MANAGEMENT OF TACIT KNOWLEDGE AT THE CITY OF JOHANNESBURG LIBRARY AND INFORMATION SERVICES, SOUTH AFRICA

by

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SUMMARY

The strength of an organisation lies in its ability to manage tacit knowledge. Ideally, organisations who wish to remain service-oriented in this Fourth Industrial Revolution should comprehend the importance of tacit knowledge by valuing their retention and sharing. However, most organisations fail to realise the richness of tacit knowledge until it departs with the sole owners. Quite often, the importance of tacit knowledge will be noticed only when a new employee faces challenges when they take over the tasks of a more experienced employee who left.

This qualitative study employed the SECI model in examining the management of tacit knowledge at the City of Johannesburg Library and Information Services (COJLIS). A case study design was used, and data were collected through semi-structured interviews, content analysis, and observation. Seventeen participants were selected through purposive sampling according to the positions and the number of years of experience within the COJLIS.

The key findings revealed that the COJLIS does not have an effective strategy to manage tacit knowledge. Therefore it is poorly managed. The COJLIS does not have an organisational culture that promotes knowledge sharing and does not utilise knowledge management resources such as the Joburg Insider Repository. The study showed a lack of a knowledge sharing policy at COJLIS. The study, therefore, recommends that COJLIS should establish an effective community of practice for knowledge sharing, provide proper exit interviews and reward systems. Furthermore, the Innovation and Knowledge Management (IKM) unit should create awareness with the COJLIS on the use of the Joburg Insider Repository. It is recommended that the COJLIS should establish a policy for knowledge sharing.

Keywords:

Knowledge; tacit knowledge, explicit knowledge, knowledge management; knowledge sharing; knowledge retention; management of tacit knowledge; SECI model, a community of practice; City of Johannesburg Library & Information Services.

DECLARATION

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Management of tacit knowledge at the City of Johannesburg Library and Information Services, South Africa.

I declare that the above dissertation is my work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I submitted the dissertation to originally checking software, and it falls within the accepted requirements for originality.

I further declare that I have not previously submitted this work, or part of it, for examination at Unisa for another qualification or at any other higher education institution.

SIGNATURE   DATE: 5 September 2019

ACKNOWLEDGEMENTS

DEDICATION

With great love, I dedicate this dissertation to my loving children; Evans, Trixie, Sean and Morris Junior Nkomo.

To my late grandmothers, Lydia Chinyati and Maud Mutsvanga, who taught me the value of tacit knowledge. Your knowledge and wisdom were unsurpassed.

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ABBREVIATIONS

AARs:	After-action reviews
BIDS:	Bibliographic and distribution services
COJ:	City of Johannesburg
COJLIS:	City of Johannesburg Library and Information Services
COP:	Community of practice
ELA:	E-learning and library applications
IKM:	Innovation and knowledge management
JCL:	Johannesburg City Library
JPL:	Johannesburg Public Library
KM:	Knowledge management
KR:	Knowledge retention
KS:	Knowledge sharing
SCA:	Sustainable competitive advantage
SECI:	Socialisation; Externalisation; Combination; Internalisation
SERD:	Service Extension and Resource Development
SME:	Subject matter experts
TKM:	Tacit knowledge management

CHAPTER ONE
INTRODUCTION AND BACKGROUND TO THE STUDY

1.1   Introduction

The management of tacit knowledge may contribute to an organisation's competitive advantage. This is because knowledge has become the key to success and, therefore, its management is too valuable to be left to chance. Knowledge has developed to be one of the fast-emerging and, ultimately, vital resources for organisations in this Fourth Industrial Revolution (Jelenic 2011). This is reinforced by Bolisani and Bratianu (2017) who articulate that knowledge, as a strategic resource, needs to be managed to promote the competitive performance of the organisation. Mahdi, Nassar and Almsafir (2019) back these sentiments and state that in modern times, organisations realise that acquiring knowledge and using it effectively is the only way to have a sustainable competitive advantage (SCA) in the marketplace. On the same note, Schiuma, Carlucci and Lerro (2012) posit that organisations have realised that knowledge, its effective use, and the fast acquisition and utilisation of new knowledge represent the only source of sustainable service orientation. Ranjbar and Amiri (2015) argue that knowledge has emerged as the primary strategic resource for firms in the 21st century, and researchers and practitioners strive for clues on how to accumulate and manage knowledge resources effectively for competitive advantage. With the knowledge economy growing at a very fast pace, the new models for knowledge management are needed (Musulin, Gamulin & Crnojevac 2011). This growth has thus made knowledge to be an icon of the new economy and should be considered at the City of Johannesburg Library and Information Services (COJLIS) and many other similar organisations who wish to remain competitive.

