard, *et al.*, 2014: 50). On the other hand, content validity is judged on the basis of the extent to which statements or questions represent the issue they are supposed to measure as judged by the researcher, readership and experts in the field. The judgment that an instrument is capable of measuring what it is supposed to is primarily based upon the logical link between the research questions and objectives of the study (Kumar, 2014:213). This implies justification of each question in relation to the objectives of the study. The researcher, together with the supervisor closely examined the questions on the instruments to ensure that they measured the desired

variables. The correctness, relevance and lucidity of the questions were tested in a preliminary investigation. This helped the researcher to determine whether or not the questions included were relevant to the research problem.

4.16.1.3 *Construct validity*

Construct validity refers to the degree to which a measurement technique uncovers the information which it was designed to uncover (Brynard, *et al.*, 2014:50). To meet this criterion, the researcher ensured that questions in the questionnaire were specifically designed to largely obtain quantitative data, while questions on interview schedule were designed to largely obtain qualitative data through open and closed ended questions. The researcher standardised the data collection instruments by comparing and contrasting them with the relevant literature review.

4.16.2 *Reliability*

According to David and Sutton (2004:171) reliability is the degree to which the indicator or test is a consistent measure over time or simply, will the respondent give the same response if asked to give an answer at a different time. In simpler terms; reliability pertains to the accuracy and consistency of measures. This means that the same instrument must be able to produce the same data at a later stage under similar conditions, e.g. by means of a test-retest technique (Brynard, *et al.*, 2014:50). To ensure reliability, the researcher pre-tested the questionnaire and interview schedule on fellow colleagues and municipal employees who were not part of the sample. This was done to identify vague, unacceptable questions and consistency of results. The test appeared to be reliable because the respondents gave consistent answers with those in the pilot study.

4.17 Representativeness and Response Rate

4.17.1 Representativeness

Representativeness refers to how well the sample drawn for the questionnaire research compares with the population under study. The researcher ensured that the sample of respondents reflects elements of the population with breadth and depth by selecting a minimum of 10% of the population as advised by (Ngulube, 2005:134).

4.17.2 Response rate

A poor response rate can introduce uncertainty and bias in the results and make the study of little scientific value. Stangor (2011:109) defines response rate as the percentage of people who actually complete the questionnaire and return it to the investigator. The target population for this study was 2189 employees working in the following sections:

- Administration
- Finance
- Information technology
- Maintenance
- Library and information services
- Marketing and communication
- Supply Chain Management
- Legal services
- Technical services
- Transport

In research, response rates approximating 60% should be the goal of researchers, while for survey research intended to represent the entire population, a response rate of 80% is expected (Fincham, 2008:1). The researcher distributed a total of 438 questionnaires to sampled staff in the studied municipalities. Of this number, 305 copies were completed and returned, meaning 133 questionnaires were not returned to the researcher. The unreturned questionnaire included uncompleted and partially completed. Statistically, this means the study achieved a response rate of 68%. The response rate of this nature was sufficient to enable generalising the results to the target population. Mavodza (2010:111-112) commends a higher response rate because it enhances the reliability and validity of the results.

The researcher compensated for an expected low response rate by doing the following: making pre-contacts through human resource officers and personal assistants from the office of the Municipal Manager facilitating the survey, and improving questionnaire design. In this case, the researcher minimised the length and difficulty of the survey by simplifying the format, ensuring that questions were not ambiguous and had clear instructions. Moreover, the researcher had a good timing by avoiding Christmas, Easter, municipal events and audit time. Questionnaires were distributed in the morning and collected the same day in the afternoon. All these measures were taken to ensure that enough and reliable data were collected bearing in mind the cost of running the survey and the response rate that could be achieved (Data Analysis Australia, 2016). Interviews with managers were scheduled immediately after the completion of questionnaires. In this case, 21 (three from each local municipality) interviews were conducted.

4.18 Data analysis

Data analysis in multi-methods research relates to the type of research strategy chosen for the procedure (Creswell, 2009:218). “Data analysis refers to the process of bringing order, structure and meaning to the mass of collected data. The purpose of data analysis is to manage and classify data, as well as to structure the findings so as to reach a conclusion” (De Vos, *et. al*, 2005: 333). Leedy and Ormrod (2005) suggest steps for data analysis, namely, the logical arrangement of the details of the case being studied, categorisation of data, the examination of bits of data for their relevance towards the case, analysing the data for underlying themes and patterns and, lastly, the synthesis of results and generalisations arising thereafter.

There are various ways of analysing data depending on the type of data collected. In this study, the researcher collected both qualitative and quantitative data. Based on the type of data collected, the researcher used both qualitative and quantitative approaches to analyse the collected data. There are a number of software packages available to facilitate quantitative data analysis. In this study, the data were analysed using IBM Statistical Package for Social Science (SPSS) version 23 software. This was done with the assistance of a statistician. Microsoft Word was also useful in data analysis and presentation thereof. Thematic analysis was used to analyse qualitative data from the interviews and open-ended questions. According Liamputtong (2009: 285), thematic analysis is a method for identifying, analysing and reporting patterns (themes) with data. Descriptive statistics, such as frequency tables and percentages were used in the data analysis and summaries.

4.19 Ethical considerations

Research ethics are typically associated with morality and concern matters of right and wrong (Babbie, 2010:64). In this regard, Burns and Grove (2005: 176-208) identified the following human rights protection regulations (right to self-determination; privacy; anonymity and confidentiality; fair treatment; and protection from discomfort and harm), based on the three principles of respect for persons, principle of beneficence and principle of justice. Major ethical issues in conducting research are discussed in subsequent paragraphs.

4.19.1 Permission to conduct the study and informed consent

The researcher proved to the municipalities that he had been issued with ethical clearance certificate by the University of Fort Hare (see appendix 5). Upon producing the ethical clearance certificate to municipalities the researcher was issued authorisation letters (see appendix 7-13) which were shown to respondents. Respondents who agreed to participate in the study were asked to complete an informed consent form. According to Armiger (1997), informed consent means that a person knowingly, voluntarily and intelligently, and in a clear and manifest way, gives his/her consent to respond to research questions. Its purpose is to ensure that the will of the participants is respected at any cost for the research (Fouka & Mantzorou, 2011:4). In other words, informed consent is one of the means by which a participant's right to autonomy is protected. According to Fouka & Mantzorou, 2011:4) autonomy is the ability for self-determination in action according to a personal plan. Informed consent seeks to incorporate the rights of autonomous individuals through self-determination. It also seeks to prevent assaults on the integrity of the participant' and protect personal liberty.

Fouka and Mantzourou (2011:4) argue that individuals can make informed decisions in order to participate in research voluntarily only if they have information on the possible risks and benefits of the research. To this end, the researcher provided a "non-coercive disclaimer" stating that participation in the study was voluntary and no penalties were involved because of refusal to participate. In this regard, the respondents were fully informed and explained to about the nature and purpose of the study and were free to choose to participate or not to participate without coercion or deceit (Polit & Beck, 2006:89). Each respondent signed a written informed consent form to voluntarily participate in the study and share information with the researcher. The contact details of both the researcher and supervisor were written on the consent form for benefit of participants who would need to discuss or enquire about the study at a later stage.

4.19.2 Beneficence- Do not harm

The term beneficence relates to the benefits of the research (Fouka & Mantzourou, 2011:5). It is understood as an obligation to maximise possible benefits and to minimise possible harm. The principle of beneficence ensures that research respondents are not exposed to permanent or undue harm and exploitation (Burns & Grove, 2005). Therefore, the researcher should communicate the benefits and risks of the study to respondents. The study should only continue if the benefits outweigh the risks but if the risks outweigh the benefits, such research should be discontinued because the principle of beneficence-do not harm is compromised. The researcher considered all possible consequences of the research and balanced the risks with proportionate benefit. In other words, the researcher conducted the risk benefit ratio and found that the benefits outweighed the risks, hence the study continued. The respondents were informed that no immediate benefits in monetary gains or any other rewards would be associated with

participation in the study. Future benefits were that the research findings could provide information on improvement of service delivery through knowledge sharing. In this case, participants were told that a copy of the final study would be submitted to their municipality for them to access. Additionally, the researcher should avoid misuse of the relationship with respondents, exposing subjects to undue harm through asking intrusive and sensitive questions; not use the information gained against respondents (Polit, *et al.*, 2006:88). The researcher maintained professional relationship with participants and constructed the questions carefully to avoid intrusion of respondents' privacy. Moreover, the freedom to withdraw was explained (Fouka, *et al.*, 2011:5). Accordingly, the researcher informed the participants that they could withdraw from the study at any time should they wish to do so and there would be no penalties for withdrawing. Beauchamp and Childress (2001), suggest that the principle of beneficence includes the professional mandate to do effective and significant research so as to better serve and promote the welfare of our constituents. However, it is difficult to establish at all times whether any degree of harm will come to participants (De Vos, *et al.*, 2011). According to Burns and Grove (2005) the potential harm of participation can be physiological, emotional, social and economic in nature. Although it has been argued that all possible situations that may arise during an investigation cannot be foreseen and ruled out beforehand, the researcher tried by all means to prevent both intentional harm and minimise potential harm.

4.19.3 Respect for anonymity and confidentiality

The issue of confidentiality and anonymity is closely connected with the rights of beneficence. Anonymity occurs when even the researcher cannot link a participant with the information for that person (Polit, *et al.*, 2004:711). Anonymity is protected when the

subject's identity cannot be linked with personal responses (Fouka, *et al.*, 2011:6). Confidentiality indicates the handling of information in a confidential manner (De Vos, *et al.*, 2011). It can also be described as the management of private information by the researcher in order to protect the Participant's identity. In this study, confidentiality was maintained by restricting access to raw data. Only the researcher and the researcher's supervisor and statistician had the privilege to access raw data. Anonymity was maintained by ensuring that no one, including the researcher would be able to identify any participant afterwards. The researcher asked the participants not to write their names on the questionnaire. Confidentiality was further maintained by means of using pseudonyms and distorting identifying details of questionnaire and interviews when transcribing and analysing data.

4.19.4 Respect for privacy

Privacy is based on the principle of respect. Privacy is the right of an individual to determine the circumstances, time, and extent, type of information to share or withhold from others (Polit, *et al.*, 2006: 91). The definition of privacy implies the element of personal privacy. An invasion of privacy may happen when private information such as beliefs, attitudes, opinions and records, is shared with others, without the participant's knowledge or consent. Moreover, the invasion of privacy can include certain data collection procedure such as participatory observation, hidden observation and reporting about it; questionnaire about intimate, personal matters and certain indirect tests where subjects are not aware of what it is that they reveal and procedures in which information is obtained (De Vos, *et al.*, 2011). The researcher was able to keep the invasion of privacy to the absolute minimum. First and foremost researcher introduced himself to the participants and revealed what the study is all about and procedures in

which information would be obtained. Additionally, privacy was maintained by not asking questions about intimate, personal matters. The respondents' privacy was further maintained by distributing questionnaires in offices of participants. Furthermore, the researcher interviewed respondents privately and treated them with respect and dignity.

4.19.5 Scientific integrity

Researchers need to adhere to and apply the principles of the scientific integrity of knowledge (Burns & Grove, 2005). In this study, measures of scientific integrity that the researcher followed included refraining from fiddling, misrepresenting, fabricating and falsifying data. The researcher also refrained from influencing the participants to respond in certain ways and distorting findings to support preconceived ideas. This means that the research findings are a true reflection of what transpired in the study. The researcher did not plagiarise other people's work as sources used or consulted were cited and referenced accordingly. This includes acknowledgement of all persons who contributed to the study.

4.20 Chapter summary

This chapter presented the research methodologies that were used to conduct this study. The quantitative and qualitative methods, descriptive survey design including triangulation were outlined. The chapter also covered sampling methods, data collection methods and techniques, sampling and sampling techniques. Moreover this section presented the methods that were used to ensure that data collected was analysed and reported ethically. Lastly, the section discussed strategies that were used to ensure the validity, reliability of the study. The next chapter presents the research findings from this study.

CHAPTER FIVE:

DATA PRESENTATION AND INTERPRETATION

5.1. Introduction

The previous chapter discussed the research approach, research design, the study population, sampling methods and data collection methods and instruments used. This chapter presents and analyses data collected from the respondents who were sampled from the selected municipalities in Limpopo Province. This study used both quantitative and qualitative methods to collect and analyse data. The researcher used, charts, figures, tables and explanations to analyse and organise data into simpler accounts.

The aim of this study was to underscore the role of knowledge sharing in improving the municipal governance in the local government sector of South Africa. The objectives of the study were to:

- Find out the kind of knowledge management programmes in place in the municipalities of Limpopo Province.
- Establish the extent to which municipalities in Limpopo Province encourage knowledge sharing for improvement of municipal governance.
- Determine factors which affect knowledge sharing among employees of municipalities of Limpopo Province.
- Propose strategies on how to optimally share knowledge in Limpopo municipalities.

The chapter presents the findings from the data collection instruments (C.f 413) that included questionnaire, interviews, document analysis and the observation schedule. The

gathered data were presented according to the aim and objectives of the study as stated in chapter one (C.f 122).

5.2. Quantitative data analysis

The questionnaire was designed based on the objectives of the study and circulated to officials in eight Limpopo municipalities. The survey questionnaire was categorised into the following five categories: A Respondents' Profile, B Organisational structure, C Knowledge Management practices, D Knowledge sharing and municipal governance and E Recommendations on how to improve knowledge sharing in Limpopo municipalities.

5.2.1. Respondents' profiles

This section of the questionnaire intended to determine the background information of the respondents. Respondents were asked to indicate their age, gender, work experience, race, and their positions. Although, Abili, *et al.* (2011) argue that demographic characteristics do not have any effect on knowledge sharing, the questionnaire included respondents' profile because the researcher support Lin (2008) that demographic characteristics have a moderating effect on knowledge sharing. Essentially, the questionnaire included respondents' profile to determine their competency to respond to the questionnaires.

5.2.1.1. Gender of respondents

Respondents were asked to indicate their gender. This was meant to determine gender distribution in the studied municipalities. Table 5.1 shows that out of 305 respondents, 131 (43%) were male while 174 (57%) were female.

Table 5.1: Gender of respondents (N =305)

Gender	Frequency	Percent
Male	131	43.0
Female	174	57.0
Total	305	100.0

Table 5.1 shows that in Limpopo municipalities, there were considerable more female employees than male ones. Men-women relationships in the workplace influence the ways in which knowledge sharing is interpreted (Lin, 2008: 245). According to Syed-Ikhsan and Rowland (2004:101) knowledge sharing may fail when a team is primarily comprised of men or women as employees in the gender minority may be less likely to share knowledge freely. Even though the results show that the female respondents were more than male respondents, there is a satisfactory balance of gender distribution in the Limpopo municipalities as such there is a good chance of knowledge sharing.

5.2.1.2. Age of respondents

Respondents were asked to indicate their age group. Employee age has an impact on the willingness to share knowledge. Riege (2005) argues that the more age compatible team will engage in effective knowledge sharing. The results show that the age range of the respondents was between 18 years and above 45 years. Table 5.2 depicts age of respondents divided into six groups that were proportionally distributed.

Table 5.2: Age brackets of respondents (N =305)

Age	Frequency	Percent
18-25	44	14.4
26-30	53	17.4
31-34	61	20.0
35-39	74	24.3
40-45	37	12.1
Over 45	36	11.8
Total	305	100.0

Forty-four (14.4%) respondents' age ranged from 18 -25 years, 53 (17.4%) ranged from 26 - 30 years, and 61 (20.0%) ranged from 31 - 34 years. Most of the respondents 74(24.3%) ranged from 35 - 39 years, while 36(11.8%) were over 45 years. Probably this is the age group that possesses vast experience due to long service. This could suggest that the Limpopo municipalities have older staff to share knowledge with younger respondents while younger ones should be willing to learn from older ones. On the contrary, sometimes older people may not be willing to share knowledge because of their insecurities and seeing younger ones as threats while the younger ones may not be willing to learn from older ones (Bratianu & Orzea, 2011).

5.2.1.3. *Race of respondents*

For statistical purposes, respondents were asked to indicate their race. As shown in Table 5.3, staff composition in Limpopo municipalities is predominantly Black, 295(97%), followed by Coloured 8(3 %) and lastly White 6(1%). This could also be linked with employment laws such as equity act. There was no Indian amongst the respondents.

Table 5.3: Race of respondents (N =305)

Race	Frequency	Percent
Black	295	97
White	2	1
Coloured	8	3
Indian	0	0
Total	305	100.0

The identity of the people can have an effect in the process of knowledge sharing due to existence of stereotypes and racism (Rivera-Vasquez, Ortiz-Fournier & Flores, 2011: 125).The fact that majority of the respondents were Blacks, might suggest that knowledge sharing in the Local municipalities of Limpopo is likely to be effective. Different race may suggest different cultural background. Rivera-Vasquez, Ortiz-Fournier and Flores (2011) added that knowledge sharing in heterogeneous cultural groups may be more difficult and/or require more time and effort. Regarding race, those people who considered themselves as minority were less likely to share knowledge with others in the majority, Minbaeva (2007).

5.2.1.4. Highest academic qualifications of respondents.

On this question, respondents were asked to indicate their academic qualifications. The question aimed to identify the highest qualification/s of the employees in Local municipalities of Limpopo. Essentially, the results show that the large majority of respondents hold at least a post matric qualification as shown in Table 5.4.

Table 5.4: Highest academic qualifications of respondents (N =305)

Qualification	Frequency	Percent
High school	25	8.2
Post matric certificate	47	15.4
Post matric Diploma	112	36.7
Junior Degree	83	27.2
Post graduate	38	12.5
Other (Please specify)		
Total	305	100.0

Table 5.4 shows that as far as academic qualifications were concerned, a large number of respondents 112(36.7%) reported to hold post matric diplomas, followed by 83(27.2%) who held junior degrees. A small proportion 25(8.2) held high school certificates. Wang and Noe (2010: 120) indicated that staff with higher level of qualifications are more likely to share their expertise and have positive attitudes towards knowledge sharing. In a way, all respondents were qualified to provide the researcher with relevant information for the study.

5.2.1.5. Positions of respondents

Respondents were asked to indicate their positions. The aim of this question was to identify the job categories available at the studied municipalities. The results shown in table 5.5 reflect the proportional distribution in various categories.

Table 5.5: Positions of respondents (N= 305)

Job category	Position	Frequency
Administration	Admin Officer, Personal Assistant, Secretary, HR officer, Training officer, Clerk, Deputy Manager Monitoring	67
Finance	Accountant, Pay roll officer, Data capturer, Internal Auditor, Admin Officer	28
Information technology	System administrator, IT officer, Supervisor	20
Maintenance	Plumber, Electrician, General worker, Admin Officer	11
Library and information services	Librarian, Assistant Librarian, Library Assistant, Admin officer(records)	62
Marketing and communication	Communication officer, Media liaison, Admin Officer, Messenger	40
Supply Chain Management	Admin Officer, Assistant Manager	14
Legal services	Legal advisor, Admin Officer, Assistant Director	9
Technical services	Engineer, Project manager, Admin Officer, Engineer, Artisan, Town planner	35
Transport	Admin Officer, Driver	19

The most popular job title or position was Administration Officer which was under administration job category. Levels or positions of individual play a role in knowledge sharing.

5.2.1.6. Respondents' year of service

Figure 5.1 gives respondents' year of service. Respondents were expected to state the number of years in their positions at the Limpopo municipalities. The intention on this

question was to identify probable practical experience staff possessed and thus indicating knowledge gained through experience as it would be related to the year they spent at the municipality. Figure 5.1 shows that the number of respondents decreases as the number of years increases.

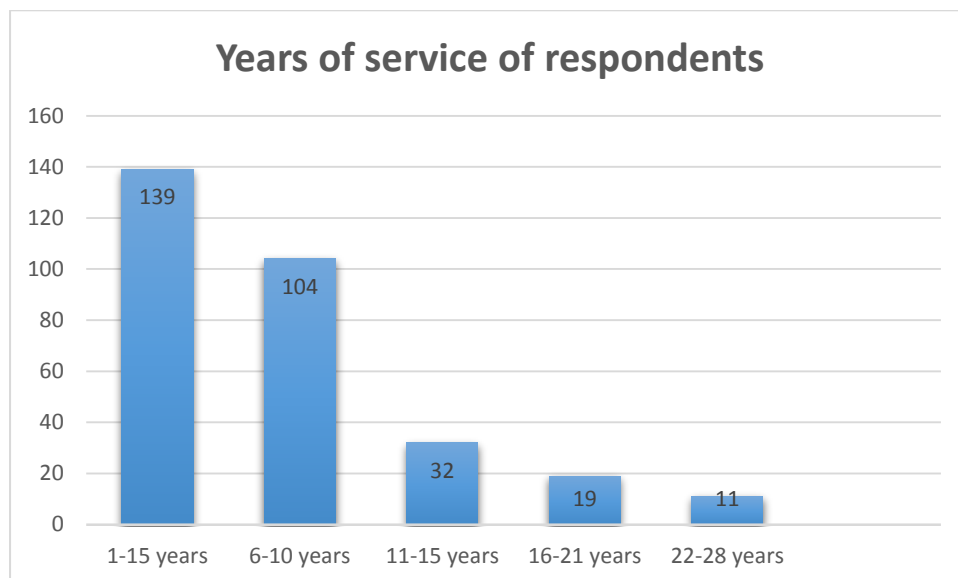


Figure 5.1: Years of service of respondents (N=305)

Figure 5.1 shows significance variance of experience of respondents. Years of experience range between one year and 28 years. Of significance is that an average 139 (46%) and 104 (34 %) respondents had practical work experience ranging between one and 10 years. Number of years of respondents continue to be unevenly distributed or represented between 11 and 28 years. One may assume that employees with fewer years had less experience. Conversely, those with longer periods of service had more experience and organisational knowledge worth sharing. According to Connelly and Kelloway (2003), experienced employees may simply be more able to share their knowledge because they know more of the right people in the organisation.

5.2.2. Availability of knowledge management unit/section in Limpopo municipalities

Table 5.6 shows responses to the question on whether Limpopo municipalities had knowledge management section/unit in their organisational structures. This sought to understand whether there were any formalised section which would encourage organisational culture which would enable knowledge sharing. Table 5.6 shows that almost all respondents indicated that their municipalities did not have knowledge management units/sections.

Table 5.6: Availability of knowledge management unit/section in Limpopo municipalities (N =305)

	Frequency	Percent
Yes	1	.3
No	304	99.7
Total	305	100.0

Table 5.6 illustrates that 304 respondents indicated that there was no knowledge management unit in their municipalities, while only one said there was such a unit. Gaffoor and Cloete (2010:6) contends that a Knowledge Management division is important in municipalities (i.e. in the case of eThekweni Municipality). The basis of their argument is that because Knowledge Management division would be responsible for facilitating knowledge sharing in organisations.

5.2.3. Knowledge Management practices available in the Limpopo municipalities

The question, “What kind of Knowledge management programmes are in place in the municipalities of Limpopo Province?” was asked to identify KM practices in the studied municipalities. The responses to this question would assist in determining that even though there were no specific sections or unit for Knowledge management, there were

some knowledge management practices which allowed knowledge sharing. Table 5.7 outlines kinds of Knowledge Management practices available in Limpopo municipalities.