It is quite clear that the whole concept of knowledge revolves around its management to have a sustainable competitive advantage. The knowledge and expertise of an organisation's human resources, when strategically managed, can advance its innovative and competitive edge. Thus, it is very important for organisations to be able to identify, harvest and harness the knowledge within its workforce (Serrat 2010). This type of knowledge is commonly referred to as tacit knowledge (Polanyi 1966).

Polanyi (1966) broadly classifies knowledge into explicit knowledge and tacit knowledge. Tacit knowledge by nature is difficult to express, measure or formally record (Whyte & Classen

2012). It comprises the "unwritten, unspoken, and vast hidden storehouse of knowledge held by practically every normal human being, based on his or her emotions, experiences, insights, intuition, observations and internalised information." (Polanyi 1966:4). Even though there are various other definitions of tacit knowledge, they all emphasise the subjective and personal nature of tacit knowledge. However, there is general agreement in the literature that the power and value of tacit knowledge for organisations lay in its context specificity (Ranjbar & Amiri 2015; Janus 2016).

Explicit knowledge refers to knowledge that is readily accessible in the form of words and numbers, which makes it easy to store (for example, in the form of documents and databases), retrieve and use. Unlike tacit knowledge, explicit knowledge can be shared more easily (Phaladi 2011:25). Unlike explicit knowledge, tacit knowledge cannot be documented easily or expressed in explicit form, and hence, it is tough to share tacit knowledge with others. The effective sharing of tacit knowledge is, therefore, a vital part of the knowledge management process because it is tacit knowledge that is inimitable and is unique to the firm and hence provides competitive advantage (Khatun 2018). Tacit knowledge could be gathered from observation and experience. It is ideally up to the possessor to decide to share it; otherwise, it remains an unprofitable resource to an organisation. It yields no benefits to the organisation if it is within the organisation, but hidden. This is supported by sentiments from Musulin et al. (2011) who assert that, although the tacit knowledge is hard to measure or represent, it is a critical asset for the success of an individual, a group or an organisation.

Moreover, given that a large percentage of organisational knowledge resides in the minds of individuals in the form of tacit knowledge, failure to share this critical knowledge can have negative consequences. This has significant implications for tacit knowledge, because, not only is it difficult for organisations to exploit since it only resides inside people, it cannot easily be stored or retrieved electronically. In other words, tacit knowledge is not compatible with information technology (IT). It can never be saved using IT formats for future reference.

Thus, organisations seeking to harness this power and value must contend with its complex nature, which, as highlighted above, makes tacit knowledge difficult to discern and express. This is particularly critical, especially given the fact that the largest proportion of organisational knowledge exists as tacit knowledge in the minds of the employees of the organisation. This knowledge is largely based on their individual experience, intuition, insights, and observations,

coupled with their inherent values, ideas and emotions (Alkahtani 2015). Therefore, as explained by Ranjbar and Amiri (2015), tacit knowledge is always embodied in the person who carries it, and only he or she can readily create, augment, or share it. This presents an enormous challenge in that the true extent of tacit knowledge held by an individual employee is often only realised when that employee is no longer a part of the organisation (Davenport & Prusak 1998).

Many organisations are losing organisational knowledge in the form of tacit knowledge through staff turnover. In this light, Pena (2013) asserts that when employees leave a job, whether of their own volition or not, employers lose the institutional knowledge or history that they take with them. Most of these employees would have accumulated many years of experience and expertise, which leave with them when they leave, with the result that the remaining employees must face and execute the old tasks, but without the benefit of institutional knowledge (Bessick & Naicker 2013). This is especially worrying for those organisations that do not have adequate knowledge retention strategies. Many organisations lack sufficient transfer programmes to stem the loss, even though for a successful knowledge creation organisation, there should be effective management practices.