Table 5.7: KM practices available in the Limpopo municipalities (N= 305)

Statement	Frequency	Percentage
1.Communities of practice(COPs)	132	43.3
2.Rewards (as a means of motivating for knowledge sharing)	26	8.5
3.Storytelling (as a means of transferring tacit knowledge)	42	13.2
4. Cross-project/ inter project learning	31	10.2
5. Knowledge mapping (a map of knowledge repositories within an organisation accessible by all)	30	9.8
6. After action reviews/debriefing	59	19.3
7. Mentoring programmes	63	20.7
8.Expert directories (to enable knowledge seeker to reach to the experts)	25	8.2
9. Best practice transfer	68	22.3
10.Knowledge fairs	15	4.9
11. Competence management (systematic evaluation and planning of competences of individual organisation members)	23	7.5
12.Proximity & architecture (the physical situation of employees conducive to knowledge sharing)	9	3.0
13.Master-apprentice relationship	24	7.9
14. Collaborative technologies (groupware, email, text chat, share point, intranet, drop box, etc.)	161	52.8
15. Social software (wikis, social bookmarking, blogs, etc.)	78	25.6
16.Social networking sites like Twitter and Facebook	81	26.6
17. Knowledge repositories (databases)	47	15.4
18.Corporate library	84	27.5
19.Notice boards	213	69.8

Statement	Frequency	Percentage
20.Measuring and reporting intellectual capital (a way of making explicit knowledge for organisations)	17	5.6
21.Knowledge brokers (organisational members that take on responsibility for a specific "field" and act as first reference on whom should talk about a specific subject)	33	10.8

Most respondents 213(69.8%) indicated that notice boards was KM practice available in the municipalities, followed by collaborative technologies and Community of Practice (CoP). Surprisingly, fewer respondents 26 (8.5%) stated that rewards as a motivator for knowledge is one of the KM practices. This could mean that Limpopo municipalities did not reward staff for sharing knowledge despite that rewards are recommended as incentives to facilitate knowledge sharing and help build a supportive environment (Yao, Kam & Clan, 2007). These authors suggested that lack of incentives has been a major barrier to knowledge sharing across the cultures.

5.2.4. *The state of Knowledge management practices in Limpopo municipalities*

Respondents were asked to rate the state of knowledge management practices in their respective municipalities on a scale of very poor to very good. This meant to check out whether those available KM practices were functional and enhancing sharing of knowledge. Thus checking the municipalities' understanding of knowledge management, and knowledge generation, acquisition, organisation, storage, transfer, sharing and retention (Branin, 2003). The results indicate that the KM practices are not in a good state as indicated by figure 5.2.

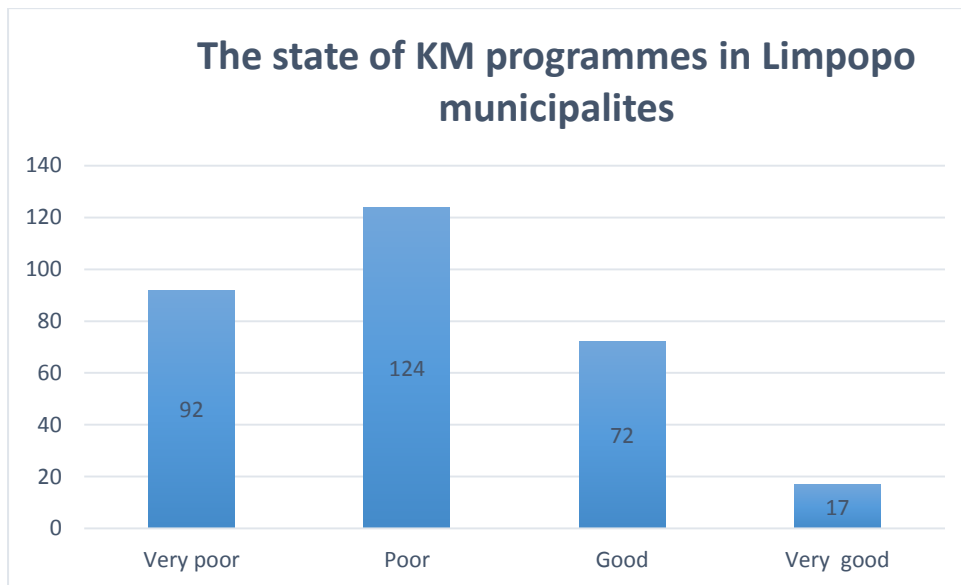


Figure 5.2. The state of Knowledge management programmes in Limpopo municipalities (N=305)

The results were as follows: 92(30.2%) respondents rated knowledge management practices as very poor, while 124(40.7%) rated them as poor. Seventy-two (23.6%) respondents rated knowledge management practices as good while the last 17(5.6%) rated knowledge management practices as very good. Figure 5.2 relate well with Table 5.7 in section 5.2.3 which indicates the availability of knowledge management practices. Most practices received fewer support from the respondents. This could suggest that the Knowledge management practices are available but not effective for knowledge sharing.

5.2.5. *Views about the role of knowledge sharing in support of municipal governance.* (N=305)

Using a Likert scale, respondents were asked to indicate their views about the role of Knowledge sharing in support of municipal governance. SD stood for Strongly Disagree--D stood for Disagree----A stood for Agree ----SA stood for Strongly Agree ----and U

stood for Uncertain. The question sought to solicit respondents' views about the importance of knowledge sharing in their organisations. Table 5.8 summarises responses on how respondents agreed or disagreed to general statements on the role and relevance of knowledge sharing.

Table 5.8: Views about the role of knowledge sharing in support of municipal governance (N=305)

	Statement	SD %	D %	A %	SA %	U %
1.	Knowledge is the most important factor for a service delivery	1.6	3.6	45.2	43.0	6.6
2.	Knowledge sharing is important for a successful delivery system	2.3	7.5	33.8	39.3	17.0
3.	In my opinion, knowledge sharing in a municipality results in increased performance	2.0	3.6	43.0	40.3	11.1
4.	Knowledge sharing will enable municipality to save time and financial costs.	3.0	9.2	38.7	35.1	14.1
5	Knowledge sharing is important to only private sector.	47.2	31.5	8.2	4.6	8.5
6	The importance of knowledge sharing is clearly communicated.	44.3	20.7	16.4	10.2	8.5
7.	There is growing knowledge awareness of the benefit of knowledge sharing in this municipality.	45.2	24.9	14.4	6.6	8.9
8.	Knowledge sharing can ensure continuity and consistency in service delivery.	5.6	9.5	48.5	25.6	10.8
9.	Knowledge sharing can ensure transparency and accountability in service delivery.	2.3	9.5	42.3	27.2	18.7

The sharing of knowledge between employees, departments and across the municipalities is necessary to transfer individual and group knowledge into organisational knowledge, which leads to improvement of organisational performance (Islam, *et. al*, 2011:5900).The statements that received a considerable support were that knowledge is the most important factor for service delivery; that knowledge sharing

in municipality results in increased performance; knowledge sharing can ensure continuity and consistency in service delivery; and that knowledge sharing can ensure transparency and accountability in service delivery. The results show that 138(45.2%) agreed and 131 (43.0%) strongly agreed with the statement that knowledge is the most important factor in service delivery. Regarding statement on knowledge sharing in municipality results in increased performance 131(43.0%) respondents agreed and 123 (40.3%) strongly agreed.

As far as the statement that knowledge sharing can ensure continuity and consistency in service delivery in their municipalities, 148(48.5%) respondents agreed while 78 (25.6%) strongly agreed. Furthermore, 129(42.3%) respondents agreed that knowledge sharing can ensure transparency and accountability in service delivery, while 78 (27.2%) strongly agreed with the statement.

On the other side, 138 (45.2%) respondents strongly disagreed with the statement that there is a growing awareness of the benefit of knowledge sharing in the municipality while 144 (47.0%) respondents also strongly disagreed that knowledge sharing is only important to private sector.

5.2.6. Extent of sharing information and knowledge

Respondents were asked to indicate the extent to which sharing of information and knowledge is encouraged in the municipality. This question intends to highlight the level on which information and knowledge were encouraged to be shared in Limpopo municipalities. Respondents were to rate the given statements on information and

knowledge sharing. The study revealed that only 111(37%) respondents indicated that they shared knowledge with others to a great extent. Culture of knowledge hoarding appeared to prevail in Limpopo municipalities. Hence, Lindner and Wald (2010:11) argue that culture is by far the most important factor of success for knowledge sharing in organisations.

5.2.6.1. Information and knowledge sharing among employees

Respondents were to indicate the extent to which municipalities encourage information and knowledge among employees. This question aimed to understand whether information and knowledge were shared among employees and that to what extent were they encouraged by municipalities to share information and knowledge. The results are shown in chart 5.3.

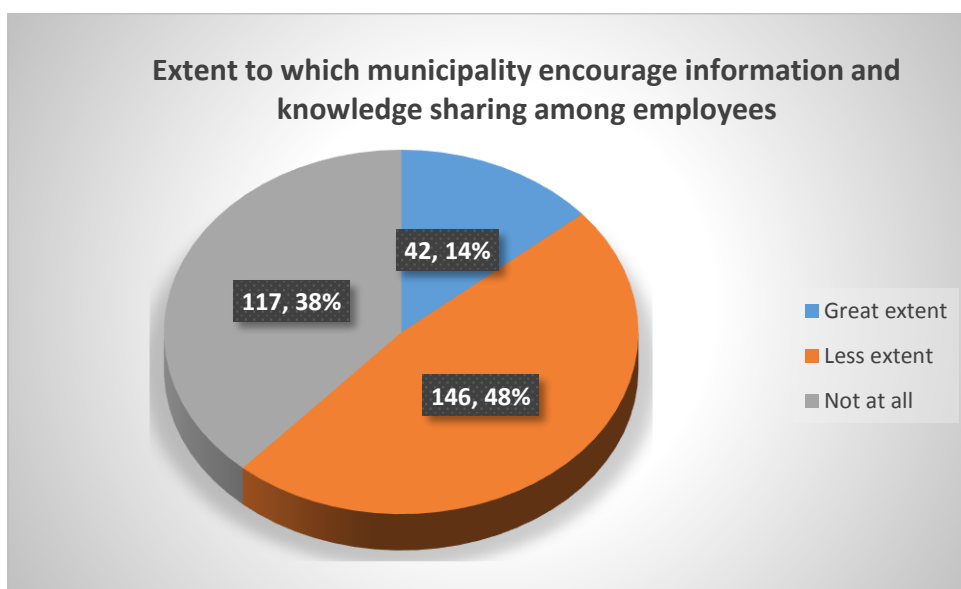


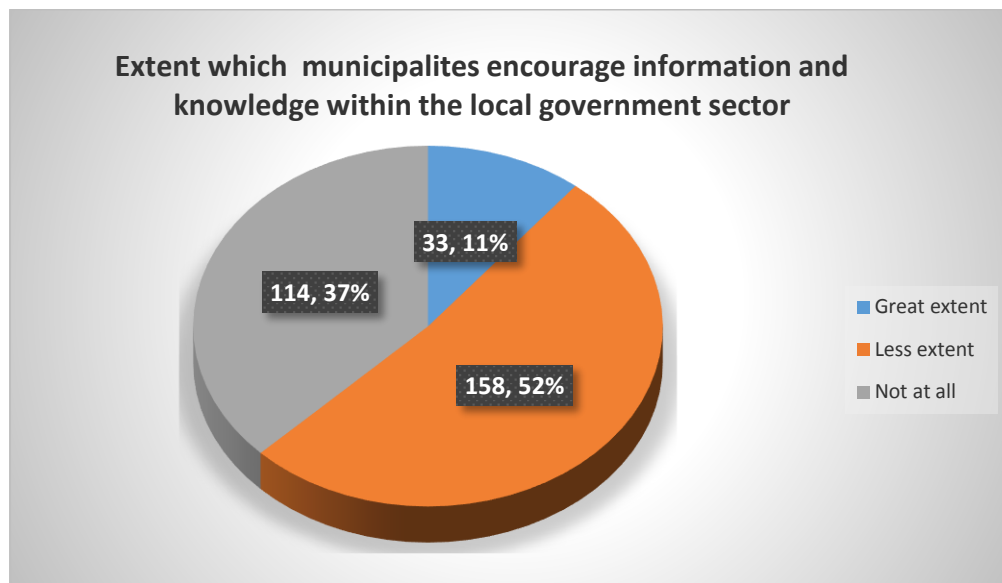
Chart 5.3 Extent to which municipality encourage Information and knowledge sharing among employees (N=305)

Chart 5.3 reveals that minority 42(14%) respondents stated that information and knowledge sharing among employees in their municipalities was encouraged to great extent, the highest 146(48%) respondent indicated that it is encouraged to lesser extent, while 117(38%) respondents indicated information and knowledge sharing among employees was not encouraged at all. This might mean that there are no activities or strategies to encourage knowledge sharing in Limpopo municipalities. Limpopo municipalities need to realise that the “presence of rewards and motivation facilitates knowledge sharing and transfer, while the absence of rewards and motivation hinders the sharing and transfer of knowledge (Asrar-ul-Haq & Anwar, 2016:8).

5.2.6.2. Information and knowledge sharing within the local government sector

Respondents were asked to indicate the extent to which their municipalities encouraged information and knowledge sharing with other municipalities within the Local government sector. Service delivery in South Africa is the mandate of local government sector. It is thus important that different municipalities should learn good practices from each other. Hence this question sought to find out efforts to share knowledge among municipalities. The results are shown in chart 5.4.

Chart 5.4 Extent to which municipality encourage information and knowledge sharing within the local government sector (N=305)



Based on Chart 5.4, 33(11%) respondents indicated that their municipalities encouraged information and knowledge sharing within the local government sector to great extent. Again, this chart shows that 114(37%) respondents stated that their municipalities did not encourage information and knowledge sharing among within the local government sector at all. The last portion, being the highest number of respondents 158(52%) respondents indicated that their municipalities encouraged information and knowledge sharing within the local government sector to less extent. A picture given by the results of this study is that within local government sector of Limpopo Province, municipalities work in silos, thus fail to leverage other municipalities' experience.

5.2.6.3. Knowledge sharing can improve municipal governance

Respondents had to give their opinion regarding the extent to which knowledge sharing could improve municipal governance. Good governance will ensure effective service

delivery. This question focuses on the understanding of the respondents on the role played by knowledge sharing on municipal governance. Chart 5.5 shows the results.

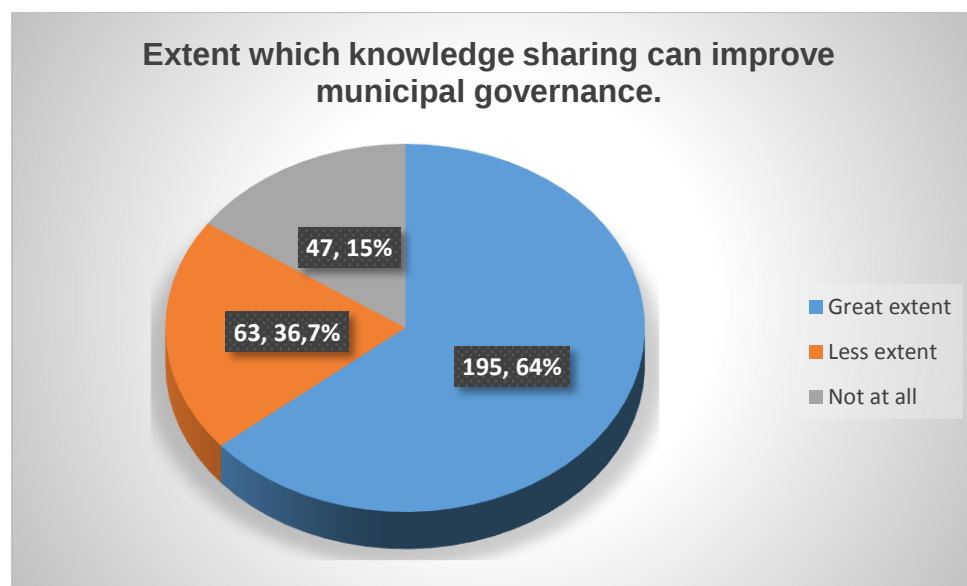


Chart 5.5 Extent which knowledge sharing can improve municipal governance (N=305)

Chart 5.5 depicts that 47(15%) respondents indicated that knowledge sharing could improve municipal governance to a great extent, 63(36%) to a less extent while majority 195(64%) respondents stated that knowledge sharing could not improve municipal governance at all. The interpretation of these results mean that Limpopo municipalities lack knowledge about the role of knowledge sharing in organisations. (McAdam & Reid, 2000). Elsewhere in the world the respondents had positive views towards knowledge sharing (Bevan, *et al.*, 2012; Wai Ling, *et al.*, 2009).

5.2.6.4. Respondents' sharing knowledge with others

Chart 5.6, reveals the responses on the question to what extent do respondents share knowledge with others. It is important for the purpose of this study to check out whether respondents shared knowledge with others. Respondents were also asked to indicate the level of sharing knowledge with others. The results reveal that some respondents 111(37%) indicated that they shared knowledge with others to a great extent, 112(36.7%) to less extent and 80(26%) reported not sharing knowledge at all with others. Results are summarised and shown in Chart 5.6.

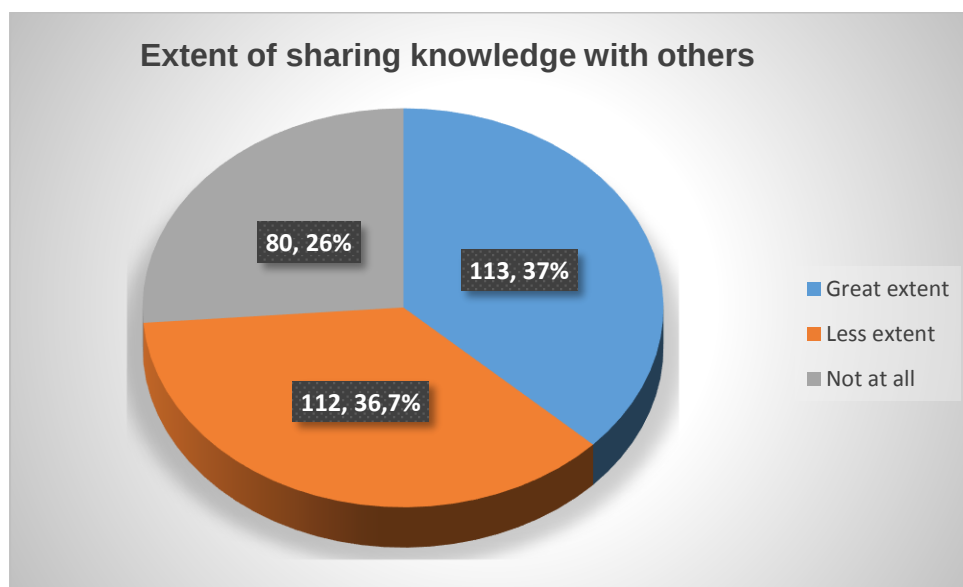


Chart 5.6: Extent of sharing knowledge with others (N=305)

The results in figure 5.6 reveal that generally knowledge sharing is not a common practice in Limpopo municipalities. Reasons for not sharing knowledge linked well with chart 5.6 whereby majority 195(64%) respondents are of the view that knowledge sharing could not improve municipal governance at all.

5.2.7. Boundaries of knowledge sharing

On this question, the respondents were asked to indicate the boundaries of knowledge sharing. It was important to understand the extent of knowledge sharing in Limpopo municipalities and identify how far knowledge was shared with others. This would also determine the knowledge management practices or initiatives for knowledge sharing in local government sector. Table 5.9, displays boundaries of knowledge sharing. Hundred and nine (35.7%) respondents indicated to have shared knowledge within Limpopo Province, 65(21.3%) outside Limpopo Province, 84(27.5%) within the public sector as a whole, 63(20.7%) outside the public sector, 87(28.5%) within local government sector as a whole, 118(38.7%) and lastly, 230(75.4%) respondents only shared knowledge within their unit/sections.

Table 5.9 Boundaries of knowledge sharing (N=305)

	Boundaries	Frequency	Percentage
1.	Within Limpopo Province	109	35.7
2.	Outside Limpopo Province	65	21.3
3.	Within the public sector as a whole	84	27.5
4.	Outside the public sector	63	20.7
5.	Within local government sector	87	28.5
6.	Within my municipality	118	38.7
7.	Within my unit/section	230	75.4

Knowledge sharing in Limpopo municipalities occurs mostly within a unit/section of a specific municipality. This is because majority 230 (75.4%) indicated that they shared

knowledge within their units followed by a considerable number 118 (38.7) of respondents who shared within their municipalities. This is in support of Chart 5.3 which showed that municipalities were encouraging knowledge sharing in local government sector to a less extent.

5.2.8. Levels of sharing particular type of knowledge

Using 1-5 scale (1 being the lowest and 5 the highest), respondents were asked to rate the kind of knowledge they shared with colleagues. This was meant to understand the types of knowledge which was important to the municipalities and to what extent the knowledge is shared. It is also important to understand whether tacit or explicit knowledge is shared and to what extent if it is shared. The question was focused on three types of knowledge, namely, personal, educational and work knowledge.

5.2.8.1. Levels of sharing personal knowledge

This question was directed on personal knowledge. Respondents were to rate the degree to which they share personal knowledge on a scale of very low to very high. Personal knowledge in this study referred to sharing knowledge about personal experiences on life in general. The idea was to understand that if respondents could share personal knowledge, it could mean that there was some level of trust which sometimes it is referred to be a barrier in knowledge sharing. Figure 5.7 shows the results.

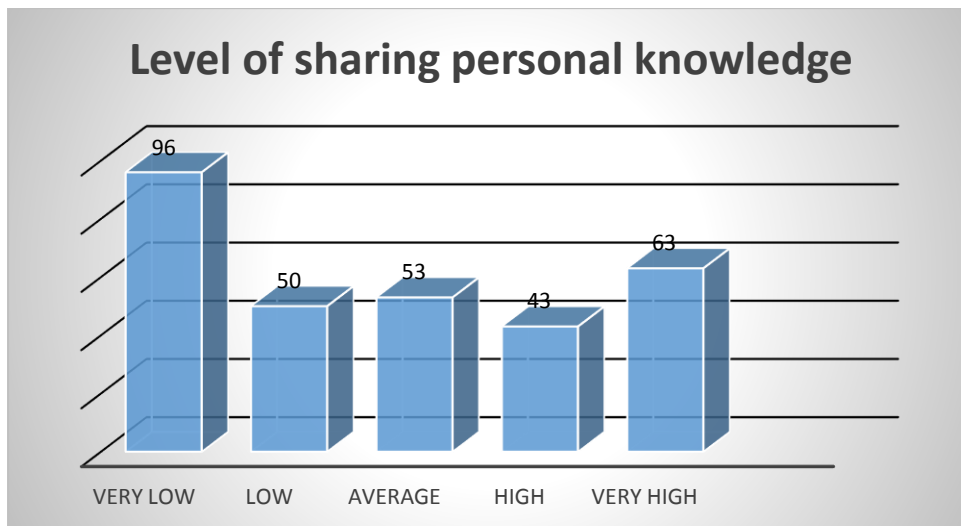


Figure 5.7. Levels of sharing personal knowledge (N = 305)

When asked to rate the degree which they share personal knowledge, 96(31.5%) respondents indicated their level of sharing personal knowledge was very low, while 50(16.4%) rated themselves low. Fifty three (17.4%) rated their level of sharing personal knowledge with others as average. In addition, 43(14.1%) respondents rated their level of sharing personal knowledge as high and 63(20.7%) rated their level as very high. The low level of sharing personal knowledge could mean that there was some lack of trust among the respondents at the Limpopo municipalities. This is consistent with Politis (2003) who established that interpersonal trust or trust between co-workers is an extremely essential attribute in organisational culture, which is believed to have a strong influence over knowledge sharing.

5.2.8.2. *Levels of sharing work knowledge*

Figure 5.8, shows the responses on level of sharing work knowledge with colleagues. This question meant to reveal if there was knowledge sharing with regard to the activities and processes of duties in Limpopo municipalities. This would also assist in supporting

whether the knowledge management practices available in municipalities were in a good state to facilitate organisational knowledge. The results depicts that few 63(20.7%) and 78(25.6%) respondents were sharing organisational knowledge; while 53(17.4%) were sharing organisational knowledge on average level. The portion of respondents who shared organisational knowledge at high levels was 48(15.7%). Lastly, 63(20.7) respondents were sharing organisational knowledge at a very high level. summary of results is shown in figure 5.8

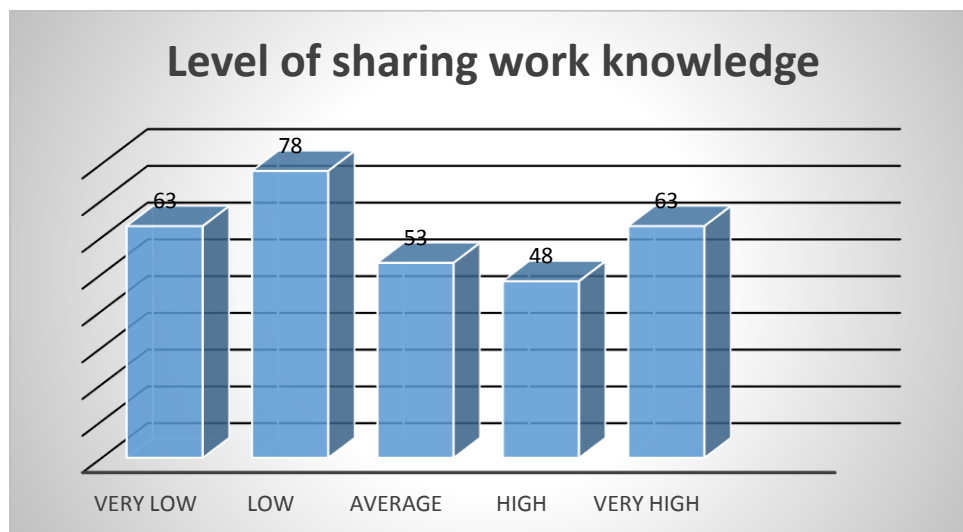


Figure 5.8. Level of sharing work knowledge (N=305)

The results indicate that work knowledge is not optimally shared among employees of Limpopo municipalities. Respondents who shared work knowledge could be managers and supervisors giving work instructions to junior staff. Knowledge sharing is effective when communication channels allow interaction between those who are sharing knowledge and those receiving knowledge (Wai Ling *et al.*, 2009).

5.2.8.3. Levels of sharing educational knowledge

Respondents were asked to indicate the level to which they shared educational knowledge. Educational knowledge referred to knowledge in relation to their studies such their assignments or any educational activities and tasks. The ability to share educational knowledge would show the level of expertise in their field and improvement of their qualifications. The results are shown in figure 5.9.

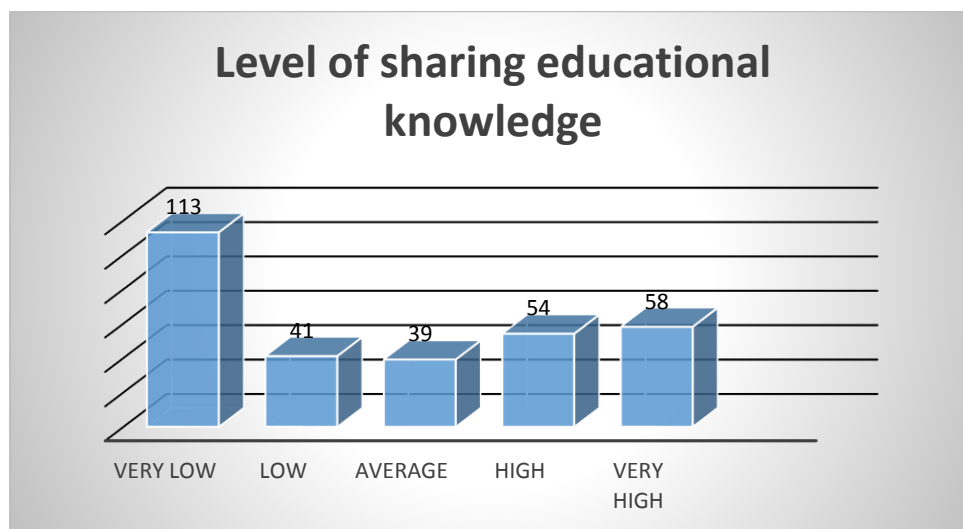


Figure 5.9 Level of sharing educational knowledge (N=305)

Figure 5.9, revealed respondents who shared educational knowledge, probably for their studies. The Figure demonstrated that 113(37.0%) respondents shared educational knowledge to very low level; 41(13.4%) to a low level; 39(12.8%) to an average level; 54(17.7%) to a high level and 58(19.0%) respondents shared educational knowledge to a very high level. This could also mean that the employees were not registered for any formal qualification at the time of data collection or did not trust each other's knowledge. Chowdhury (2006) reported that one of the most challenging barriers hindering its wider

adoption is that people need to trust each other for knowledge sharing to happen spontaneously and efficiently.

5.2.9. *Frequency of knowledge sharing*

The question was asked on how often respondents shared knowledge. The responses to this question would show if there were any formalised activities of knowledge sharing. The frequency of knowledge sharing will determine whether respondents regard knowledge sharing as an important factor of improving service delivery or not. Table 5.10 shows the frequency of knowledge sharing in Limpopo municipalities. Of importance from the table is that nearly half respondents 152 (49.8%) indicated that they shared knowledge as and when there was need.

Table 5.10. Frequency of knowledge sharing (N=305)

Statement	Frequency	Percent
Daily	107	35.1
Weekly	14	4.6
Monthly	24	7.9
Quarterly	6	2.0
Annually	2	.7
When a need arises	152	49.8
Total	305	100.0

The results could mean that half of respondents 152(50%) are not committed to knowledge sharing, probably because they do not regard knowledge sharing as an important factor that may improve the quality of service they render.

5.2.10. *Availability of rewards for encouraging knowledge sharing*

Respondents were asked to indicate whether there were specific rewards at their municipalities for sharing knowledge. This was meant to establish reward systems available for sharing knowledge at the municipalities studied. Responses to the question are shown in Table 5.11.

Table 5.11 Availability of rewards for encouraging knowledge sharing (N=305)

Availability of rewards for encouraging knowledge sharing	Frequency	Percentage
Yes	26	9%
No	279	91%

Majority 279(91.5%) indicated that they were not rewarded for sharing knowledge. Only a small number 26(8.5%) of the respondents indicated that they were rewarded for sharing knowledge. The question allowed the respondents to mention the kind of rewards for knowledge sharing. Three (1.0%) respondents indicated that they were given financial rewards. Other respondents, 23(7.9%) indicated that they gained social recognition as a means of rewarding knowledge sharing. Rewards play a major role in knowledge sharing (Riedge, 2005). It seems that in Limpopo municipalities there is little effort from the municipalities in encouraging employees to commit toward knowledge sharing for improvement of service delivery and municipal governance.

5.2.11. *Other mechanisms that are in place to encourage employees to share knowledge*

Respondents were asked to indicate other mechanisms in place to encourage employees of the municipalities to share knowledge. The intention of this question was

to find out the mechanisms that municipalities used which were not included in Table 5.9. Seventy-six (25 %) respondents left the question unanswered.

Hundred and fifty-two (66%) respondents stated that they were not aware/did not know of other mechanisms that may be in place for encouraging knowledge sharing in and across municipalities while 57 (25%) out of 229 respondents stated that there were no other mechanisms in place except some of those mentioned in Table 5.11.

Table 5.12: Other mechanisms to encourage knowledge sharing (N = 229/305)

	Frequency	Percentage
Not aware/did not know of other mechanisms	172	75%
No other mechanism	57	25%
Did not answer	76	25%

The results show that majority 172(75%) of respondents were not aware of other mechanisms available in their municipalities to encourage knowledge sharing. Such large number of respondents could mean that indeed there were no mechanisms in place for rewarding knowledge sharing in Limpopo municipalities.

5.2.12. *Description of knowledge sharing culture in municipalities*

Respondents were expected to describe the culture of knowledge sharing in their municipalities. The aim was to find out whether organisational culture existed to encourage knowledge sharing. This was an open question which allowed different opinions from respondents. This question seemed to have been difficult to respondents as majority (168) 55% respondents did not answer it. Majority of respondents 76 (55%) described culture of knowledge sharing as poor/very poor. Some of the terms used to describe the culture were as follows: Less favourable, less developed, inconsistent,

inadequate, top to bottom, not clear, secretive, very weak, below standard and not satisfactory. Others described the culture as non-existent while some described it as still developing. Sixty-one (44.5%) respondents stated they could not describe the culture of knowledge sharing in their respective municipalities. It can be deduced from the results that knowledge hoarding culture prevails in Limpopo municipalities.

5.2.13. Individual factors/barriers affecting knowledge sharing in municipalities

Using a Likert scale Strongly Disagree (SD), Disagree (D), Agree (A), Strongly Disagree (SD) and Uncertain (U), respondents were asked to indicate whether they agreed or disagreed with the various factors or barriers affecting knowledge sharing. This question would assist to determine if there are individual factors or barriers affecting knowledge sharing in the Local municipalities. Nine possible individual factors/barriers statements to knowledge sharing were given to respondents to select those applicable to them. Table 5.13, summarises responses on the extent to which respondents agreed or disagree with the general statements about barriers that might hinder knowledge sharing.

Table 5.13: Individual barriers to knowledge sharing (N=305)

Statement	SD %	D %	A %	SA %	U %
Knowledge is power I cannot share it with anyone	43.0%	32.8	7.5	9.5	7.2
There is a general lack of time to share knowledge	23.9	31.8	28.2	12.8	3.3
Misconception about KM	6.9	16.7	42.6	23.3	10.5
There is a lack of interaction between those who can provide and those who need knowledge.	5.9	8.9	45.2	36.1	3.9
Staff do not share knowledge due to poor communication and interpersonal skills.	12.1	16.7	32.8	22.3	16.1
Fear restricts staff from seeking knowledge from their immediate superiors and peers	6.9	12.1	27.5	36.1	17.4
The fear that undue credits are being accorded to undeserving parties creates deterrent to knowledge sharing.	7.2	9.5	27.5	33.8	22.0
It is difficult to convince colleagues about the values and benefits of the knowledge I possess.	10.8	20.3	34.1	27.9	6.9
There is general lack of trust among personnel in the municipality	6.9	6.9	21.3	48.9	16.1

As shown in Table 5.13, majority 131(43.0%) of respondents strongly disagreed and 100(32.8%) disagreed with the statement that knowledge is power I cannot share it with anyone”. This is in contrary with the general assertion by various authors (Wang, *et al.*, 2014; Cong, *et al.*, 2007) that one of the barriers to knowledge sharing is the thought that people do not want to share because they think they would lose power or job insecurity. Some 97(31.8%) of respondents disagreed that time was a barrier to knowledge sharing their municipalities and this was also inconsistent with literature (Riedge, 2005). Most of the findings were consistent with literature (Riedge, 2005). As

illustrated in Table 5.13, some respondents 130(42.6%) of respondents agreed with the statement that misconception about knowledge management affect knowledge sharing in their municipalities, while 71(23.3%) respondents strongly agreed that misconception about knowledge management affect knowledge sharing in their municipalities. Some 138(45.2%) of respondents agreed that lack of interaction between those who can provide and those who need knowledge affect knowledge sharing in their municipalities. Furthermore, 110(36.1%) respondents strongly agreed with the said statement and 138 (45.2%) agreed with the statement. The results revealed that almost half 149(48.9%) of respondents strongly agreed with the statement that there was general lack of trust among personnel in the municipality, 65(21.3%) agreed with the statement. De Long and Fahey (2000) established that the level of trust that exists between organisation, its subunits, and its employees greatly influences the amount of knowledge that flows both between individuals and from individuals into the firm's databases, best practices archives and other records.

5.2.14. *Organisational barriers hindering knowledge sharing*

A Likert scale was used on this question. SD stood for Strongly Disagree, D stood for Disagree, A stood for Agree, SA stood for -Strongly Agree, and U- stood for Uncertain. Respondents were asked about organisational factors which hindered knowledge sharing in municipalities. This question intended to confirm any organisational knowledge sharing practices that encouraged knowledge sharing. On the other hand it was also important to understand the factors that impact knowledge sharing in Limpopo municipalities. Lastly, this question was meant to identify available strategies used for knowledge sharing. Eight statements were given and respondents were to indicate to what extent they agreed with each statement. To avoid cumbersome table, each

statement was separately discussed. The discussion starts from section 5.2.14.1 to 5.2.14.9.

5.2.14.1. Information Technology in Limpopo municipalities

Respondents were to rate the level of agreement or disagreement using a Likert scale (Strongly Disagree to Strongly Agree) to show their opinion on using information technology to support knowledge sharing in Limpopo municipalities. The responses to the statement that inadequate information technology systems discourage knowledge sharing, would assist in whether employees at Limpopo perceived IT as important tool for knowledge sharing. Figure 5.11 shows the responses for the statement.

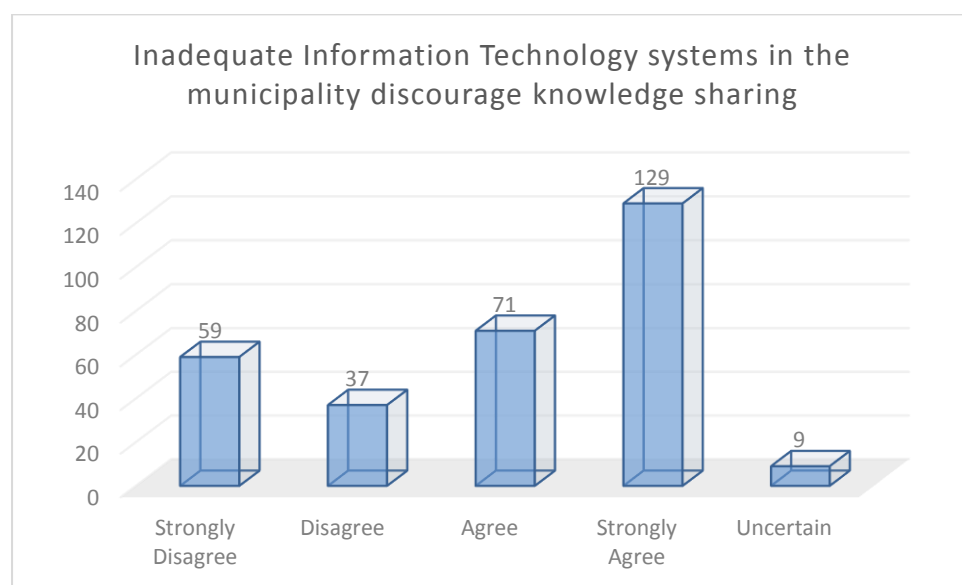


Figure 5.11. Inadequate Information Technology systems in the municipality discourage knowledge sharing (N=305)

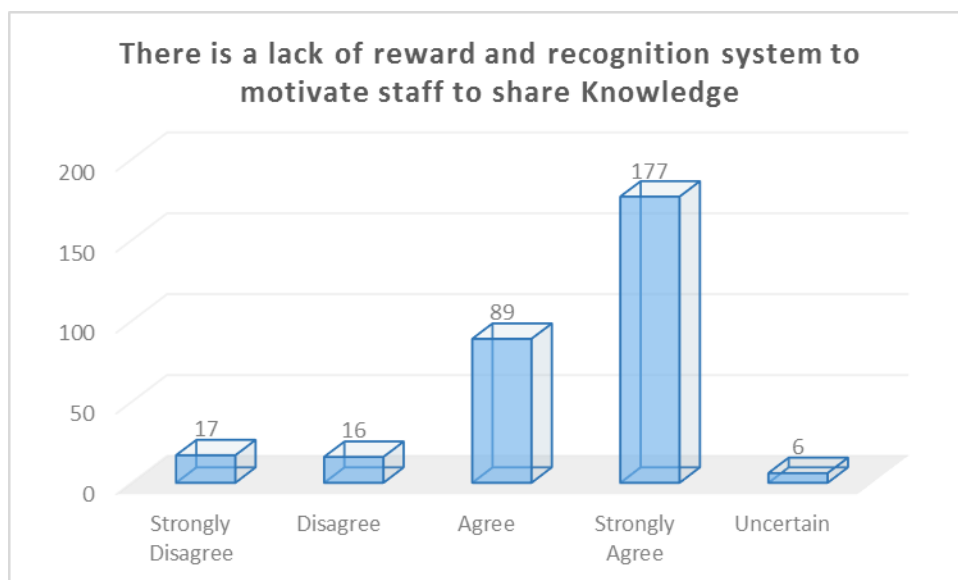
The results show that some 129(42.3%) of respondents strongly agreed that inadequate Information Technology systems in the Limpopo municipalities discouraged knowledge sharing, 71(23.3%) agreed, 59(19.3%) strongly disagreed and 37(12.1%) disagreed

with the statement. It seems from the results that most employees at Limpopo municipalities perceived IT as important tool for knowledge sharing. Only 9(3.0%) respondents were uncertain of whether inadequate Information Technology systems in the municipalities discouraged knowledge sharing. In spite of information communication technology being recommended as an important enabler of knowledge sharing, the results of this study validated Gorry's, (2008) finding that inadequate and underdeveloped information communication technology discourage knowledge sharing.

5.2.14.2. *Reward and recognition system*

Regarding reward and recognition system, Figure 5.12 shows that majority 177(58.0%) of respondents strongly agreed and 89(29.2 %) agreed that the participating municipalities lacked reward and recognition system to motivate staff to share knowledge. Some respondents 17 (5.6%) strongly disagreed that their municipalities lacked reward and recognition system to motivate staff to share knowledge, 16(5.2%) disagreed while 6(2.0%) were uncertain with the statement that their municipalities lack reward and recognition system to motivate staff to share knowledge. Summarised results are shown in Figure 5.12.

Figure 5.12 There is a lack of reward and recognition system to motivate staff to share knowledge (N=305)

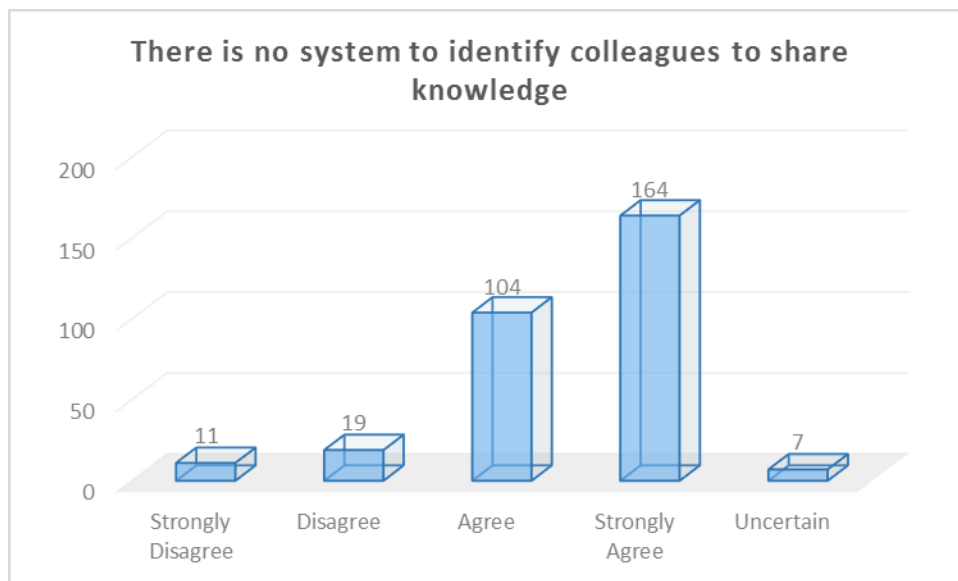


The interpretation of the results indicate that lack of rewards was negatively impacting knowledge sharing in the participating municipalities. According to Sandhu, *et al.* (2011:209) reward system should be present for successful knowledge sharing in organisations.

5.2.14.3. System to identify knowledgeable colleagues

When asked whether they disagreed or agreed with the statement that there was no system to identify colleagues to share knowledge with, figure 5.12 reveals the responses regarding the statement. The intention to this question was to identify whether the municipalities were able to track those knowledgeable colleagues as such the type of knowledge they possessed. This would assist the researcher to understand to what extent the municipalities played a role in promoting knowledge sharing. Results are shown in figure 5.13.

Figure 5.13 There is no system to identify colleagues to share knowledge with (N=305)



Regarding the availability of the system to identify knowledgeable colleagues to share knowledge, the results show that over half 164 (53.7%) of respondents strongly agreed that their municipalities do not have such system, 104(34.1%) agreed to not having a system, 11 (3.6%) strongly disagreed and 19(6.2%) respondents disagreed that their municipalities had no system to identify knowledgeable colleagues to share knowledge. Few, 7(2.3%) respondents reported uncertainty about the availability and non-availability of the system used to identify colleagues to share knowledge. The results suggest that the selected municipalities suffer from ways of accessing and exploiting existing knowledge that is poor knowledge mapping. According to Joseph and Dieter (2013:17) "Knowledge mapping is about facilitating the discovery of sources of knowledge, tracing its flow, mapping its existence and its changes, and identifying relationships with other sources of knowledge. Without knowledge mapping the selected

municipalities might not be able to know, locate and use the knowledge they already have.

5.2.14.4. *Physical environment and layout of work areas*

Physical environment and layout of work areas play a major role in knowledge sharing. Respondents were asked to what extent they agreed with the statement that physical work environment and layout of work areas restricting effective knowledge sharing. This meant understanding if municipalities had physical space conducive to knowledge sharing. Figure 5.14, shows that generally the respondents agreed that the physical environment and work areas layout restrict effective knowledge sharing.

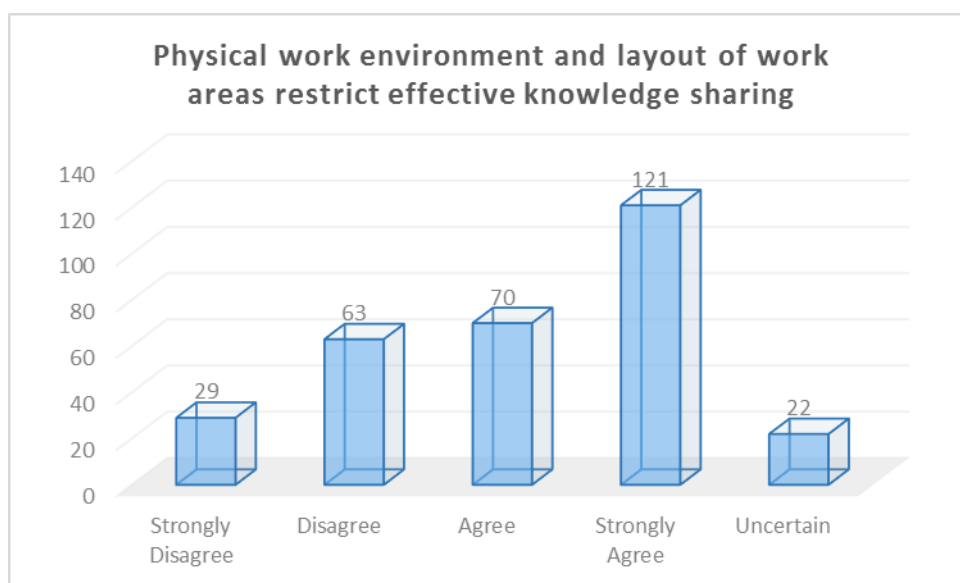


Figure 5.14 Physical work environment and layout of work areas restrict effective knowledge sharing (N=305)

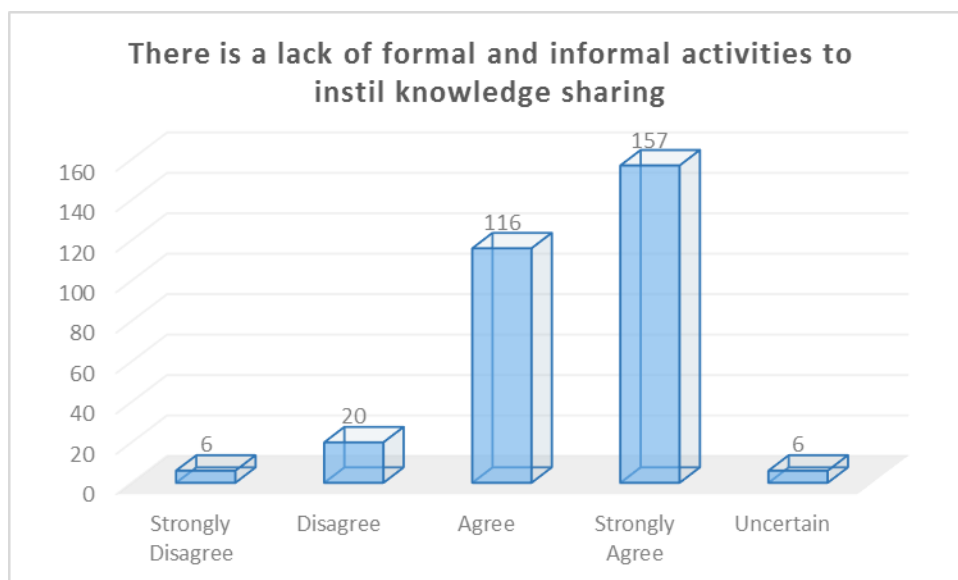
Hundred and twenty-one (39.7%) respondents strongly agreed that the physical work environment and layout of work areas in their municipalities restrict effective knowledge sharing while 29 (9.5%) of respondents strongly disagreed with the statement. Figure 5.13 also revealed that 70 (23.0%) respondents agreed, 63 (20.7%) disagreed and

22(7.2%) were uncertain on whether the physical work environment and layout of work areas restrict effective knowledge sharing. The dissatisfaction about the physical work environment and layout of work might be attributed to the fact that managers were assigned single occupancy plan while general staff were assigned multi-occupancy plan. It was not clear why respondents were dissatisfied about the physical work environment and layout because many organisations are moving towards proving more open, shared environment to increase knowledge flow and collaborative working (Pinder, *et al.*, 2009). Perhaps it was lack of privacy or the need to find private space for longer discussions may generate negative effects (Pinder, *et al.*, 2009).

5.2.14.5. *Formal and informal activities to instill culture of knowledge sharing*

Using a Likert scale, respondents were to state whether they agreed or disagreed with the statement that there was lack of formal and informal activities to instill culture of knowledge sharing. This question relate very well with question asked in Chart 5.2 in section 5.2.6.1 and Chart 5.3 in section 5.2.6.1 which asked the extent to which municipalities are encouraging knowledge sharing. The responses to this question would assist in identifying if there were any formal or informal activities to instill culture of knowledge sharing in Limpopo municipalities. Figure 5.15, summarises the results.

Figure 5.15 There is a lack of formal and informal activities to instill knowledge sharing (N=305)



When coming to the statement that municipalities lacked formal and informal activities to instill culture of knowledge sharing, 6(2.0%) respondents strongly disagreed with the statement, 20(6.6%) disagreed, 116(38.0%) agreed, majority 157(51.5%) strongly agreed with the statement, while less 6(2.0%) were respondents who were uncertain about the statement. Thus results pointing out the poor knowledge sharing practices in the selected municipalities, implying that knowledge sharing is not taken seriously.

5.2.14.6. *Municipal culture to support knowledge sharing*

The results showed that 10(3.3%) respondents strongly disagreed that the existing municipal culture did not support knowledge sharing sufficiently, 28(9.2%) disagreed with the statement. The results also showed that 116(38.0%) respondents agreed that that the existing municipal culture did not support knowledge sharing sufficiently, 142(46.6%) strongly agreed with the statement. Again, the results revealed that 9(3.0%) respondents were uncertain about the statement that the existing municipal culture did

not support knowledge sharing sufficiently. The findings suggest lack of knowledge friendly culture at the selected municipalities. Lindner and Wald (2010) affirms that culture is by far the most important factor of success for knowledge sharing. Summary of results is shown in figure 5.16.

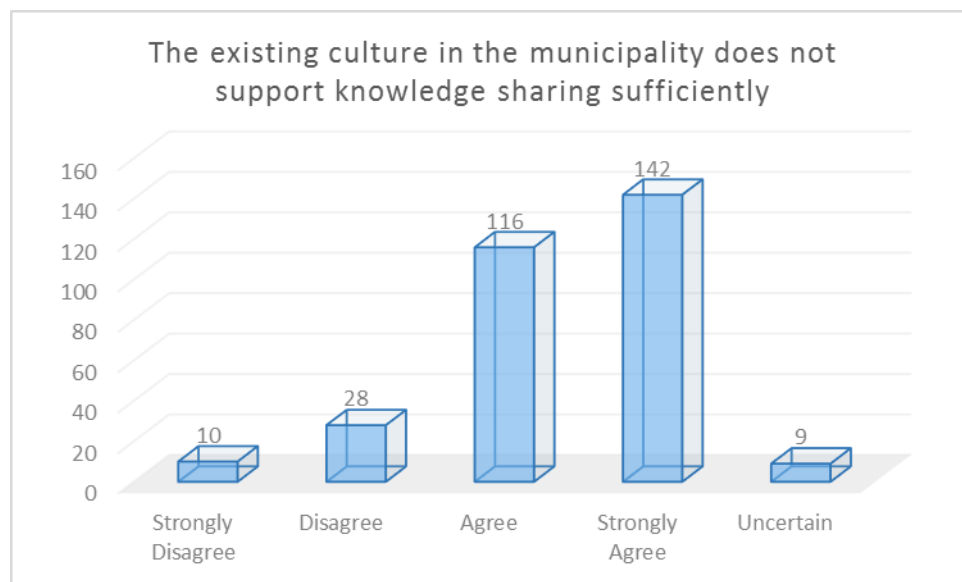


Figure 5.16. The existing culture in the municipality does not support knowledge sharing sufficiently (N=305)

5.2.14.7. Retention of highly skilled and experienced staff

Respondents were asked whether they agreed or disagreed with the statement that retention of highly skilled and experienced staff was not a priority in Limpopo municipalities. The aim of this question was to identify if municipalities value the tacit knowledge held by skilled and experienced staff. Results are shown in figure 5.17.

Figure 5.17 Retention of highly skilled and experienced staff is not a priority (N=305)

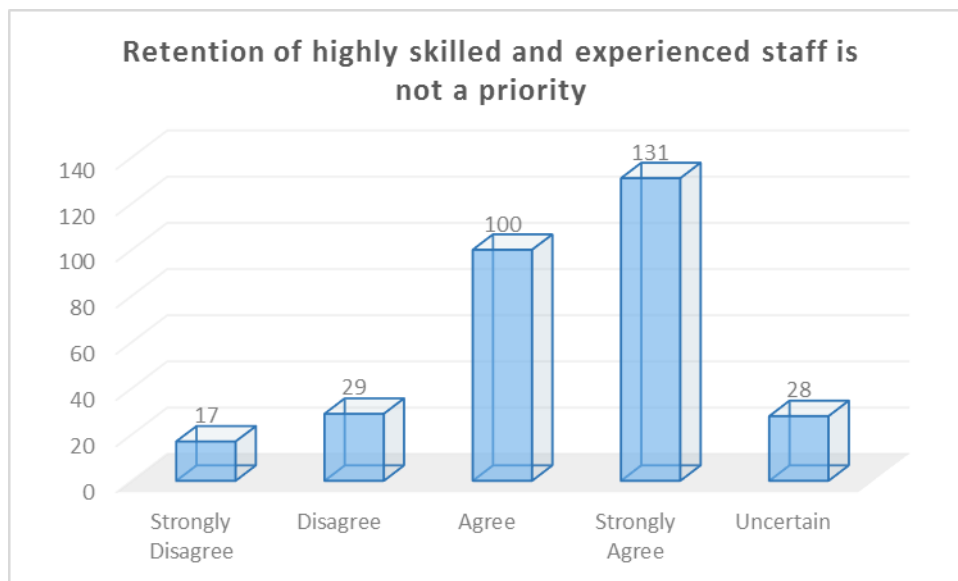


Figure 5.17 shows that 17(5.6%) respondents strongly disagreed that retention of highly skilled and experienced staff was not a priority in their municipalities and 29(9.5%) disagreed with the statement. Hundred (32.8%) agreed that retention of highly skilled and experienced staff was not a priority in their municipalities, 131(43.0%) strongly agreed and some respondents 28(9.2%) were uncertain about the statement that “retention of highly skilled and experienced staff was not a priority” in their municipalities. The findings denote lack of knowledge retention practices in the selected municipalities. Knowledge retention refers to all systems and activities that preserve knowledge and allow it to remain in the system once introduced (Chigada, 2014).

5.2.14.8. *Budget to support knowledge sharing projects*

Respondents were asked about lack of budget to support knowledge sharing projects. If knowledge sharing is budgeted for, factors such as rewards and incentives for those involved in knowledge sharing would be addressed. Enablers such as information

communication technology tools would be made available and maintained. It was important for this study to check out if municipalities had budget for knowledge sharing to show their commitment to knowledge sharing activities. Figure 5.18 indicates on a Likert scale whether respondents strongly disagreed, agreed, agreed, strongly disagreed and uncertain about the statement that there was lack of budget to support knowledge sharing projects.

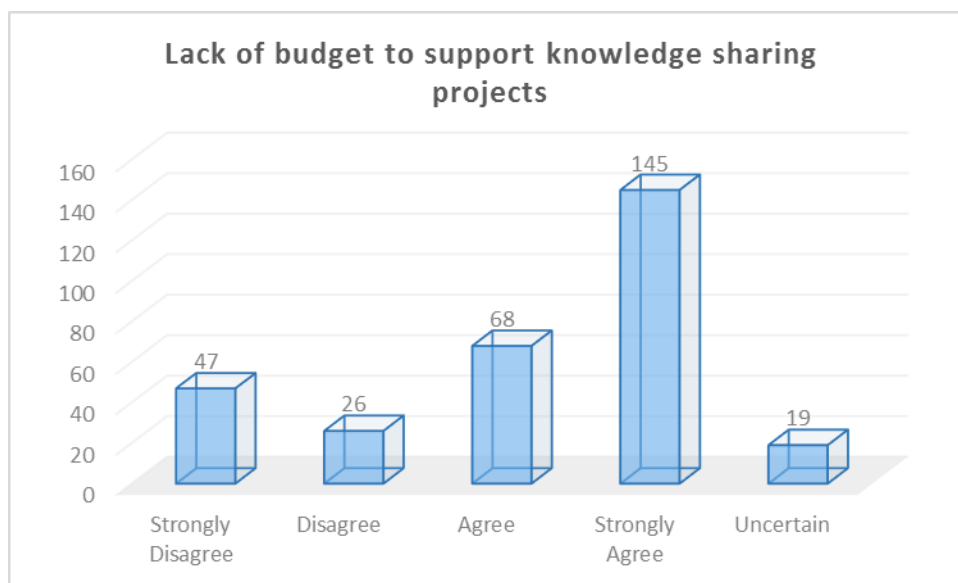


Figure 5.18 Lack of budget to support knowledge sharing projects (N=305)

The results are as follows: 47(15.4%) respondents strongly disagreed that their municipalities lacked budget to support knowledge sharing practices, while 26(8.5%) respondents disagreed with the statement. Figure 5.18 shows that respondents who agreed that lacked of budget to support knowledge sharing projects were 68(22.3%) and those who strongly disagreed were 145(47.5%), while less number 19(6.2%) of respondents stated that they were uncertain about the statement. The findings suggest that knowledge sharing in the selected municipalities is not a funded mandate or activity. This means that employees are not accountable to anybody if they decide to share or not to.

5.2.14.9. Lack of support from top management

Using a Likert scale (Strongly Disagree, Disagree, Strongly Agree, Agree, and Uncertain), respondents were to indicate the extent to which they agree or disagree with the statement that there was a lack of support from to management with regard to knowledge sharing in Limpopo municipalities. Management of organisations play an important role in developing organisational behaviour that supports knowledge sharing activities. This question was meant to understand the role management played in shaping the culture of human thought and behaviour in terms of knowledge sharing (Niranjana & Pattanayak, 2005). The results are presented in figure 5.19.

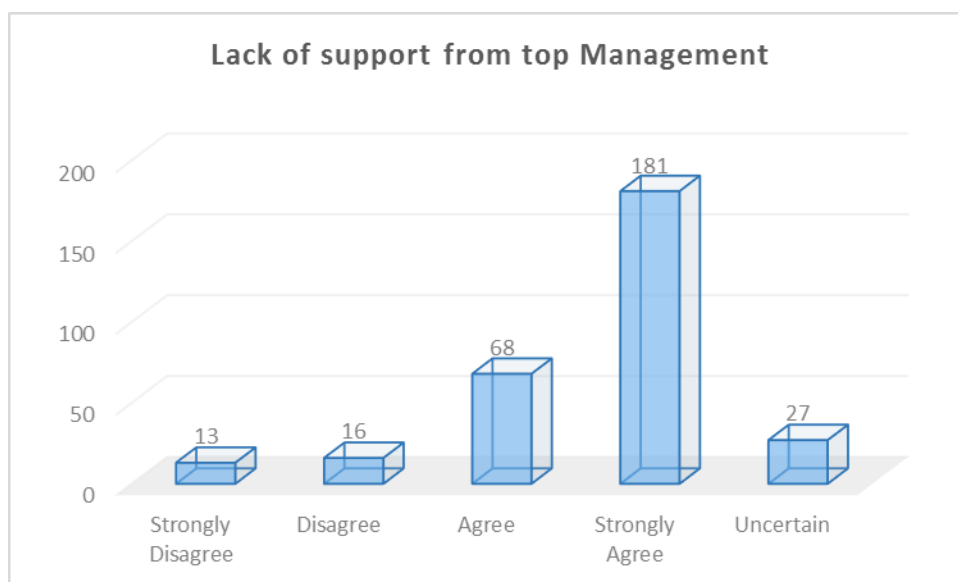


Figure 5.19: Lack of support from top management (N =305)

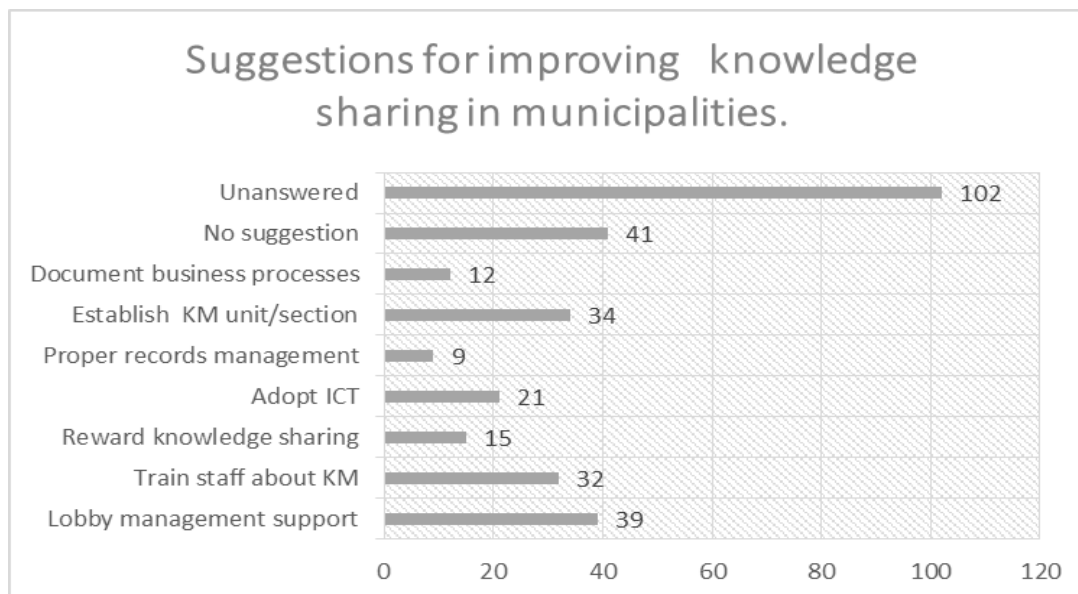
The results as shown in figure 5.19 reveal that knowledge sharing in the selected municipalities does not receive attention and support from management. This was evidenced by 13(4.3%) of respondents strongly disagreed that their municipalities lacked support from top management, 16(5.2%) disagreed with the statement. On the other hand, 68(22.3%) agreed that there was lack of support from top management in

their municipalities and 181(59.9%) strongly agreed with the statement. Twenty-seven (8.9%) respondents were uncertain whether their municipalities lacked support from top management or not. From the results it shows that there was lack of support from top management of Limpopo municipalities as majority 181 (59.9%) of respondents strongly agreed and 68 (22.3%) agreed that with the statement. Management support is required to ensure that knowledge sharing harmonise with organisational culture (Davenport & Prusak, 1998).

5.2.15. Respondents' suggestions on how to help municipalities improve knowledge Sharing

The last question of the questionnaire, asked respondents to make suggestions for improving knowledge sharing in Limpopo municipalities. Suggestions would reveal strategies that employees in Limpopo municipalities prefer for knowledge sharing. This question was aimed at recommending how knowledge sharing can be improved in the studied municipalities. The question was an open-ended one wherein various suggestions were made. For the purpose of data analysis for this study, the responses were grouped into subthemes and presented graphically in Figure 5.20.

Figure 5.20: Suggestions for improving knowledge sharing in municipalities (N=203/305)



Besides 102(33%) of respondents having not answered and 41(13%) indicated to have no suggestions on how to improve knowledge sharing in Limpopo municipalities, 162 (54%) respondents suggested the following:

5.2.15.1. *Documentation of business processes*

The results show that 12(5.9%) respondents proposed that municipalities should improve on their business processes. This means that, recording every processes or means of doing things in municipalities. Respondents further recommended that the documented business process be made widely available in both print and electronic formats. “By so doing, all staff members will have access to organisational knowledge”, one manager was quoted as saying.

5.2.15.2. Establishment of Knowledge management unit in municipalities

Out of 203 respondents, 34(19.7%) suggested that Limpopo municipalities should establish Knowledge management units/sections which would solely deal with Knowledge management issues. Respondents further recommended that such units/sections should be equipped with staff members qualified in the field of knowledge management. The knowledge management unit/section will be best-placed in providing a roadmap which will define the major 'steps' and provide the logical framework for the actions that should give effect to the knowledge management strategy and implementation plan. For instance, the section would describe in what order and how to implement the knowledge management practices and processes to be used. It will outline the timelines and allocate responsibilities accordingly. Thus holding both employees and municipalities accountable for knowledge sharing in municipalities.

5.2.15.3. Proper records management

Records show whether the organisation or individuals in it have met defined legal, organisational, social or moral obligations in specific cases (Wamukoya, 2000:25). In line with this some respondents 9(4.4%) suggested that municipalities should start by improving the poor state of records management in the municipalities. Thus improving access to explicit knowledge in the selected municipalities.

5.2.15.4. Adoption of information communication technology

Some respondents 21(10.3%) suggested that municipalities should fully adopt the of information communication technology tools. This should include acquisition and use of knowledge management systems. Standing and Kinitin (2011:288) observed that web 2.0 technologies, may overcome the problem of managing tacit knowledge in

organisations. To this end, some respondents proposed that municipalities should permit the use of social network such as Facebook and Twitter to communicate service related information. The use of social networks may enhance communication between municipalities and its stakeholders.

5.2.15.5. Rewards for knowledge sharing

Although rewards are perceived to play a major role in motivating the employees to share knowledge (Riedge, 2005), minority 14 (7.3%) of respondents recommended that employees should receive monetary rewards for sharing their knowledge. To achieve this, municipalities may integrate knowledge management aspect in the performance agreements/contracts between employees and municipalities.

5.2.15.6. Training of staff about knowledge management

Knowledge management training was also pointed out by 32(15.8%) respondents. Respondents recommended that all staff members, particularly top management should be trained on and about knowledge management. Such training could be in form of workshops, short courses and a formal training such as degree/diploma. If employees are trained to know the benefits of Knowledge sharing, they would be able to share it freely.

5.2.15.7. Get management support

There is insufficient buy-in or support from management and other critical stakeholders. This could be that knowledge management was not considered part of the strategic or core function at Limpopo municipalities. Thirty-nine (19.2%) respondents recommended solicitation of management support. If municipalities could have a support from top

management, resources to support knowledge sharing would be allocated accordingly. Resources in this regard include time, financial and human resources. The researcher believes that management support will influence employees' compliance to knowledge sharing.

5.3. Qualitative data analysis

The researcher conducted interviews and unobtrusively made some observations to establish the state of knowledge sharing in Limpopo municipalities. The observations were made and interviews were conducted at seven municipalities of the Limpopo Province. The observations scheduled were used as a checklist to establish how information and knowledge are collected, stored and shared. The interviews were used to clarify and confirm the observed situation. Interviews were arranged with 21 managers.

5.3.1 Interviews from managers

Twenty one managers of various sections were interviewed. Since data collection tools were triangulated, it was relevant to gather data from the managers and relate it to data from the questionnaires and observations schedule.

5.3.1.1 Interviewee's (managers) profile

Respondents were asked about their profiles. The aim of this question was to determine profile of the managers in relation to knowledge sharing and facilitation of knowledge sharing. The respondents' profiles included their departments/section they were employed, gender, qualifications and years of experience and positions. The profiles

are presented in Table 5.14. As shown in the table the researcher targeted managers from three sections, namely. Records and information management Municipal Manger's office and Information technology. The reason was that respondents from these sections were key informants because their sections play a pivotal role in knowledge sharing. For instance, Records and information management section is custodians of information and knowledge, Municipal Manger's office represent top management in municipalities and Information technology is viewed as an important enabler in knowledge sharing.

Table 5.14: Respondents' profiles (N=21)

Aspect	Number	Percentage
Department/section		
Records and information management	7	33%
Municipal Manger's office	7	33%
Information technology	7	33%
Gender		
Male	18	86%
Female	3	14%
Race		
Black	21	100%
White	0	0%
Indian	0	0%
Coloured	0	
Age		
18-25	0	0%
26-30	0	0 %
31-34	0	0 %
35-39	9	43%
40-45	10	48%
Over 45	2	9%
Job designation		
Managers	21	100%

Years of experience		
Less than or 5 years	3	14%
6-10 years	3	14%
11-15 years	5	24%
16-20 years	5	24%
More than 20 years	5	24%
Educational/training qualification		
Graduate	19	90 %
Postgraduate	2	10%

As shown in Table 5.14, 18 (86%) respondents were males while 3(14 %) were females. In terms of managerial positions, Limpopo municipalities had gender disparity because majority of managers were males. Nine (43%) were aged between 35-39 years. Nearly half 10 (48%) of managers were aged between, 40-45 years. Two 2(9%) managers were aged over 45 years. Table 5.14 also shows that all 21(100%) managers were Black. An equal number 3(14%) of managers respectively had less than or 5 years of experience and 6-10 years, 5(24%) had 11-15 years, 5(24%) had 16-20 years of experience. Lastly, 5(24%) had more than 20 years of experience. The last three categories of respondents were highly experienced and knowledgeable because they have more than 10 years of service.

Nearly all respondents 19 (90%) held at least a graduate degree while 2(10%) were even more qualified with post graduate degrees. Generally, the majority of these municipalities strongly preferred to recruit candidates with tertiary education. It seems that, holding a graduate degree is the minimum requirement to occupy a managerial position in Limpopo municipalities. However, qualifications of most managers were mismatched with position occupied. As one manager put it “in this municipality, change

of political leadership (Mayors) means reshuffling of senior managers, look I am a qualified IT specialist but am heading Records and Information Management section.”

5.3.1.2 How tacit knowledge (knowledge in people’s heads) is extracted?

Although few organisations have formal knowledge retention strategies (Liebowitz, 2011). However, the situation seemed to be different in Limpopo municipalities. Sixteen (76%) respondents said that they were using techniques such as exit interviews to extract the knowledge of employees who are about to depart. The concept of exit interviewing has been revisited and expanded as a knowledge management tool, as a way of capturing knowledge from leavers; rather than simply capturing human resources information, the interview also aims to capture knowledge about what it takes to do the job (Schunter, 2016). This contradicted a questionnaire survey finding whereby respondents said their municipalities did not take knowledge retention seriously (C.f 6.6.2.6). Furthermore, the interviewees indicated that through handover reports, municipalities were able to tap tacit knowledge from employees nearing retirement. Some indicated that their municipalities extract tacit knowledge by paring those about to resign or retire (Dewah, 2012) with the incumbent who would be acting in the position until it is formally filled. Five (24%) interviewees stated that their municipalities had no means of extracting tacit knowledge, meaning that if employees were to resign or retire, would leave with all the organisational knowledge they had gathered over the years of employment. Some respondents expressed that:

Interviewee A

“In this municipality nobody cares who knows what and how such knowledge may be used to benefit others and the municipality itself”

Interviewee B

“I do not know or remember this municipality having any mechanism to extract knowledge of the employees”

Chigada (2014:46) stated that in the absence of knowledge retention strategies, organisations continue to lose valuable knowledge.

5.3.1.3 How municipalities ensure that explicit (documented) knowledge is stored in an accessible manner

The interviewees were asked to state how they ensured that explicit knowledge was stored in a manner that it could be easily accessed. The answers revolved around registry, website and intranet. The researcher made some efforts to visit the said measures of storing explicit knowledge. The researcher visited records management centre. Unfortunately, the researcher was not permitted access to the records due to the nature of the information stored in there. Some of the verbatim statements:

Interviewee A

“I do not know what others do but in my section we try to keep all important documents either on the server or registry depending on the nature of the document”

Interviewee B

“We store documents at registry even though some staff members do not comply with this requirement”

Interviewee C

“The documents are uploaded on the website and intranet”

5.3.1.4 Available Knowledge management sharing fora

The interview with managers revealed that municipalities had various fora for sharing information and knowledge. The existing functional information fora (community of practice) exist at executive level were Chief financial officer's forum and Municipal manager's forum. The purpose of these community of practice was to establish a common team work for solving common challenges and sharing of best practices within and across the municipalities.

5.3.1.5 Knowledge Management Policy guiding knowledge management programmes in Limpopo municipalities

All 21(100%) respondents stated that they did not have knowledge management programmes and as such, they did not have policy documents, policy guidelines, manuals and standards for knowledge management. It seemed to the researcher that interviewees did not understand what knowledge management is because they claimed not to have knowledge management programmes while they had the existing functional information sharing fora. When asked what guides their information sharing fora, respondents said despite not having a formal knowledge management policy document, it was common knowledge for members to participate in information sharing fora.

5.3.1.6 Knowledge management budget

When asked how much of the municipal budget was set aside every year to support knowledge management programmes, all 21(100%) interviewees indicated that knowledge management was not budgeted for because knowledge management did not appear on municipal organograms or structures. This is not surprising as many

organisations are struggling to figure out just what KM means for them and their future (Smith & McKeen, 2003). On the contrary, Noor and Salim (2012: 509) explain that government and public organisations emphasised on the importance of knowledge sharing in their organisation for innovation and organisational performance.

Interviewee A

“There is no knowledge management in this municipality and there is no way it can be budgeted for. We only fund mandates that appear on the strategic plan”

Interviewee B

“You are aware that Limpopo Province is under administration and that had a negative impact on us. So we operate under a serious budget constraints and as such we only have budget for important things”

Interviewee C

“There is no budget for knowledge management at all and there was never budget for that ever since I joined this municipality nine years ago”

5.3.1.7 Information communication technology tools used to enable knowledge sharing

The researcher also observed that respondents had computers with internet connectivity. When asked if the available information communication technology infrastructure supported knowledge management, all section heads stated that office employees had the necessary information communication technology infrastructure except those who worked in the field. However, respondents did not know if the available information communication technology infrastructure could support knowledge

management programmes. The respondents were also asked if they were using knowledge management systems to facilitate knowledge sharing. Respondents indicated they did not utilise information communication technology tools for information sharing sessions and stated that they conducted face-to-face information sharing sessions. However, they reported that they used emails to arrange dates for information sharing sessions and venues where such meeting would be held. The use of technology can certainly be seen as a maintenance factor to knowledge sharing, that is, it is a necessary but not sufficient condition for knowledge sharing (Oye, *et al.*, 2011).

5.3.1.8 The ICT tools that municipalities still need to enable inter and intra knowledge sharing across Municipalities

Information technology is important to support knowledge sharing, especially in the digital age (Anna & Puspitasari, 2013). All of the studied municipalities were equipped with very basic information technology such as emails, fax, telephone and intranet that might be used for knowledge sharing process. Some of respondents 5(24%) believed that their municipalities were well equipped with information communication technology tools which could support knowledge sharing. When asked to recommend information communication technology tools that municipalities needed to enable inter and intra knowledge sharing within the local governments of Limpopo Province, majority of respondents 16(76%) did not know which tools they still need for knowledge sharing since they were not knowledgeable in the knowledge management field. Some respondents stated that they were not in a position to recommend knowledge management systems since they were not competent in knowledge management. One respondent was quoted as saying” *information communication technology managers could be in a better position to recommend knowledge management systems*”.

5.3.1.9 Methods of encouraging staff members to share organisational knowledge

As the last question, respondents were asked to explain how they encouraged staff members to share organisational knowledge. Respondents stated, there were no specific means and ways of encouraging staff members to share knowledge but considerable amount of knowledge was shared during meetings and other forums. Some respondents indicated that knowledge was shared when an individual approached colleagues asking about organisational matters. According to the respondents, knowledge sharing came naturally in their municipalities. This is supported by responses from Table 5.11 (C.f 5.2.1.1) wherein majority 152(66%) of respondents revealed that there were no mechanisms in place to encourage knowledge sharing in their municipalities. It is clear from the responses that there is little or no support to knowledge sharing culture at the Limpopo municipalities.

Interviewee A

“There is no specific method”

Interviewee B

“It is difficult for me to say but, I think through staff meetings”

Interviewee C

“Management encourage staff to consult managers and senior managers when they experience problems and challenges”

5.3.2 Data collected from observations

The following aspects formed part of observation guide: Interaction among staff, Library, Registry, knowledge management strategy, Notice boards, Meetings/workshops and information communication technology tools.

5.3.2.1 *Interaction among staff*

A valuable avenue for knowledge sharing occurs during social interaction be it in the corridor, or at the water cooler, or a chat over lunch, and it is not uncommon in those discussions for storytelling to be used to illustrate examples of points to be made (Mitchell, 2008). The researcher observed that there was little interaction among staff as members were having tea or lunch in their respective offices. According to Azudin, *et al.* (2009), knowledge sharing through informal communication takes place during lunch hour compared to workplace. The knowledge workers prefer sharing information outside the organisation for various reasons such as more freedom to express information, thought, where people can discuss freely about anything. The researcher also observed there were less movements between the offices or in the corridors. This could be that the staff was engaging in knowledge sharing mostly during formal gatherings such as meetings and perhaps through the use of information and communication technologies.

5.3.2.2 *Library*

The observation was made to determine the role of library in knowledge sharing. African Libraries role in Knowledge management while not yet widespread, can involve content management, web based access to print based information, and use of skills in indexing

and thesaurus construction to facilitate Knowledge sharing (Mchombu,2010). Employees were observed as they were visiting the library. The aim was to determine if employees regard library as important tool for knowledge management. The researcher observed that the library collection consisted of books for use by the general community and no municipal documents such as reports, strategic plans were stored in these libraries. This could be that libraries are situated outside and sometimes far away from municipal offices as they also serve as public and/or community libraries.

5.3.2.3 Records management centres/registry

Knowledge management and records management complement each other and are interrelated. Swartz (2015) views records management as a tool to support knowledge management by identifying where critical information and knowledge resides and how to harness it for critical decision making areas. The researcher observed employees visiting records centres checking in and returning records for various purposes. Access to records centres was restricted because of the confidentiality of information held in the records. Registry officials told the researcher that most of the records that were circulating were human resource management records.

5.3.2.4 Policy documents

The benefits of knowledge management may be realised if there is a knowledge management policy (Chigada, 2014:42). The researcher intended to peruse documents such as knowledge management policies, strategies and procedure manuals that guide knowledge sharing in the studied municipalities. Unfortunately, all municipalities did not have these documents except strategic plans, annual performance plan and annual

reports that the researcher was able to peruse. Sadly, there was nowhere in these documents where knowledge sharing was discussed. The implication was that there were no guidelines for knowledge sharing in the studied municipalities.

5.3.2.5 Notice boards

Noticeboards were checked with a purpose of identifying the type of knowledge that was shared at the studied municipality. It was again to observe people checking the messages or not checking. According to Parsons (2004), notice boards are highly effective tool to build and share knowledge. Even though there were some notices, few employees were checking information on the board. This could be that people had already read the notice board before observation took place.

5.3.2.6 Meetings/Workshops/seminars

Meetings, seminars and workshops can be used to enhance knowledge sharing. The intention was to make observations in workshops and seminars but there were no workshops or seminars at the time of data collection. However, the researcher managed to attend a meeting from one municipality. Meetings can be useful learning and knowledge sharing opportunities when they are planned to be interactive and presenters must not only allow for questions from participants (Robbins & Finley, 2000). The observation made indicated that knowledge was flowing from the managers to junior staff members. Regular meetings for the purpose of discussing work-related experiences provide an avenue for sharing knowledge that generates a collaborative environment and one through which everyone benefits (Mitchell, 2008). According to

Staplehurst and Ragsdell (2010) sharing knowledge in meetings provides a free environment where members make their contributions.

5.3.2.7 Information communication technology tools

Among the information communication technology tools that were observed by the researcher were computers, telephones, faxes, intranet sharing of knowledge and usage of information communication technology tools at the Limpopo municipalities. Unfortunately the researcher could not have access to intranet as such it was impossible to ascertain if the intranet was working and/or even used effectively to share knowledge. Effective knowledge sharing depends on people sharing their knowledge through computer facilities that users throughout the organisation have access to. Authors such as Yeh, *et al.* (2006) and Gaffoor (2008) agree that information communication technology such as intranet play important role in collaborations in organisations as such help in the sharing of knowledge.

5.4 Chapter summary

This chapter shows some direction towards the findings of the study that would determine whether the research objectives were achieved or not. The following findings were recognised: Respondents are aware of the benefits of knowledge sharing in an organisation. Respondents as a whole agreed that municipalities are encouraging knowledge sharing to less extent. Although they believe that knowledge is important for improving municipal governance, a gap between beliefs and the actual practices is evident. For example, 152 (66%) of the respondents indicated that there were no mechanisms available to encourage staff to share organisational knowledge but the

interviewees argued that knowledge sharing came naturally in their municipalities. Respondents admitted that knowledge management practices are poor in their organisation as almost all agreed that there are no unit/section for knowledge management in municipalities. All 21(100%) interviewed managers also admitted that they have no written knowledge management policy or strategy and majority 152 (66%) of respondents from the questionnaire survey acknowledged that they have no formal mechanisms in place to capture experience and knowledge of employees. Almost all respondents were not aware that library is an important knowledge management tool that may facilitate knowledge sharing. As such all municipalities did not deposit seminar/workshop material at the library. There was inadequate use of information communication technology tools to support knowledge sharing. Even though Limpopo municipalities had basic information communication technology tools, there was little or no evidence of knowledge management software and systems. Hence some respondents suggested to municipalities to adopt knowledge management systems in order to improve knowledge sharing in the selected municipalities.

CHAPTER SIX:

DISCUSSION OF THE FINDINGS

6.1 Introduction

The quantitative and qualitative data analyses in chapter five presented the results obtained from the survey interviews and observations. This chapter presents an interpretation and discussion of the findings that were presented in chapter five. The interpretation and discussion were done in relation to research objectives, research questions discussed in chapter one, literature review discussed in chapter three, data presented in chapter five. The findings are also discussed in relation to five theories discussed in chapter two (C.f 2.3). Such theories are: knowledge-based view of the firm, theory of diffusion of innovations, theory of reasoned action, social exchange theory and organisational knowledge conversion theory. This chapter discusses the research findings to determine how they can contribute to knowledge management field. As outlined in chapter one (C.f 1.22 and 1.23) the study introduced the aim and objectives of the study as follows:

The aim of this study was to underscore the role of knowledge sharing in improving the municipal governance in the local government sector of South Africa. The objectives of the study were to:

- Find out the kind of knowledge management programmes which are in place in the municipalities of Limpopo Province.
- Establish the extent to which municipalities in Limpopo Province encourage knowledge sharing for improvement of municipal governance.

- Determine factors which affect knowledge sharing among employees of municipalities of Limpopo Province.
- Propose recommendations and strategies on how to optimally share knowledge in Limpopo municipalities.

6.2 Theories used in this study

There three theories that were used in this study, namely Knowledge-based view of the firm, Social Network Theory (SNT), Diffusion of Innovation Theory (DOI), Theory of planned behaviour (TPB) and Organisational knowledge conversion theory. This study was anchored on Organisational knowledge conversion theory. Therefore the theory was used to organise and analyse data collected through the respondents' questionnaires, interviews observations and document analysis.

6.2.1 *The knowledge-based view of the firm*

Knowledge-based theory of the firm regards knowledge as the key productive resource of the firm as well as a principal source of competitive advantage (Nonaka, 1994). According to Sveiby (2001) employees can use their competence to create value by transforming and converting knowledge externally or internally to the organisation they work for. This suggests that it is important for municipalities to have strategies to manage knowledge for good municipal governance. From the studied municipalities knowledge is not considered an important resource that could be used for good governance. For instance, managers indicated during the interviews that the municipalities did not have any formal structures for managing and sharing knowledge.

However, some aspects of knowledge sharing were evident in these municipalities. The next section explains such aspects through Organisational knowledge conversion theory.

6.2.2 Aspects of Organisational knowledge conversion theory in the studied municipalities

The organisational knowledge conversion rests on the premise that knowledge is converted from one state to another (Nonaka and Takeuchi, 1995) and in that way organisational knowledge can be shared. As state in chapter 2(Cf. 2.3.6) Organisational knowledge conversion deals with the conversion of knowledge from tacit to tacit (Socialisation), from tacit to explicit (Externalisation), from explicit to explicit (Combination) and from explicit to tacit (Internalisation).

6.2.2.1 Socialisation (tacit-tacit)

Menolli, *et al.* (2015:292) described socialisation as the conversion of part of a person's tacit knowledge to the tacit knowledge of another person and occurs through the sharing of experiences between people. In the studied municipalities knowledge is shared through discussions conducted in formal meetings, community of practice and training programmes. Through these programmes, employees gain more experience, by face-to-face discussions with colleagues from either different municipality or different business unit or sections. Information and communication technology enables of knowledge sharing. Through emails, intranet and website tacit knowledge was transferred from one employee to other employees.

6.2.2.2 Externalisation (tacit-explicit)

Externalisation is defined as the conversion of tacit knowledge into documented knowledge (Nonaka and Takeuchi, 1995). The studied municipalities transform tacit into explicit knowledge by documenting the outcomes of various activities. Employees are asked to document and report the outcomes of their discussions in meetings, workshops and other training programmes. Essentially, externalisation in studied municipalities, occurs when tacit knowledge is codified into documents such as reports and manuals. Through externalisation, some knowledge is made explicit while much remain tacit.

6.2.2.3 Combination (explicit–explicit)

According to Toyama, and Konno (2000:10) combination is the process of converting explicit knowledge into more complex and systematic sets of explicit knowledge and it involves the use of social processes to combine different bodies of tacit knowledge held by employees in an organisation. The combination process reformulates explicit knowledge into a clearer and more beneficial form for municipalities and staff thereof. Reconfiguration of existing knowledge leads to the creation and sharing of new knowledge (Nonaka, 1994). In the studied municipalities, individuals exchange and combine knowledge through processes such as meetings, telephone conversations, and document exchanges. The studied municipalities also perform certain activities to implement combination process such as the continuous updating of records, reports, website and intranet.

6.2.2.4 Internalisation (explicit-tacit)

Internalisation is the process of converting explicit knowledge to tacit knowledge and is closely related to learning by doing (Nonaka and Takeuchi, 1995). The selected

municipalities encourage employees to internalise explicit knowledge by studying relevant courses, accessing outcomes of training programmes, databases, and by arranging meetings to explain the content of related reports and documents. The selected municipalities support staff to attend workshops and other training programmes. Internalising knowledge is also related to “learning by doing”, so training on the job has an important role (Nonaka and Takeuchi, 1995). In this study, procedure manuals were identified as support materials used to solve some work-related problems. Tacit knowledge accumulated can then set off a new spiral of knowledge creation when it is shared with others through socialisation” (Nonaka, Toyama, & Konno, 2000:10).

6.3. Patterns of data for each research objective

This chapter provides a discussion of the findings in line with the objectives as outlined in Chapter one (C.f 1.23). The document analysis, survey questionnaire, and interviews that were carried out established that the selected municipalities were somehow committed to implementing knowledge management practices and strategies for knowledge sharing. However, this study identified some indicators that point to Knowledge management challenges facing Limpopo municipalities in South Africa. The findings are discussed in the context of wider comparisons with the literature review.

6.3.1. *Respondents’ Profiles*

Although, the characteristics of research participants did not form part of the research study objectives, Section A of the questionnaire and interview guide opened with the respondents’ profile. Brčić and Mihelič (2015:855) advises that “characteristics of

employees themselves also contribute to the initiation and effectiveness of knowledge sharing. More specifically, employees of different ages, who belong to different generational cohorts vary in their desire to share knowledge with co-workers". Subsequently, the well-established differences between generations and the consequential conflicts (Aker, 2009) can undermine the dissemination of knowledge within teams and departments. Therefore respondents' profile was important to show that strategies, processes, and methods to share knowledge were helpful and necessary for municipal leaders to bridge the generation gap; develop sensitivity to diversity, enhancing open communication and understanding the strengths and benefits of multigenerational workforce (McNichols, 2010). Respondents' profile from the questionnaires revealed that the majority of the respondents were below 40 years. Mohamed, *et al.* (2006) posits that these age groups are very active and can change organisations resulting in knowledge leakage. Staff composition in Limpopo municipalities is predominantly Black, including management positions. This reveals a violation of employment equity act. As far as gender is concerned Limpopo municipalities had more females than males. Majority of respondents had educational qualifications.

Profile of the interviewed managers as shown in Table 5.14 in section 5.3.1.1, revealed that eighteen (86%) of managers were males while 3(14 %) were females. Table 5.14(C.f 5.3.1.1) also showed that all 21(100%) managers were black. With regard to age of managers, nine (43%) were aged between 35-39 years. Nearly half 10 (48%) of managers were aged between, 40-45 years. Two (9%) managers were aged over 45 years. Furthermore: 3(14%) managers had less than or 5 years of experience, 3(14%) had 6-10 years, 5(24%) had 11-15 years, 5(24%) had 16-20 years of experience.

Similarly, 5(24%) had more than 20 years of experience. The last two age groups are probably highly experienced and knowledgeable given the long period of service. Nineteen (90%) respondents were graduates while only two (10%) respondents held post graduate qualifications. The next section provides a discussion of the findings in line with the objectives of this study.

6.3.2. Knowledge management programmes which are in place in the municipalities of Limpopo Province

In an organisation, knowledge management success and maturity are dependent on a broad set of capabilities that cross processes, technology and people (Gartner Group, 2006). Using different maturity models, the researcher was able to analyse and assess how Limpopo municipalities develops through different levels which are briefly explained below (Gartner Group, 2006):

- Level 0: Nonexistent.** Knowledge management is not on the radar screen. There are no recognisable processes in place and no strong awareness of the opportunity to be addressed.
- Level 1: Initial.** The organisation recognises the opportunity in Knowledge management. There are some initial applications that are locally built and supported. There is no real organisation around Knowledge management.
- Level 2: Repeatable.** Consisted approaches to Knowledge management exist for key applications. People in different parts of the organisation are using similar approaches. Some sharing of infrastructure is taking place.
- Level 3: Defined.** Awareness is high. Knowledge management is well understood and its potential appreciated. There is a growing use of consistent process, technology and shared infrastructure. Centralised support is emerging

- Level 4: Managed.** Knowledge management is planned and funded on a regular schedule. Business units plan the integration of Knowledge management into business processes. Funding and business value are predictable. Reliable support is available.
- Level 5: Optimised.** Knowledge management is integrated into management practices. Creating and managing intellectual capital and goals in key enterprise initiatives. Knowledge and intellectual assets are well managed.

The five levels of assessment were used to outline the status of Knowledge management in the studied municipalities. The findings reveal that with the exception of Fetakgomo municipality where Knowledge management is repeatable at level two, the rest of the municipalities are at initial level one on the Gartner scale. The state of knowledge management programmes and practices in Limpopo municipalities is poor. Majority of respondents were not happy about Knowledge management programmes and practices at their municipalities. Hundred and twenty four (40.7%) respondents stated that their knowledge management programmes were very poor, while 72(23.6%) indicated that their knowledge management programmes were poor, suggesting that Limpopo municipalities are struggling with knowledge management. The poor state of knowledge management is not surprising because the interviews with managers established that there were no knowledge management strategy, policy documents, manuals or standards that are being applied to run the knowledge management programmes in Limpopo municipalities. Different from this, the City of Cape Town metropolitan municipality had embraced knowledge management such that it drafted knowledge management strategy for the City of Cape Town (InfoWizz Information Services Business Data Solutions, 2006). It is worth mentioning that poor state of knowledge management programmes is not only prevalent in Limpopo municipalities. Research (Al-Khouri, 2012; 2011; Shields, *et al.*, 2000), showed

that public sectors across the world are struggling with knowledge management. Khoza's study (2008) found that knowledge management practices are poor in South African public sector because of the following reasons:

- The South African public sector knowledge and understanding about the leveraging of knowledge management for service delivery is poor.
- The knowledge management prioritisation for leveraging effective service delivery is non-existent.
- There is no knowledge management culture in the public sector
- There are a few structures that drive Knowledge management for the service delivery in the public sector
- The public sector does not have the requisite skills and competencies to leverage knowledge management for service delivery.

Although information communication technology is regarded as a natural medium for the flow of knowledge in the organisation (Allameha, *et al.*, 2011:1215) and it determines the knowledge accessibility in the organisation (Gaffoor, & Cloete, 2010:4), majority 213(69.8%) of respondents used notice boards for knowledge sharing. The striking finding is that Limpopo municipalities still rely more on manual information systems for sharing information and knowledge during this technological era. Underutilisation of information communication technology was corroborated by the interviewed managers. They indicated that communities of practice (Municipal managers' and Chief financial officers fora) physically rotate amongst Limpopo municipalities. Technology can either enables or hinders knowledge sharing in an organisation (Johansson, *et al.*, 2013: 299); in Limpopo Province it hinders knowledge sharing. It is worth to note from the interviews with managers was that Limpopo municipalities do attempt to extract tacit knowledge from the employees. This was in particular to those leaving the organisation.

6.3.3. *Extent to which municipalities in Limpopo Province encourage knowledge sharing for improvement of municipal governance*

As stated in the literature review chapter, (C.f 3.9.1) there is a significant relationship between reward system and knowledge sharing in organisations (Jahani, *et al*, 2013). Oliver and Kandadi (2006) confirmed that organisational rewards motivate employees towards knowledge sharing and foster a knowledge culture. As such, knowledge sharing needs to be rewarded and recognised (O'Dell & Hubert, 2011). According to Wai Ling, *et al.* (2009) the most effective method to promote knowledge sharing in an organisation is to link it with rewards and performance appraisal. Contrarily, Limpopo municipalities did not have a clear rewarding system for knowledge sharing. Majority 279 (91.5%) of respondents indicated that they were not rewarded for sharing knowledge. Hence, the level of knowledge sharing in Limpopo municipalities is low. It has been stated that the low level of information and knowledge sharing among government agencies is the major contributor to poor service delivery in the public sector (Yusof & Ismail, 2009:1). Limited number of respondents 26(8.5%) indicated that they were rewarded for sharing knowledge. Of this percentage, 24(7.9%) said the types of rewards they received were intrinsic, meaning that they derived inner satisfaction and gained social recognition by sharing knowledge. Only 3(1.0%) claimed to receive extrinsic rewards in form of money. It is clear from the results that municipalities in Limpopo Province did not encourage knowledge sharing.

When asked to indicate the extent to which municipalities encouraged knowledge sharing, nearly half 146(48%) of the respondents said their municipalities encouraged information and knowledge sharing among employees to a less extent, followed by

117(38%) of the respondents who reported that their municipalities did not encourage information and knowledge sharing among employees at all. This implies that Limpopo municipalities work in silos and did not share the best practices among themselves. The low levels of knowledge sharing is not only within certain municipalities, but also within the entire Limpopo local government sector. The research results for a study conducted in local administration offices of the Silesian Voivodeship, Vienna, Austria indicated that, there are still a lot barriers causing difficulties in the transfer of knowledge in local governments (Kuraś & Kuraś, 2015).

6.3.4. Factors affecting knowledge sharing among employees of municipalities of Limpopo Province

There are various factors influencing knowledge sharing in an organisation. Such factors may emanate from individuals, organisation and technology (Riege, 2005). According to Riege(2005) individual factors include: motivation, trust, time, power and leadership, communication skills; organisational factors include: management support, reward system, organisational structure, human resource management practices, organisational culture, office politics, and strategies to share knowledge; while technological factors include IT systems, IT skills and member training. Questionnaire survey, interviews and document analysis showed that lack of supportive knowledge management enablers inhibited the sharing of knowledge. There was consensus between interview and survey respondents that there were knowledge sharing challenges in the selected municipalities.

5.3.5 *Individual factors/barriers affecting knowledge sharing in municipalities*

Employees' tacit knowledge, by its very nature, is difficult to transfer and that knowledge sharing is typically voluntary (Lin, Hung & Chen, 2009). Research (Kuraś & Kuraś, 2015; Liebowitz & Chen, 2003), showed that it is more difficult to share knowledge in public sector organisations because most people believe that their knowledge would become obsolete once they share it. Others associate knowledge with power, and their promotion opportunities and as such they cannot share it. In this study, 131(43.0%) of respondents strongly disagreed and 100(32.8%) disagreed with the statement that "knowledge is power I cannot share it with anyone" (C.f 5.2.1.3).

Lack of time was one of the factors limiting the process of knowledge sharing in local governments of Vienna, Austria (Kuraś & Kuraś, 2015). Other researchers also found that lack of time was a major barrier towards knowledge sharing in many organisations (Riege, 2005; Wai Ling, *et al.*, 2009). Some 97(31.8%) of respondents disagreed that lack of time was a barrier to knowledge sharing in their municipalities. So, it can be deduced that lack of time is also a barrier limiting the process of knowledge sharing in Limpopo municipalities.

6.3.5.1 *The concept of knowledge management*

Both questionnaire survey and interviews confirmed that there was some recognition on the opportunity of Knowledge management in Limpopo municipalities, but there was also much confusion as to what constitutes knowledge management and how it is an important element in service delivery. In an attempt to clarify the concept, Alshboul, *et al.* (2012:18) defined knowledge management as the process of identifying and seeking the intellectual experiences and assets which individuals inside an organisation possess, and transferring

and conveying them to an organisation through publications, or through the auxiliary systems for conveying knowledge, with a view to disseminating knowledge and improving performance of municipalities. The understanding of knowledge management depends on the programmes put in place to educate and bring awareness to employees on the importance of knowledge management (Chigada, 2014). There is prevailing misconception about the concept knowledge management in Limpopo municipalities. A total number of 130(42.6%) respondents agreed that misconception about Knowledge management affect knowledge sharing in their municipalities and 71(23.3%) of respondents agreed in stronger terms. This is consistent with research findings from a study conducted by Khoza (2008) in South African public sector revealed that senior officials and politicians did not even understand what knowledge management means. They viewed knowledge management as IT or Information Systems and fail to understand the difference between data, information, knowledge and wisdom.

6.3.5.2 *Employee team interaction*

Cong, *et al.* (2007) pointed out that, effective functioning of government rests on effective sharing and use of knowledge by public sector employees at various levels, central or local. However, the results of this study revealed a different picture about Limpopo municipalities. A striking finding was that 138(45.2%) of respondents agreed and 110(36.1%) strongly agreed that lack of interaction between those who can provide and those who need knowledge was a barrier of knowledge sharing in Limpopo municipalities. This implies that employees work in silos within and across the municipalities. Without employee interaction there would be no knowledge sharing. Consequently people in organisations would remain fixed in silos, poorly knitted together, prone to duplication of work and repetition of mistakes, wastage of resources,

forgetful of good ideas, and without the harnessing of strengths (Gaffoor & Cloete, 2010:1). All of this would be time consuming, costly and lead to ineffectiveness and inefficiencies in municipalities. This might explain the poor municipal governance prevalent in most municipalities. The “know how” was not shared among the municipalities that perform well and those who do not perform well. What needs to be done is that municipalities should share best practices in order to improve municipal governance.

6.3.5.3 *Communication and interpersonal skills*

Communication and interpersonal skills is very important for carrying and disseminating messages. Hence Hoong, *et al.* (2015: 295) alluded that “Knowledge workers must be able to speak, write, read and listen closely on the information. They must be able to converse well with their subordinates and their supervisors to achieve the organisational effectiveness and continual improvement of products and sales together.” However, in many instances lack of communication and interpersonal skills remains a challenge among employees in various organisations. Lack of communication skills has been classified by Riege (2005) and Wai Ling *et al.* (2009) as one of individual barriers that may affect knowledge sharing in an organisation. In this study, 100 (32.8%) and 68 (22.3%) respondents respectively agreed and strongly agreed with Wai Ling *et al.* (2009) and Riedge’s (2005) observation, that municipal employees do not share knowledge due to poor communication and interpersonal skills. Social exchange theory explains that individuals interact with others based on a self-interest analysis of the costs and benefits of such an interaction. The core of the theory is the principle of reciprocity to which the interpersonal relationship adheres (Jinyang, 2015:172). Interviews and survey responses showed that employees did not freely interact or learn from others.

Over and above lack of communication skills, inadequate information communication technology infrastructure exacerbate communication problems in the municipalities that were studied. Brčić and Mihelič (2015:855) affirms that the actual sharing of knowledge requires interpersonal interactions, so factors pertaining to this may also help explain the level of knowledge sharing. In other words, the decision to share knowledge with a co-worker may also be contingent on the nature of the working relationship. The closer the actual relationships between employees, the higher the probability that the process of knowledge sharing will unfold (Brčić & Mihelič, 2015:856).

6.3.5.4 *Fear*

In most organisations, individuals fear to make and admit mistakes (Weir & Hutchings, 2005). When fear is present in an organisation, people would not contribute in sharing critical information and would be suspicious regarding their organisation's true intentions (Davenport & Prusak, 2000). A study by Usoro, *et al.* (2007), examined the role of fear of losing face within virtual communities of practice and found that people who experience fear of losing face in the context of knowledge sharing are afraid that the information they provide might be inaccurate or that their contribution might be unimportant. A study conducted by Easa (2012:37) found that "when managers asked their employees to document findings of any discussions, due to a fear of making mistakes, the employees were very cautious to document exactly what they were asked to do, without reference to their feedback from managers, or other useful informal knowledge." The results of this study are consistent with the literature because 84(27.5%) and 110(36.1%) have respectively agreed and strongly agreed that fear restricted staff from seeking knowledge from their immediate supervisors and peers. Some respondents 84(27.5%) agreed, while 103 (33.8%) strongly agreed that they

feared that sharing knowledge would result in undue credits being accorded to undeserving employees. By implication, fear limits innovation and creativity in an organisation.

Closely related to fear is trust. Studies have shown that trust plays a pivotal role in knowledge sharing. Trust among co-workers is an important cultural element for successful knowledge management (Issa & Haddad, 2008). Similarly, Snowden (2000) regards trust as a fundamental aspect of knowledge sharing and the most crucial requirement for knowledge transfer. The researcher believes that when people trust each other, they would be more willing to provide useful knowledge and also when trust exists, people are more willing to listen and absorb each other's knowledge (Andrews & Delahay, 2000). Without trust, employees may not engage in knowledge sharing. The results of this study show that nearly half 149(48.9%) of respondents cited lack of trust among personnel in the municipalities as a barrier to knowledge sharing. Davenport and Prusak (2003), pointed out that if distrust is present within an organisation, knowledge management cannot, and will not, succeed.

6.3.6 Organisational factors/barriers affecting knowledge sharing in municipalities

Organisational barriers emanates from the organisation itself. According to Riege (2005), lack of integration of IT systems/processes; technical support; maintenance of integrated IT systems; people's reluctance to use IT systems and lack of training are the main barriers in knowledge sharing. Organisations have been taking steps to combat loss of knowledge by investing in technologies that help facilitate knowledge sharing, but not in Limpopo municipalities. From the responses to questionnaire, the study

established that 71(23.3%) and 129(42.3%) had respectively agreed and strongly agreed that inadequate information technology systems was a barrier of knowledge sharing in their municipalities. Interestingly, this was inconsistent with interviews results. Managers indicated that their municipalities had the necessary information communication technology tools but did not know if it can support knowledge management. This implied that IT as a Knowledge management enabler is not optimally utilised in Limpopo municipalities. This is consistent with research findings in the public sector in the USA, whereby inadequate technology was found to be the main barrier to knowledge sharing (Gorry, 2008). This finding is also consistent with McAdam and Reid (2000) observation that lack of technology was a major barrier to knowledge sharing in the public sector. However, it is worth mentioning that the studied municipalities have functional websites and intranets. Research has shown that Intranet is a powerful tool for communication and collaboration that presents data and information and the means to share knowledge, in one easily accessible place (Sayed, *et al.*, 2009: 228). Furthermore, intranet offers municipalities the ability to centrally find and access organisational information and knowledge to support knowledge workers and knowledge sharing (Averweg, 2012:1).

6.3.6.1 Reward system

Asrar-ul-Haq and Anwar (2016:8) pertinently said that the “presence of rewards and motivation facilitates knowledge sharing and transfer, while the absence of rewards and motivation hinders the sharing and transfer of knowledge. Thus, when individuals are not motivated to share knowledge and there is no reward for them, they tend to hide the knowledge they possess and do not reveal or share it with others”. Lack of rewards and recognition system to motivate staff to share Knowledge was also found to be an

organisational barrier towards knowledge sharing in Limpopo Municipalities. This was demonstrated by a sizeable number 279(91%) of the respondents who revealed lack of reward system in their municipalities. This explains why employees are not encouraged and motivated to share knowledge in Limpopo municipalities. This was inconsistent with studies that emphasised the importance of rewards in knowledge sharing. For instance, O'Dell and Hubert (2011) pointed out that knowledge sharing behaviour need to be rewarded and recognised. Oliver and Kandadi (2006) argued that organisational rewards motivate employees towards knowledge sharing and foster a knowledge culture. A study conducted by Wai Ling, *et al.* (2009) found monetary rewards to be more effective in promoting knowledge sharing in an organisation, while Oliver and Kandadi (2006) established that the indirect rewards such as appreciation and recognition play a greater role in knowledge sharing.

6.3.6.2 Poor knowledge management practices

King and Marks (2008) pronounced that an organisation should create a dynamic knowledge capability where knowledge is acquired, created, shared and retained to improve business processes, practices, products and relationships. The result of questionnaire survey, interviews and observations revealed poor knowledge management practices in the Limpopo municipalities. The study discovered that municipalities had no proper systems and processes to identify employees who were knowledgeable or possessed certain expertise that needed to be shared among the employees. As a result, Limpopo municipalities find it difficult to identify, select, organise, disseminate and transfer important information and expertise that are part of the organisational memory that typically resides within an organisation in an unstructured manner. This was evidenced by majority 164 (54%) of the respondents

who strongly agreed that their municipalities did not have any system for identifying knowledgeable colleagues to share knowledge while 104(34.1%) agreed with the statement. Almost two third majority 177(58%) respondents conceded that their municipalities lacked formal and informal activities to instill knowledge sharing. As a result, the selected municipalities are prone to duplication of work and repetition of mistakes, wastage of resources, forgetful of good ideas, and without the harnessing of strengths (Gaffoor & Cloete, 2010:1).

6.3.6.3 Culture

Literature pointed out that culture is the most important factor of success for knowledge sharing (Lindner & Wald 2010:11). According to Al-Alawi, *et al.* (2007) trust between co-workers is an extremely essential attribute in organisational culture, which is believed to have strong influence over knowledge sharing. Mushtaq and Bokhari (2011) concur that culture of an organisation plays an important role in promoting knowledge sharing activity among the employees and it impacts on knowledge sharing. When trust exists, people are more willing to listen and absorb each other's knowledge (Andrews & Delahay, 2000). According to Albers (2009) an ideal knowledge sharing culture is characterised by trust, openness, teamwork, risk taking, tolerance for mistakes, autonomy, common language, courage, and time for learning.

The existing culture in Limpopo municipalities did not support knowledge sharing sufficiently. This was evidenced by 116(38.0%) of respondents who agreed with one voice that the existing municipal culture did not support knowledge sharing sufficiently and 142(46.6%) strongly agreed with the said statement. It has been stated that, some cultural sayings "*kgomo ga e ntšhe boloko ka moka*" (a person cannot and should not

share his or her entire knowledge with others) perpetuate the culture of knowledge hoarding. Similarly, the studied municipalities have developed culture of mistrust and knowledge hoarding culture. If distrust is present within an organisation, just like in the Limpopo municipalities, knowledge sharing cannot, and will not, succeed because when fear is present, people would not contribute in sharing critical information and would be suspicious regarding their organisation's true intentions (Davenport & Prusak, 2003).

6.3.6.4 Physical layout of municipal buildings

In addition to cultural barriers, municipal structures restrict effective knowledge sharing in Limpopo municipalities. An average number of respondents, 70 (23%) and (121(39.7%) respectively agreed and strongly agreed that physical work environment and layout of work areas restricted effective knowledge sharing. Due to lack of space, municipal offices are scattered while some are built in multiple floors which reduces physical contacts and chances of knowledge sharing among employees. Managers were assigned single occupancy plan while general staff were assigned multi-occupancy plan. As a trend, many organisations are moving towards proving more open, shared environment to increase knowledge flow and collaborative working (Pinder, *et al.*, 2009).

6.3.6.5 Organisational structure

Government agencies are typically hierarchical and bureaucratic organisations (Sandhu, *et al.*, 2011: 210). Thus making sharing of knowledge difficult. Syed-Ikhsan and Rowland (2004:101) defined organisational structure as the manner in which individuals and posts are organised to make the performance of the organisation's work possible. Al-Alawi, *et al.* (2007) in their study found that organisational structure is

positively related to knowledge sharing in organisations. Limpopo municipalities lack a model or an organisational structure that takes into account all organisational members who work together collectively to generate knowledge (Gaffoor & Cloete, 2010:4). Nearly all 304(99.7%) respondents explained that their municipalities did not have knowledge management unit/section in their organisational structure. Interviews with managers revealed the absence of the posts of Knowledge Officers. This could be so because of the fact that knowledge management was not yet fully implemented in organisations (Levy, 2011) such as Limpopo municipalities. However Knowledge still flow in these municipalities. If the relationship network of the professionals is designed to facilitate individuals to locate those who know what, then transfer of knowledge becomes easy in the organisation (Szulanski, 1996). Regarding the availability of the system to identify knowledgeable colleagues to share knowledge, the results show that over half 164(54%) of respondents strongly agreed that their municipalities did not have such system. Thus impeding knowledge sharing in Limpopo municipalities.

6.3.6.6 Knowledge retention

Knowledge retention involves capturing knowledge in an organisation so that it can be used later (Levy, 2011). It is a sub-discipline of knowledge management and is concerned with ensuring that the organisation does not lose the knowledge held by knowledge workers who leave the organisation. The study established that retention of highly skilled and experienced staff was not a priority in the Limpopo municipalities. This was confirmed by 100 (32.8%) of respondents who agreed and 131(43.0%) who strongly agreed that retention of highly skilled and experienced staff is not a priority in their municipalities. This means that critical knowledge seeped away from municipalities through resignations. Brown and Duguid (2001:199) referred to this external unwanted

movement of knowledge as knowledge leaky. This is in addition to knowledge that municipalities lose through retirements and death. Dewah (2012) noticed that performance gap left by experts compromises the quality of services in the organisations. Halawi, *et al.* (2005) extrapolate that when employees leave, municipalities lose valuable knowledge that needs to be managed since it has been reported to be the most critical asset in an organisation. Asian Productivity Organisation (2013:17) shows that proper knowledge management will assist supervisors to retain knowledge within their teams even after their officers with critical expertise move to other divisions, or leave the organisation. Captured knowledge is shared with other employees, thereby shortening their learning curves and minimising knowledge loss.

6.3.6.7 Leadership

Leadership has been identified as one of the critical success factor in implementing knowledge sharing initiatives in organisations (Theriou, *et al.*, 2011). Leaders are important in acting as role models to show the desired behaviours for knowledge sharing. For instance, they should show a willingness to share and offer their knowledge freely with others in the organisation, to continuously learn, and to search for new knowledge and ideas (Wong & Aspinwall, 2005). Successful knowledge sharing in Limpopo municipalities would largely dependent on management support (Rylatt, 2003:5). In the context of government agencies such as municipalities, support of both political (Mayor) and administration (Municipal manager) leadership is an essential aspect for the success of knowledge sharing.

The results of the study showed that majority 181(59.9%) strongly viewed lack of support from top management as a barrier to knowledge sharing in the Limpopo

municipalities. Gorry (2008) conducted a similar study in in the USA public sector and found that lack of leadership and top management support were the main barriers to knowledge sharing. Similarly, Lee, *et al.* (2006) pointed out that top management support affect both the level and quality of knowledge sharing through influencing employee commitment to knowledge management. As such, many organisations fail to leverage knowledge due to lack of commitment of top leadership in sharing organisational knowledge (Hiebeler, 1996; Yeh, *et al.*, 2006) and this is detrimental to an organisation. Therefore the involvement of leadership in knowledge management programmes is very important. The level of support and dedication from the Mayor and Municipal manager would determine how resources and time are allocated for executing the knowledge management plan in Limpopo municipalities (Yeh, *et al.*, 2006:797).

6.4 Synthesis

The major findings of this study are the following:

- Knowledge management is not yet fully implemented in Limpopo municipalities.
- Knowledge sharing among the employees and across the municipalities is not encouraged.
- Knowledge sharing in Limpopo municipalities is affected by both individual and organisational barriers.
- Underutilisation of information communication technology to support knowledge management programmes and practices.

Comparatively, the findings of this study to large extent support what has been recorded in literature. For instance there is a prevailing culture of knowledge hoarding like in many organisations. Lack of management support, misconception about knowledge management, poor communication and interpersonal skills, lack of trust and fear

(Rusman, *et al.*, 2012; Easa, 2012:37). However, the study contradicts a typical mind set of the managers and staff in government that “knowledge is power,” therefore they cannot share it (Wang, *et al.*, 2014; Cong, *et al.*, 2007). Lack of time was not a barrier in the selected municipalities and this was also in difference with literature. Knowledge sharing habits of Limpopo municipalities are confined to manual system. In contrast, Stellenbosch municipality possesses an adequate information technology infrastructure to facilitate any knowledge management efforts (Gaffoor & Cloete 2010:7). The use of information communication technology, intranet in particular was also observed at e-Thekwini municipality (Averweg, 2012). These knowledge sharing habits are different from those of e-Thekwini municipality, City of Cape Town and other municipalities in South Africa.

Community of practice is one of the strategies of knowledge sharing which is supported by research (Majewski, *et al.*, 2011). In Limpopo municipalities, community of practice is mainly practiced at top management level. In contrast municipalities Stellenbosch municipality did not have community of practice at all. Limpopo municipalities operate without formalised knowledge management units and without knowledge sharing strategy, while a toolkit for South African municipalities (2013) confirmed that e-Thekwini and Cape Town municipalities had knowledge sharing strategies. Limpopo municipalities share knowledge on adhoc basis, within the boundaries of each department and within the municipality itself. In Stellenbosch municipality a culture of knowledge sharing is present and thriving, although it is only within the boundaries of each department (Gaffoor & Cloete 2010:7). A toolkit for South African municipalities (2013) stated that eThekwini municipality is sharing knowledge with other municipalities, associations and networks, both locally and internationally. In short, the culture of

information and knowledge sharing is reasonably established but a culture persists with regard to a lack of enthusiasm to learn how to utilise technologies and information. A toolkit for South African municipalities (2013) concluded that that South African local government, knowledge is already shared in different ways but often in a scattered and fragmented manner, not through recognised knowledge management practices. Employees at Limpopo municipalities are not mandated to share knowledge with other employees or other municipalities. However, employees seem to realise the importance of knowledge sharing. This came out clear during questionnaire survey when respondents were asked to give their views about the role of Knowledge sharing in support of municipal governance (C.f table, 5.9). Majority of respondents realised that knowledge sharing may result in an increased performance governance and improvement of service delivery. The results of the interviews also showed some kind of commitment or efforts of employees toward knowledge sharing. Many activities in the selected municipalities are knowledge oriented and substantive amounts of knowledge flow through and within the municipalities. Such knowledge is managed by all officials even though it is to a limited extent and not formalised.

Sharing knowledge is one thing and understanding which knowledge to share is another. Therefore it is critical for employees to know the type of knowledge to share in order to improve municipal governance. Some researchers (Tiwana, 2008; Nonaka & Takeuchi 1995) argue that tacit knowledge is a more important type of knowledge that needs to be shared in organisation because it can be put to action and used in innovation and creative practices, thus adding value to service delivery. Similarly, Fombad (2009) argues that tacit knowledge is generally of a higher value than explicit knowledge because of its fast-changing nature, since it can determine to what extent

organisations will be competitive in a turbulent market. Stafford and Mearns (2009) hold the view that organisations need to share both tacit and explicit knowledge. It is also the view of the researcher that organisations need both kinds of knowledge. “Organisations that that are successful in doing their business use both tacit and explicit knowledge to their advantage. For instance, they usually use tacit knowledge to foster creativity and innovation and use explicit knowledge to make the work environment predictable and guide the way tasks are organised” (Brown & Dugid, 2000).

6.5 Chapter summary

This chapter discussed findings of the study presented in the previous chapter. The findings of the study resonated with the non-existence of knowledge management initiatives in all the Limpopo municipalities. This includes non-existence of knowledge management units or sections in all municipalities. Inadequate information communication technology tools, knowledge hoarding culture, lack of management support and general lack of knowledge about knowledge management impede knowledge sharing the Limpopo municipalities. Most of these findings support what was outlined in the literature review. In line with these findings, respondents were asked to recommend strategies for improving knowledge sharing in their respective municipalities. The top three recommendations made by respondents included establishing knowledge management units or sections in municipalities, training staff about knowledge management and lobbying for management support. The next chapter presents the summary, conclusions and recommendations of the study that was discussed in relation to the objectives of the study.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**7.1. Introduction**

The previous chapter interpreted and discussed the findings of the study. This chapter provides a summary of research findings, recommendations based on the findings of the study, conclusion and areas of further future study. Conclusions drawn and recommendations made in this chapter were guided by the aim and objectives of the study as outlined in chapter one (C.f 1.22 and 1.23). The aim of this study was to underscore the role of knowledge sharing in improving the municipal governance in the local government sector of South Africa. The objectives of the study were to:

- Find out the kind of knowledge management programmes which are in place in the municipalities of Limpopo Province.
- Establish the extent to which municipalities in Limpopo Province encourage knowledge sharing for improvement of municipal governance.
- Determine factors which affect knowledge sharing among employees of municipalities of Limpopo Province.
- Propose recommendations and strategies on how to optimally share knowledge in Limpopo municipalities.

7.2. Summary of the findings

This section outlines the summary of the findings, conclusion and recommendations of the study. Conclusions and recommendations in this chapter were discussed in line with

the problem statement (C.f 1.20) and research objectives outlined in Chapter one (C.f 1.23).

7.2.1. Findings on the kind of knowledge management programmes and practices in place in the municipalities of Limpopo Province

Proper knowledge management practices are encouraged in organisations. According to Sarrafzadeh, *et al.* (2006), knowledge management practices are defined as the way ideas are translated into action and in the process accomplishing specific goals. Branin (2003) opined that knowledge management practices include the understanding of knowledge management, and knowledge generation, acquisition, organisation, storage, transfer, sharing and retention. Therefore organisations such as municipalities need to increase investment and put more effort into ensuring that information and knowledge available in databases, patents; tacit knowledge is fully utilised and transferred into products and services that give value to the organisation (Singh, 2007:177).

The focus of this study was on knowledge sharing. The study found out that pockets of knowledge practices imbedded in the Limpopo municipalities exist even though they are at infant stages. The study revealed poor knowledge management programmes and practices in Limpopo municipalities. Knowledge management programmes that are in place or available in Limpopo municipalities include the knowledge centres which serve as focal points for knowledge skills and facilitating knowledge flow. Such programmes, in ascending order include notice boards and collaborative technologies (email and intranet), records and registry centres. This study also found that there are some knowledge sharing mechanisms that facilitate events that encourage greater sharing of knowledge than would normally take place. Such knowledge sharing mechanisms are

in form of community of practice. It has been stated that community of practice is one of the strategies of knowledge sharing which is supported by research (Majewski, *et al.*, 2011). There was only one municipality, namely Fetakgomo that has taken a lead in establishing its own knowledge forum for all staff with an aim or objectives of encouraging exchange of information and knowledge within the municipality, promoting learning through sharing, increasing availability of benchmarking and good practice information, and Improving service delivery. Library services are provided in all municipalities even though most respondents did not indicate the existence of such services. This is probably because the libraries are located in different areas from the main municipal buildings. The libraries mainly store and preserve explicit knowledge for posterity. Lastly, the study found out that all municipalities had intranet portal that provides a 'one-stop-shop' that gives access to explicit knowledge. At other South African municipalities such as e-Thekwini , intranet was also found to be a common feature for use as a strategic tool in knowledge sharing due to their ability to support the distribution, connectivity and publishing of data and information” (Averweg, 2012). Essentially, using intranet for knowledge sharing have advantages such as posting savings on travelling costs, more frequent interaction with experts, better coordination, and control of collaborative work (Malhan & Gulati, 2003). Generally, knowledge management practices help organisations to refocus on using knowledge that already exists, creating an environment for innovation rather than limiting themselves to best practice solutions only (Laudon & Laudon, 2012).

7.2.2. Findings on the extent to which municipalities in Limpopo Province encourage knowledge sharing among employees to support improvement of municipal governance

A toolkit for South African municipalities (2013) explains that knowledge sharing support democratic governance, by providing accessible information to the public, who feel more connected and involved with governance systems. Additionally, Knowledge sharing may leverage knowledge and expertise that already exists within the municipality. Therefore knowledge sharing needs to be encouraged. Municipalities that encourage knowledge sharing have been shown to be more competitive than others and better able to serve the needs of their residents (A toolkit for South African municipalities, 2013). With regard to research objective mentioned (C.f 7.3.2), the study found out that Limpopo municipalities did not have a reward system or formal strategy to encourage knowledge sharing among the employees and across the municipalities. Although Lin (2007), found that organisational rewards did not have an effect on employees' willingness to share knowledge with their colleagues, the researcher supports the view of many researchers who observed that reward systems were significant variables that affect employee knowledge-sharing capabilities (Lee *et al.*, 2006; Oliver and Kandadi, 2006). This explains the low level of knowledge sharing in the studied municipalities. This support a study by Yusof & Ismail (2009:1). Their research result revealed that the low level of information and knowledge sharing among government agencies is the major contributor to poor service delivery in the public sector. It is worth mentioning that Limpopo municipalities, through their performance management systems reward good performance and this should not be taken for granted that best employees share their knowledge.

7.2.3. Findings on the factors that affect knowledge sharing in the Limpopo municipalities

Common barriers to knowledge sharing in organisations, include the structure of the organisations that has traditionally been compartmentalised, silo mentality still dominates, and “Knowledge hoarding” rather than “knowledge sharing” is the norm (Cong, *et al.*, 2007: 254). This study found out that there are two major types of barriers that affect knowledge sharing in Limpopo municipalities. Such barriers include those emanating from the individual level and those emanating from organisational level. A discussion of this barriers was provided in discussed in the findings chapter (C.f 6.3).

7.2.3.1. Individual barriers affecting knowledge sharing

At individual level the top barriers or factors found to affect knowledge sharing in organisations is fear (Easa, 2012:37; Tohidinia & Mosakhani, 2010:612). The individual barriers that were identified in this study were lack of interaction between those who can provide and those who need knowledge, misconception about knowledge management, poor communication and interpersonal skills, lack of trust and fear. In this regard fear could suggest lack of trust among the employees and across the municipalities as suggested by other scholars (Rusman, *et al.*, 2012). As discussed under section 3.9.2, trust between co-workers is an extremely essential attribute in organisational culture, which is believed to have strong influence over knowledge sharing (Al-Alawi, *et al.*, 2007). Lack of time is a familiar excuses for not sharing knowledge in many organisations (Cong, *et al.*, 2007: 254), but this study found otherwise.

7.2.3.2. *Organisational barriers affecting knowledge sharing*

In government, there are many functional silos created by large and bureaucratic organisations, operating on “need to know” basis, “knowledge is power,” “what’s in it for me,” “not invented here” syndrome and fear of mistakes making are typical mind set of the managers and staff with the constraint of resources (Cong, *et al.*, 2007). Even though in this study majority (167.7) 55% of respondents were unable to describe knowledge sharing culture at their municipalities, they conceded having a knowledge hoarding culture. The same finding was also revealed during the interviews with managers.

Information communication technologies make it possible for connections that enable knowledge sharing in organisations (Carlson, 2008). In this study it was found that lack of relevant information communication technologies in the municipality discouraged knowledge sharing. Poor knowledge audit systems was also found to be a barrier to knowledge sharing because municipalities did not have systems to identify knowledgeable people within the organisation. Thus they might not know what they know and what they do not know.

The study also found the physical location and structural offices to be a barrier to knowledge sharing, poor knowledge management practices, lack of support and budget from top management were also amongst the factors negatively affecting knowledge sharing in municipalities. Lack of support and budget from top management were found to be in accordance with other studies completed in the past such as that of (Kathiravelu, *et al.*, 2014; Riege, 2005; Chigada, 2014). Lastly, the study found that poor knowledge retention strategies to be a barrier to knowledge sharing. Knowledgeable staff leave

municipalities without the municipalities capturing their knowledge. Chigada, 2014:46, Dewah, 2012) observed that in the absence of knowledge retention strategies, organisations continue to lose valuable knowledge.

7.2.4. Findings on strategies used by municipalities to optimally share knowledge

The aim of this research objective was to determine strategies used by Limpopo municipalities for knowledge sharing. Knowledge sharing strategies could take any forms, such as manual, Web 2.0 social networking and microblogging systems (Hoong, *et al.*, 2015: 295). The use of ICTs enhances faster knowledge sharing without geographic limitations. This study established predominant use of manual system in Limpopo municipalities. This was evidenced by the research findings discussed in research finding section (C.f 6.3.). As illustrated in section 6.3 they mainly use notice board as a means of knowledge sharing and conduct face to face Municipal managers' and Chief financial officers' fora for knowledge sharing. These fora are active at executive level. In line with the use of manual system Hoog, *et al.*, (2015:293) asserts that "gone are the days where employees perform structured and routine works that are manually operated". According to Chigada (2014) the use of manual system in an organisation would impede accuracy and timeous processing of results and decision-making. The use of ICT may also be hampered by the prohibitive costs; slow accessibility; insufficient number of digitally literate and employees Ondari-Okemwa (2006:238).

7.3. Conclusions

The conclusions of this study are based on the findings provided research findings chapter (C.f 6.3 and knowledge management theories introduced in chapter two section

2.3. Conclusion reached in this study was entirely supported by the data presented (Leedy & Ormrod, 2010: 296). Conclusion is presented according to the order of the research objectives of this study. As outlined in chapter one (C.f 1.23) the objectives of the study were to: find out the kind of knowledge management programmes which are in place in the municipalities of Limpopo Province, establish the extent to which municipalities in Limpopo Province encourage knowledge sharing for improvement of municipal governance, determine factors which affect knowledge sharing among employees of municipalities of Limpopo Province, and to propose recommendations and strategies on how to optimally share knowledge in Limpopo municipalities.

7.3.1. Conclusions on the kind of knowledge management programmes in place in the municipalities of Limpopo Province

This study concluded that there are no formal knowledge management programmes in Limpopo municipalities. In similar vein Chigada (2014) found that there were no stipulated practices at selected banks of South Africa for knowledge sharing. However, in South African municipalities knowledge is already shared in different ways but often in a scattered and fragmented manner, not through recognised knowledge management practices (A toolkit for South African municipalities, 2013). It was also concluded by Ondari-Okemwa (2006) that Kenyan government-owned organisations lacked formal knowledge management programmes but knowledge was valued and there were efforts to treat knowledge as an important organisational resource. In Limpopo municipalities this was evidenced by various knowledge management practices such as notice boards, communities of practice, registries, intranet and libraries. Although libraries exist in many of the Limpopo municipalities, employees did not regard them as strategic areas for storing organisational knowledge for future use and for sharing. The study concludes

that with or without formal knowledge management programmes, certain knowledge management practices are prevalent in Limpopo municipalities.

7.3.2. Conclusion on the extent to which municipalities in Limpopo Province encourage knowledge sharing among employees to support improvement of municipal governance

Weddell (2008) observed that the existence or absence of a reward and/or incentives system can encourage or discourage individuals to contribute towards knowledge sharing. In line with this observation, the study concluded that there is minimal efforts and less interest on the part of Limpopo municipalities in engaging in encouraging knowledge sharing. The study found that there were low levels of knowledge sharing among employees. This was evidenced by 146(48%) of respondents who stated that their municipalities did not optimally encourage them to share knowledge (C.f 6.2). The researcher concludes that unavailability of system for rewarding knowledge sharing is the major cause of low level of knowledge sharing in Limpopo municipalities. The basis of this conclusion is that Jahani, *et al.* (2013) found that there is a significant relationship between reward system and knowledge sharing in organisations. Just like in Limpopo municipalities, Kenyan government organisations practice and apply knowledge management practices to a limited extent (Ondari-Okemwa, 2006).

7.3.3. Conclusion on factors that affect knowledge sharing in the Limpopo municipalities

The study concluded that Limpopo municipalities face various challenges in sharing knowledge. Many of these challenges are universal and consistent with those reported in literature. Among other challenges, are underutilisation of knowledge management systems, lack of strategy for knowledge sharing. To a large extent, the researcher concluded that organisational culture was not a very conducive environment for

knowledge sharing. Organisational culture symbolises collective tacit knowledge, which cannot easily be taught or transferred, making it a very difficult process (Taylor, 2007:30). As part of organisational culture fear and lack of trust impede knowledge sharing. Thus, culture of knowledge hoarding reigns. Lack of budget and reward system for knowledge sharing also contribute towards low level of knowledge sharing. It is also concluded that Knowledge sharing in Limpopo municipalities did not get a proper attention or support from both general staff and the leadership. It appeared to the researcher that, employees would not take knowledge management serious as long as is not on the municipality's strategic document and on their performance agreements or job descriptions. Nonaka and Konno's (1998) suggested that knowledge is shared within a contextualised space called "*ba*" but environments that existed in the selected municipalities, were contrary to what has been suggested by these authors. As suggested by Ridge (2005) knowledge sharing in Limpopo Province is affected by both individual and organisational barriers.

7.3.4. Conclusion on strategies used by the Limpopo municipalities to optimally share knowledge

According to Ondari-Okemwa (2006) the tools for managing knowledge in the Kenyan organisations are largely non-electronic. This study also established that knowledge sharing strategies in Limpopo municipalities are largely manual. Therefore, the researcher concludes that the use of manual system did not support knowledge sharing, hence low level of knowledge sharing within and across the Limpopo municipalities. In short, strategies used by the Limpopo municipalities did not help the selected municipalities to optimally share knowledge.

7.4. Strengths, limitations and challenges of the study

A higher response rate enhanced the reliability and validity of the results (Mavodza, 2010:111-112). Another strength of this study lies in the use of triangulation method which provided strengths that offset the weaknesses of both quantitative and qualitative methods, and therefore had the potential to provide stronger inferences (De Vos, et. al, 2011: 434). The quality of the research is improved since the triangulation method minimised biases, limitations and weaknesses to close the loophole for each of the methods (Fidel, 2008; Bless, *et al.*, 2006).

“Limitations are inherent in academic work. No researcher can do it all and do it perfectly” (Hofstee, 2006:87). In this study the first limitation relate to access to research population. The researcher wanted to study all 25 municipalities in Limpopo Province but only seven municipalities granted permission to undertake the study. Some respondents exercised their rights and refused to partake in this study while some were not fully committed to participation. Respondents` attitude, beliefs, degree of truthfulness, cooperation and experiences may greatly jeopardise research results and therefore the researcher tried to guard against these attitudes, beliefs etc., by remaining neutral in opinions and by observing respondents behaviour. The researcher was working under time and financial constraints. As such the researcher had to sample the population and complete the study within the stipulated time.

The researcher faced some challenges that affected the pace and number of municipalities included in the study. The major challenge was about gaining access and approval to conduct the study. The municipal accounting Officers were forever not available to respond to the researcher’s request letters to conduct research. It took the

researcher about three months to get feedback and authorisation to conduct the study in the municipalities studied. Of the 25 municipalities requested, seven responded by permitting the researcher to conduct the study, while one refused to grant permission to conduct the study. Fourteen municipalities did not participate in the study because they did not respond to the researcher's request to conduct the study.

Upon getting permission to conduct the study in the said municipalities, the researcher had to postpone scheduled interviews more than six times due to non-availability of managers who were occupied with meetings and other duties in their municipalities. Since these managers were key informants, interviews had to be rescheduled to suit them. The problem was not only prevalent to managers, general staff was also problematic, whereby some respondents took a very long time to complete and return the questionnaires. This proved rather costly for the researcher. Costs were in a form of time and capital. Another challenge was that some questionnaires were returned uncompleted, particularly on the open ended questions. Moreover, some respondents did not return the questionnaires because they were either lost or misplaced. Some respondents exercised their rights by refusing to participate in the study due to their tight schedules.

7.5. Recommendations

Knowledge management barriers or challenges described in section 6.3 can pose threats and destabilise the implementation of knowledge management initiatives in an organisation if no immediate action is taken by management of the selected municipalities. A number of recommendations were made based on the findings and conclusions of this study. The researcher hope that the recommendations would assist

Limpopo municipalities to effectively and efficiently share knowledge in order to improve municipal governance. This section also makes recommendations on the future areas of study which could not be covered in this study.

7.5.1. Recommendations:

Develop Knowledge sharing strategy and link it to municipal strategic plan

The researcher made this particular recommendation because it is interlinked with many aspects surrounding effective and efficient knowledge sharing in organisations. Developing knowledge sharing strategy requires municipalities to establish knowledge management divisions. A separate knowledge management division may enable municipalities to deliver better services, based on, better utilisation and dissemination of knowledge (Gaffoor & Cloete, 2010:6). It is essential for the selected municipalities to create an independent department or a position housing a chief knowledge officer to oversee, manage and drive the organisation's knowledge management activities that would include drafting of knowledge sharing strategy. Just like Gaffoor and Cloete (2010:4) found at e-Thekwini Municipality, Limpopo Municipalities did not have a formalised knowledge sharing strategy in place yet. The researcher views knowledge sharing strategy as a plan that describes how a municipality will share its knowledge better in order to improve municipal performance. According to a toolkit for South African municipalities, (2013) a good, clear knowledge sharing strategy helps increase awareness and understanding of knowledge sharing in the municipality and communicates good practice. Thus the researcher recommends that a knowledge sharing strategy be closely aligned to the municipality's broader strategy. Cong, *et al.* (2007: 259) also noted that to implement Knowledge sharing practices, organisations

need to develop a clear strategy by identifying critical drivers of the need for the organisation in order to succeed in the effort. Accordingly, a clear strategy will provide broader strategic guidance on organisational direction and lead to success of knowledge sharing (Cong, *et al.*, 2007: 259).

Development of knowledge sharing strategy would mean the involvement of top management, which the researcher believe that top management support is vital to ensure the success of knowledge sharing in the organisation. Adequate support and dedication from top management influences how resources and time are allocated for the successful execution of the knowledge sharing plan (Yeh, *et al.*, 2006:797). Wai *et al.* (2009) observed that leadership is responsible for ensuring that knowledge sharing objectives are in line with organisation's business strategy. Another dimension is that management support is required to ensure that knowledge sharing harmonise with organisational culture (Davenport & Prusak, 1998).

Lee, *et al.* (2006) who observed that top management support affect both the level and quality of knowledge sharing through influencing employee commitment to knowledge sharing. Lin, (2007) confirmed that management support for knowledge sharing has been shown to be positively associated with employees' perceptions of a knowledge sharing culture (e.g. employee trust, willingness of experts to help others) and willingness to share knowledge.

Organisational culture that is supportive by nature is a good example of a condition that can be considered as an enabler of a knowledge sharing behavior within an organisation. Such level of support, especially when coming from the top management, is an enabler of motivation to share knowledge with other people within the workplace

(Wang & Noe, 2010). The characteristics of organisational culture that has been pointed out by Cong, *et al.* (2007) as being influential in the establishment of a knowledge sharing culture within an organisation comprise being open to change and being innovative. Thus this study also recommends creation of a knowledge friendly culture to facilitate knowledge sharing. To sustain such a culture, this study recommends that Limpopo municipalities introduce system for rewarding employees engaging in knowledge sharing. Gaffoor and Cloete (2010) have also recommended the use of rewards to enable knowledge sharing at e-Thekwini municipality. This recommendation is in line with the finding (C.f 6.4.21) that the selected municipalities lacked reward and recognition system to motivate staff to share knowledge. The fact that knowledge sharing was not rewarded either formally or informally in Limpopo municipalities has to change if the selected municipalities are to take knowledge sharing seriously. Cong, *et al.* (2007) recommends the following ways to go about changing the existing “knowledge hoarding” culture and encourage municipal employees to get involved actively in the knowledge sharing:

- One way is to build a formal recognition and reward systems to compensate the knowledge sharing behaviors of the public employees, both for sharing knowledge with others and using other’s knowledge, not necessarily in monetary terms. An example given by Cong, *et al.* (2007: 254) is that of World Bank that is using this approach and proved to be very effective.
- Another effective way is to embed knowledge sharing into daily activities.

Although some governments have implemented e-government portal to provide the services online, yet in practice are operating business-as-usual (Cong, *et al.*, 2007). Therefore a fully integrated IT platform is recommended as it ensures seamless

information flow across the municipality. Furthermore, all staff are able to search across a wide variety of applications and databases (A toolkit for South African municipalities, 2013).

7.6. Suggestions for future research

This study cannot in any way claim to have exhausted and made full-proof findings on all the salient issues regarding knowledge sharing in the local municipalities under study. The study does not claim to give recommendations on knowledge sharing which may necessarily be implemented by the local municipalities in the Limpopo Province municipalities. For that, a number of recommendations are made for further research into a number of aspects of knowledge sharing and on knowledge management in general.

7.6.1 The use of incentive systems

Studies (Lee, *et al.*, 2006; Lin, 2007) on the use of incentive systems for motivating knowledge sharing yielded contradictory findings. Therefore it is recommended that a study on the use of incentive systems as a means of encouraging knowledge sharing be conducted at the selected municipalities.

7.6.2 Case study

Since this study used survey research design and the survey surface the situation and again with reference to the findings of the study, it is recommended that a case study of a selection of the municipalities surveyed. The reason is to provide a comprehensive and detailed analysis of knowledge sharing in Limpopo municipalities. A case study is

an approach to research that focuses on gaining an in-depth understanding of a particular entity or event at a specific time (Willig, 2008).

7.6.3 Culture of knowledge sharing

Culture is an important factor in knowledge sharing. It can either make or break knowledge sharing in an organisation. Lindner and Wald (2010:11) asserts that “knowledge culture is by far the most important factor of success. Without a proper atmosphere in organisations, other attempts to share knowledge might be pointless (Tohidinia & Mosakhani, 2010:612). Therefore it is recommended that a study on how culture influence knowledge sharing in Limpopo municipalities be conducted.

7.7. Implications of the research for theory and practice

First and foremost, the study contributes to the existing body of knowledge with regard to the topic under study by incorporating knowledge sharing practices in organisations that are rarely practiced and implemented. Therefore the contribution of this study is original. The interview and questionnaire survey has provided a good level of understanding on the following aspects of knowledge sharing at the studied municipalities: The study revealed that knowledge sharing was not a major practice at the municipalities that were studied. This could be that knowledge sharing was viewed unfunded mandate. Of importance was that knowledge sharing played a pivotal role in improving municipal governance and service delivery. It further gave a better understanding of the state of knowledge sharing in municipalities, perceived benefits of knowledge sharing, factors enabling and affecting knowledge sharing and strategies of knowledge sharing. The outcomes of interview and questionnaire survey yielded

conclusive findings on the insight of knowledge workers toward knowledge sharing in Limpopo municipalities.

This study is important because municipalities as government agencies, have a number of practices that may need further investigation due to evolution of knowledge and political terrain in which municipalities operates. Thus, the findings of this study may be useful to municipalities, government at large, academics, researchers and knowledge management practitioners. The implication for research and knowledge practices accords municipalities, government at large, academics, researchers and practitioners an opportunity to replicate this study by comparing and contrasting the research findings with other studies on knowledge sharing. As for the knowledge practitioners, the outcomes of the research provide them a set of guidelines with barriers and enablers of knowledge sharing in organisations. This may also allow a research model to be formulated based on the outcomes of the current and future research studies (Chen, *et al.*, 2010). However, in optimising knowledge sharing in organisations, researchers may need to consider applying the concept of “Ubuntu” to knowledge sharing framework. “Ubuntu” is a moral theory that is associated with humaneness or being humane’ (Letseka, 2014: 547–548). If the essence of Ubuntu is to act humanely towards others Letseka (2014: 547–548), there will be mutual support and respect, interdependence, unity, collective work and responsibility (Taylor, 2014) to share knowledge within and across the municipalities of Limpopo Province.

7.8. Final conclusions

This was the last chapter of the study. This chapter presented a brief summary of results and drew conclusions based on the findings and the review of the related literature.

The findings of this study given in chapter five allow specific conclusions to be drawn in line with the objectives. The following are the main conclusions and recommendations that are regarded as important for knowledge sharing in the Limpopo Local Government. The findings reveal a disjuncture on what the respondents understand what knowledge management is all about and the understanding of knowledge management in the literature: some appeared to be confusing knowledge management with “Information Management”, while others acknowledged they knew nothing about it. Similarly Chigada (2014) found that many people misconstrued knowledge management to be IT in selected South African banks. This study also revealed a low level of knowledge sharing in Limpopo municipalities. The low level of information and knowledge sharing among government agencies is the major contributor to poor service delivery in the public sector (Yusof & Ismail, 2009:1). This study also concludes that Limpopo local government has not invested enough in knowledge management. In order to improve the situation and make the knowledge management process work, there must be a seamless integration between people and culture, process and technology based on a long-term strategy. This would ensure a fully coordinated and focused attempt to centralise valuable knowledge for use across all municipalities of the Limpopo Provincial Government. The study concludes that there is a need for an inclusive Province-wide knowledge management workshop comprising representatives of all levels of staff be convened by Limpopo Department of Cooperative Governance, Human Settlement and Traditional Affairs to find a common about value of knowledge management in an organisation.

Finally, the study conclude that, an appreciation and understanding should be done through targeted capacity building to facilitate common understanding as well as appreciation and political buy-in for knowledge management which will facilitate sharing of knowledge in all Limpopo municipalities. Limpopo municipalities need to appreciate knowledge management and to build a common understanding of how knowledge can be shared and be leveraged for improvement of municipal governance.

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Appendix 1: Cover Letter and consent form



University of Fort Hare
Together in Excellence

Ethics Research Confidentiality and Informed Consent

Dear Participant

My name is Maoka Andries Dikotla and am currently doing my PHD in the Department of Library and Information Science, University of Fort Hare, South Africa. I am undertaking a research project which attempts to investigate the knowledge sharing as a means of improving municipal governance.

Please understand that you are not being forced to take part in this study and the choice whether to participate or not is yours alone. However, I would really appreciate it if you do share your thoughts with me. If you choose not to take part in answering these questions, you will not be affected in any way. If you agree to participate, you may stop me any time and tell me that you do not want to go on with the interview or complete the questionnaire. If you do this there will also be no penalties and you will not be prejudiced in any way. Confidentiality will be observed professionally.

I will not be recording your name anywhere and no one will be able to link you to the answers you give. Only the researcher will have access to the unlinked information. The information will remain confidential and there will be no “come-backs” from the answers you give.

The interview will last around 20 minute as tested through pilot study. I will be asking you questions and ask that you are as open and honest as possible in answering these questions. Some questions. I will be asking some questions that you may not have thought about before and which also involve thinking about the current, past and the

future. Even though you cannot be absolutely certain about the answers to these questions but I ask that you try to think about these questions. When it comes to answering questions there are no right and wrong answers.

If you have concerns or questions about this study, please contact: Researcher: Dikotla Maoka Andries at: Cell: 0724012726, Email: maokadikotla1@gmail.com OR the Supervisor: Prof EM Ondari-Okemwa at: Tel: +2740 602 2437, Email: eondari@ufh.ac.za, Postal: Private Bag x1314, King William's Town Road, Alice, 5700.

Yours Sincerely

.....

Dikotla MA

INFORMED CONSENT

I hereby agree to participate in research regarding Knowledge sharing as a means of improving municipal governance. I understand that I am participating freely and without being forced in a way to do so. I also understand that I can stop this interview at any point should I not want to continue and that this decision will not in any way affect me negatively.

I understand that this is a research project whose purpose is not to necessarily to benefit me personally.

I have received the contact details of the researcher should I need to speak about any issues which may arise in this interview.

I understand that this is consent from will not be linked to the questionnaire and that my answers will remain confidential.

I understand that if at all possible, feedback will be given to my municipality on the results of the completed research.

.....

Signature of participant

.....

Date

Appendix 2: Questionnaire

QUESTIONNAIRE

An exploration of knowledge sharing as a means of improving municipal governance in selected Limpopo municipalities.

A. Respondents' Profile

1. Please indicate your gender

1. Male		2. Female	
---------	--	-----------	--

2. Which of the following age range do you belong?

1. 18-25	2. 26-30	3. 31-34	4. 35-39	5. 40-45	6. Over 45
----------	----------	----------	----------	----------	------------

3. Your race (just for purposes of statistics)

1. Black	
2. White	
3. Colored	
4. Indian	

4. Highest educational/training qualification

1. High school	2. Post matric Certificate	3. Post matric Diploma	4. Degree	5. Post graduate
----------------	----------------------------	------------------------	-----------	------------------

5. What is your position in the municipality?

1.	
----	--

6. Number of years in the position

1.	
----	--

B. Organisational structure

7. Do you have a knowledge management unit in your municipality?

1	Yes	
2	No	

C. Knowledge management programmes

12. What kind of Knowledge management programmes are in place in the municipalities of Limpopo Province? (Please select as many answers as may apply)

Statement	Answer
1. Communities of practice (COPs)	
2. Rewards (as a means of motivating for knowledge sharing)	
3. Storytelling (as a means of transferring tacit knowledge)	
4. Cross-project/ inter project learning	
5. Knowledge mapping (a map of knowledge repositories within an organisation accessible by all)	
6. After action reviews/debriefing	
7. Mentoring programmes	
8. Expert directories (to enable knowledge seeker to reach to the experts)	
9. Best practice transfer	
10. Knowledge fairs	
11. Competence management (systematic evaluation and planning of competences of individual organisation members)	
12. Proximity & architecture (the physical situation of employees conducive to knowledge sharing)	
13. Master-apprentice relationship	
14. Collaborative technologies (groupware, email, text chat, wiki, blog, and bookmarking, share point, intranet, drop box etc.)	
15. Social software (wikis, social bookmarking, blogs, etc.)	
16. Social networking sites like Twitter and Facebook	
17. Knowledge repositories (databases,)	
18. Corporate library	
19. Notice boards	
20. Measuring and reporting intellectual capital (a way of making explicit knowledge for organisations)	
21. Knowledge brokers (organisational members that take on responsibility for a specific "field" and act as first reference on whom should talk about a specific subject)	

13 Rate the state KM programmes in your municipality by selecting one of the options below:

	Statement	Answer
1.	Very poor	
2.	Poor	
3.	Good	
4.	Very good	
5.	Unsure	

SECTION D. Knowledge sharing and municipal governance

14. Views about the role of Knowledge sharing in support of municipal governance (please select an applicable answer by ticking in the box)

KEY: **SD**- Strongly Disagree 2.**D**-Disagree 3.**A**gree 4. **SA**-Strongly Agree
5. **U**-Uncertain

	Statement	1. SD	2. D	3. A	4. SA	5. U
1.	knowledge is the most important factor for a service delivery					
2.	Knowledge sharing is important for a successful delivery system					
3.	To my opinion, knowledge sharing in a municipality results in increased performance					
4.	Knowledge sharing will enable municipality to save time and financial costs.					
5.	Knowledge sharing is important to only private sector.					
6.	The importance of knowledge sharing is clearly communicated.					
7.	There is growing knowledge awareness of the benefit of knowledge sharing in this municipality.					
8.	Knowledge sharing can ensure continuity and consistency in service delivery.					
9.	Knowledge sharing can ensure transparency and accountability in service delivery.					

15. The extent to which sharing of information and knowledge is encouraged in the municipality (please select an applicable answer by ticking in the box)

Statement	Great extent	Less extent	Not at all
1 To what extent does your municipality encourage information and knowledge sharing among employees?			
2. To what extent does your municipality encourage information and knowledge sharing with other municipalities within the Local government sector?			
3. To what extent do you think knowledge sharing can improve municipal governance?			
4. To what extent do you share knowledge with others			

16. What are the boundaries of knowledge sharing? (please select as many answers as may apply)

	Boundaries	
1	Within Limpopo Province	
2	Outside Limpopo Province	
3	Within the public sector as a whole	
4	Within local government sector	
5	Within the privates sector	

17. Using 1-5 scale (1 being the lowest and 5 being the highest) rate by circling the kind of knowledge that you share with your colleagues

Personal 1 2 3 4 5

Work 1 2 3 4 5

Educational 1 2 3 4 5

18. How often do you share knowledge? (please answer by ticking in the appropriate box below)

Frequency of knowledge sharing	Answer by ticking
1 Daily	
2 Weekly	
3 Monthly	
4 quarterly	
5. Annually	
6. When a need arises	

20. Is there any kind of reward for knowledge sharing in your municipalities?

1	Yes	
2	No	

21. If yes how is it rewarded?

Answer by ticking in the appropriate box		
1	Financial	
2	Day off/leave	
3	Social recognition	
4	Other, specify	

22. What other mechanisms are in place to encourage employees to share knowledge?

.....

.....

.....

23. How would you describe the culture of knowledge sharing in this municipality?

.....

.....

.....

24. Factors/barriers affecting knowledge sharing in municipalities?

24.1. Individual barriers (please select an applicable answer by ticking in the box)

KEY: **SD**- Strongly Disagree 2.**D**-Disagree 3.**A**gree 4. **SA**-Strongly Agree
5. **U**-Uncertain

	Statement	1. SD	2. D	3. A	4. SA	5. U
1.	Knowledge is power I cannot share it with anyone					
2.	There is a general lack of time to share knowledge					
3.	Misconception about KM					
4.	There is a lack of interaction between those who can provide and those who need knowledge.					
5.	Staff do not share knowledge due to poor communication and interpersonal skills.					
6.	Fear restricts staff from seeking knowledge from their immediate superiors and peers					
7.	The fear that undue credits are being accorded to undeserving parties creates deterrent to knowledge sharing.					
8.	It is difficult to convince colleagues about the values and benefits of the knowledge I possess.					
9.	There is general lack of trust among personnel in the municipality.					

24.2. Organisational barriers (please select an applicable answer by ticking in the box)

KEY: **SD**- Strongly Disagree 2.**D**-Disagree 3.**A**gree 4. **SA**-Strongly Agree
5. **U**-Uncertain

	Statement	1. SD	2. D	3. A	4. SA	5. U
1.	Inadequate IT systems and processes in the department discourage Knowledge sharing					
2.	There is a lack of reward and recognition system to motivate Knowledge sharing					
3.	There is no system to identify colleagues to share knowledge					
4.	Physical work environment and layout of work areas restrict effective knowledge sharing					
5.	There is a lack of formal and informal activities to instill knowledge sharing					
6.	The existing culture in the municipality does not support knowledge sharing sufficiently					
7.	Retention of highly skilled and experienced staff is not a priority					
8.	Lack of budget to support knowledge sharing projects					
9.	Lack of support from top management					

SECTION F: RECOMMENDATIONS

25. Suggest strategies that may help municipalities to optimally share knowledge that will lead to improvement of service delivery

.....

.....

.....

.....

THANK YOU FOR YOUR PARTICIPATION!

Appendix 3: Interview guide

INTERVIEW QUESTIONS

A Background Information

- 1 Name of the municipality.....
- 2 Your job designation/position
- 3 Department/Section.....
- 4) Your gender (To be used for statistics.).....(b) Race..... (c)
Age.....
- 5) What is your highest level of formal education.....?
- 6) How long have you worked for your organisation.....?

B KM BUSINESS PROCESSES

7. How is tacit knowledge (knowledge in people's heads) extracted?
8. How do you ensure that explicit (documented) knowledge is stored in an accessible manner?
9. Are there current structures in your municipality and across the Limpopo Municipalities that define KM processes such as Communities of Practice (CoPs) or knowledge management Sharing Fora?
10. If so, which CoPs are currently functional and what are their terms of reference?
11. What current policy documents, policy guidelines, manuals, standards are being applied to run the knowledge management programme in your municipality?
12. How much of the municipal budget is set aside every year to support the knowledge management programme?

C. KM SYSTEMS

13. Do you think your municipality has the necessary information communication technology infrastructure to support knowledge management?
14. What information communication technology infrastructure (both hardware & software) are currently being used to enable knowledge management and sharing thereof?
15. What kind of information communication technology tool/s do you think your municipality still needs to enable inter & intra knowledge sharing across Municipalities?
16. How do you encourage staff members to share their knowledge?

Appendix 4: Observation guide

1. Interaction among staff
2. Library
3. Registry
4. Knowledge management strategy
5. Notice boards
6. Meetings/workshops/seminars
7. Information communication technology tools: Intranet and website

Appendix 5: Ethical clearance certificate



University of Fort Hare
Together in Excellence

ETHICAL CLEARANCE CERTIFICATE

Certificate Reference Number: OND021 SDIK01

Project title: **Knowledge sharing as means of improving municipal governance in Limpopo Province of South Africa**

Nature of Project: PHD

Principal Researcher: Maoka Andries Dikotla

Supervisor: Prof EM Ondari-Okemwa

Co-supervisor:

On behalf of the University of Fort Hare's Research Ethics Committee (UREC) I hereby give ethical approval in respect of the undertakings contained in the above-mentioned project and research instrument(s). Should any other instruments be used, these require separate authorization. The Researcher may therefore commence with the research as from the date of this certificate, using the reference number indicated above.

Please note that the UREC must be informed immediately of

- Any material change in the conditions or undertakings mentioned in the document
- Any material breaches of ethical undertakings or events that impact upon the ethical conduct of the research

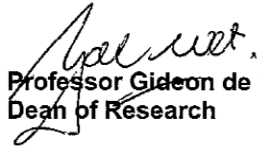
The Principal Researcher must report to the UREC in the prescribed format, where applicable, annually, and at the end of the project, in respect of ethical compliance.

The UREC retains the right to

- Withdraw or amend this Ethical Clearance Certificate if
 - Any unethical principal or practices are revealed or suspected
 - Relevant information has been withheld or misrepresented
 - Regulatory changes of whatsoever nature so require
 - The conditions contained in the Certificate have not been adhered to
- Request access to any information or data at any time during the course or after completion of the project.

The Ethics Committee wished you well in your research.

Yours sincerely


Professor Gideon de Wet
Dean of Research

28 October 2013

Appendix 6: Letter of introduction from the supervisor

Department of Library & Information Science

Faculty of Social Sciences & Humanities

2nd Floor, Psychology Building, Alice Campus

*Tel: 040 602 2211/2122/2737| Fax: (086) 628 2533/2449
OR 086 622 1359|*



TO WHOM IT MAY CONCERN

Dear Sir/Sir

RE: INTRODUCING MR M.A. DIKOTLA (STUDENT REGISTRATION NUMBER 201317085)

This serves to formally introduce the above named as a part-time Doctor of Philosophy (PhD) student in the Department of Library and Information Science, University of Fort Hare, Alice. Mr. Dikotla has proposed to conduct research on a research project titled ***“Knowledge sharing as means of improving municipal governance in Limpopo Province.”***

Mr. Dikotla’s research proposal has been approved by the Higher Degrees and Research Committee of the Faculty of Social Sciences and Humanities and duly registered by the University of Fort Hare as a research project. As the student’s supervisor, I am very satisfied that the topic is researchable. It is being increasingly realized that knowledge has an important role to play in the management of organisations, local governments and other government departments in developed and developing countries of the world.

Mr. Dikotla would like to collect data for the research project by way of interviewing those deemed to be sources of relevant information and knowledge in Limpopo Province’s municipalities. As a Department, we request that you assist Mr. Dikotla to distribute questionnaires and/or conduct face-to-face interviews. Any other assistance given to Mr. Dikotla would be highly appreciated. Please do not mind that you do not know much about Knowledge management. For any further information about Mr. Dikotla, please do not hesitate to contact the undersigned.

Thank you for your kind assistance.

Sincerely,



Prof EM Ondari-Okemwa,

Supervisor and Head: Department of Library and Information Science

Appendix 7: Research permit Blouberg municipality

Blouberg Municipality



P.O. Box 1503
SENWABARANA 0790
Tel: No.: 015 505 7100
Fax: No.: 015 505 0500 / 0296
E-mail: info@blouberg.gov.za
Enq: Manika M.P@015.505.7120

OFFICE OF THE MUNICIPAL MANAGER

Enq: Manika MP
Tel: 015 505 7120

17 June 2014

Att: Mr. Dikotla M.A
Sir

RE: REQUEST TO CONDUCT RESEARCH IN THE FULFILMENT OF PHD

The above matter refers

1. We acknowledge receipt of your letter of request in respect of conducting research in fulfilment of PhD in Knowledge sharing as a means of improving municipal governance in Limpopo Province
2. We further wish to take this opportunity to inform you that we agree to your request and undertake to assist you in every way possible towards the realization of your noble objectives;
3. It is also appreciated that you have chosen our environment and that your studies will hopefully go a long way in assisting the municipality to improve in one way or the other;
4. Wishing you the best in your studies.

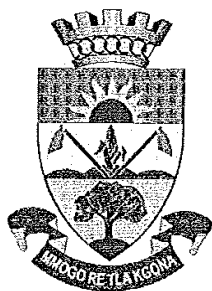
Youth Faithfully



Kgoale T.M.P
Municipal Manager

17/06/2014

Appendix 8: Research permit Aganang municipality



AGANANG LOCAL MUNICIPALITY

PO Box 990
Juno
0748

Tel: 015 295 1400
Fax: 015 295 1401/ 1447
E-Mail: admin@aganang.gov.za
Website: www.aganang.gov.za

Ref: 17/8/3
Enq: Mojela M.E

13 June 2014

University of Fort Hare
Department of Library & Information Science
Faculty of Social Sciences & Humanities
Alice Campus

Att: Mr. M.A. Dikotla

Re: Permission to conduct research at Aganang Local Municipality.

1. Your email request regarding the above sent on the 02nd April 2014 bears reference.
2. Aganang Local Municipality takes pleasure in supporting your request and hereby consent that you can undertake the said research as per your request. It will be highly appreciated if at the end your research you can compile a short report on your research findings and how do you think the municipality can overcome identified shortcomings and submit to the Office of the Municipal Manager.
3. For your personal interviews with Section 57 Managers, kindly develop a schedule with clear time lines and dates to ensure their availability on the agreed upon dates.

Regards


.....
Ramakuntwane Selepe
Municipal Manager

18/06/14
.....
Date

FETAKGOMO LOCAL MUNICIPALITY



Tel.: (015) 622 8000

Fax: (015) 622 8026

Enq: Mr Maditsi TT (073 174 5805)

Stand no.1, Ga-Nkwana, Mashung, 0739

maditsi@fetakgomo.gov.za

P/ Bag X 818

APEL

0739

Office Of The Municipal Manager

Ref: 2/9/1/3

TO: DIKOTLA M.A

SUBJECT: ACCEPTANCE ON CONDUCTING RESEARCH WITHIN THE MUNICIPALITY

Dear Sir / Madam

We acknowledge with profound thanks the receipt of your letter dated 18th December 2013 and its adjunct from the University of Fort Hare dated 25th November 2013 in which you envisage to conduct a research, "... interviewing those deemed to be sources of relevant information and knowledge in Limpopo Province's municipalities". This letter serves to demonstrate that the Fetakgomo Local Municipality, in terms of Promotion of Access to Information Act (no. 2 of 2000), read with subsidiary legislation, regulations, frameworks has no hesitation in permitting you to conduct your research project in the above respects. Be advised that our office working time starts from 07H30 to 16H30 from Monday to Friday for your convenience.

I wish you good luck in your studying life!

Regards,

Municipal Manager

Mr Matumane N.D

2014/01/08

Date

Appendix 10: Research permit Greater Letaba municipality

GREATER LETABA MUNICIPALITY

P.O Box 36, Modjadjiskloof, 0835, Tel (015) 309 9246/7/8,
Fax (015) 309 9419, Email:greaterletaba@glm.gov.za

Enquiry : Tonganahlo M. Desmond
Date : 12 February 2014
Contact no : 082 925 9941

Head of Department
Department of Library and Information Science
University of Fort Hare
Private Bag x 1314
King William's Town Road

ALICE
5700

Attention: Professor E.M. Onaari-Okenwa

**RE: REQUESTING PERMISSION TO CONDUCT RESEARCH AT GREATER LETABA
MUNICIPALITY BY MR. M.A DIKOTLA, STUDENT NUMBER: 201317085.**

1. Receipt of your letter dated 11th February 2014 is hereby acknowledged.
2. Greater Letaba Municipality has approved your letter of request that Mr. M.A Dikotla conducts research within Greater Letaba Municipal area.
3. Kindly note that the municipality has no objection with conducting of research by Mr. Dikotla, however, the municipality is requesting your institution to provide purpose of gathering the information for utilization of the information in future.
4. The municipality will appreciate it if Researcher and institution could privilege them with report.

Appendix 11: Research permit Greater Tzaneen municipality



GROTER TZANEEN MUNISIPALITEIT GREATER TZANEEN MUNICIPALITY

Tel: 015 307 8000
Fax: 015 307 8049

P.O. Box 24
Tzaneen, 0850



NMH Maake

4/4/R

09 January 2014

Prof EM Ondari-Okemwa

University of Fort Hare

Department of Library and Information Science

Private Bag X1314

King William's Town, Alice

5700

Sir/Madam

PERMISSION TO COLLECT DATA

Your letter dated 25 November 2013 refers.

Kindly note that permission is granted to conduct research at the Greater Tzaneen Municipality on the topic: "Knowledge sharing as a means of improving municipal governance in Limpopo Province"

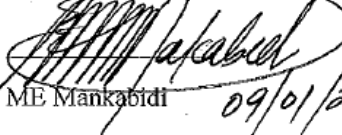
The Student is welcome to conduct a survey according to a structured questionnaire/and or conduct face-to-face interviews.

However, the student must undertake the responsibility to provide this Municipality with a copy of the final report.

The student is welcome to liaise for further assistance with Skills Development Facilitator, Mr. Brian Mashala on tel.no. 015 307 8383/78 or by email brian.mashala@tzaneen.gov.za

It is trusted that you will find the matter in order.

Yours faithfully

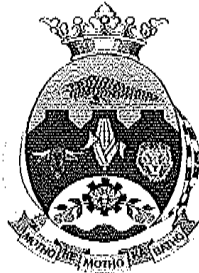

ME Mankabidi 09/01/2014

Municipal Manager

Appendix 12: Research permit Lepelle- Nkumpi municipality

9. Jun. 2014 15:29

No. 4215 P. 1/1



LEPELLE-NKUMPI LOCAL MUNICIPALITY

Postal Address
Private Bag X07
CHUENESPOORT
0745

www.lepelle-nkumpi.gov.za

Physical Address
170 BA Civic Centre
Unit F, LEBOWAKGOMO, 0737
Tel : (+27)15 633 4500
Fax : (+27)15 633 6896

05 May 2014
Enquiry: Mohlala B.R

MR M.A Dikotla

RE: APPLICATION TO COLLECT DATA FOR THE RESEARCH PROJECT IN LEPELLE-NKUMPI LOCAL MUNICIPALITY

1. Your letter dated 13/11/2013 herewith reference.
2. The Municipality has approved your request to collect data in our jurisdiction.
3. Hope you will find this in order

Kind Regards

Acting Municipal Manager
Ms Modiba L.A

MUNICIPAL CALL CENTRE NUMBER: 0800 222 011

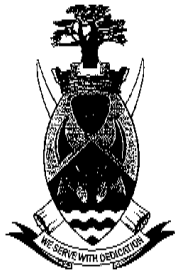
"Motho ke motho ka batho"

Appendix 13: Research permit Thulamela municipality

29/APR/2014/TUE 16:58

FAX No.

P. 001



Private Bag X5066
Thohoyandou
0950
Limpopo Province
Tel: 015 962 7500
Fax: 015 962 5328
015 962 4020

Ref : 4/6/R
Enquiries: Ramugondo R.R
Tel : 015 962 7643
Fax : 015 962 4020
E-Mail : ramugondorr@thulamela.gov.za

To : MR. DIKOTLA M.A
From : CORPORATE SERVICES
Date : 31 MARCH 2014.

Subject REQUEST TO CONDUCT RESEARCH FOR STUDIES

1. We acknowledge the receipt of your letter dated 24 March 2014 requesting permission to conduct a research in our Municipality.
2. Our office has no objection on your request, therefore a permission is hereby granted and you are requested to avail yourself to the office of the Human Resources Manager for further arrangements.

MUNICIPAL MANAGER

ADV. MATHIVHA M.H



No: 0028860

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