Smith (2001:311) suggests that one potential solution for the loss of institutional knowledge is for organisations to value and retain their employees, and to avoid having employees leave the organisations by ensuring employee satisfaction and meeting the needs of the employees. Kim, Leong and Lee (2005) note that, in the past, employees generally used to stay in the employment of a single organisation for the entire duration of their working life. However, in recent years, employees are switching jobs, or even career directions, several times, leaving with their knowledge and expertise in the process. In this regard, Kianto, Vanhala, and Heilmann (2016) posit that expert knowledge could be lost when employees leave the organisation for some reason. As baby boomers retire, attracting and maintaining the best employees will turn into a significantly bigger challenge concerning knowledge retention.

What many researchers agree on, is the fact that when employees leave their employment for whatever reason, organisations often struggle to retain the tacit knowledge these employees possess, and therefore it is lost (Butler 2010; Dube & Ngulube 2013). Given the increasing importance of knowledge as one of the most valuable assets within an organisation, it is trite

that organisations must move towards implementing robust knowledge management systems to capture and store knowledge (Cole 1998).

Knowledge management must become an integral part of an organisation's operational and management strategies aimed at promoting knowledge retention and the transfer and sharing of knowledge (Mavodza & Ngulube 2011). Knowledge retention is particularly important when long-term employees leave their employment, often creating a gap or void in the institutional knowledge of the organisation (Agarwal & Islam 2015). Agarwal and Islam (2015) further indicate that within the context of a library or information service, employees who resign or retire often leave with knowledge about specific products, customers and their specific or unique needs and so on – information which is often critical to the library successfully fulfilling its mandate.

Managers within the City of Johannesburg Library and Information Services (COJLIS) must search for and share internal knowledge before it is lost to retirement, resignation or even death. High employee turnover, knowledge hoarding (where some employees are reluctant to share their knowledge) as well as heavy workloads are some of the leading causes of institutional knowledge loss in many organisations (Razmerita, Kirchner & Nielsen 2016). Knowledge, such as subject-specific technical and expertise, general awareness of tacit organisational practices, routines, and processes, as well as explanations for why certain decisions were made, is often lost when employees depart or hoard such knowledge. According to Smith (2001:312), knowledge is valuable when it is directly related to the core values and strategic priorities of the organisation. Besides, its true value is only realised when it is shared and applied in the furtherance of the organisation's objectives (Dube & Ngulube 2012:68). Thus, for any organisation to survive, it should manage both its tacit and explicit knowledge resources. However, studies have consistently shown that, despite its importance in knowledge management, organisations continuously encounter problems in managing tacit knowledge (Lee & Nissen 2010). This study was thus conducted to examine the management of tacit knowledge in the COJLIS.

1.1.1 Contextual setting

The City of Johannesburg Metropolitan Municipality is in the Gauteng province of South Africa which has a population of 4.9 million, and offers a variety of services, including the library and information services (LIS). Currently, there are more than 90 public libraries. The first library to operate in the City of Johannesburg was formerly known as the Johannesburg Public Library (JPL), now Johannesburg City Library (JCL), which opened its doors to all races in 1974. Amidst the pioneers of the library were men who had served on several library committees in the Cape of Good Hope, which led to the JPL's espousal of the subscription system, which has its roots in the Cape. In 1936, the city librarian, Reginald Kennedy furthered his studies in Europe and the United States where he learnt the methods of making libraries more accessible to people, leading to his endorsement of branch libraries upon his return.

After the 1994 democratic elections, the city restructured and the library services of Johannesburg were merged and reorganised into the Library and Information Services of the autonomous Northern, Southern, Western and Eastern Metropolitan Local councils. The COJLIS has a variety of subsections, and regardless of all being one, employees do not share their acquired knowledge. This is based on the observation by the researcher in the ten years she has spent in the COJLIS. The subsections include bibliographic and distribution services (BIDS), service extension and resource development (SERD), e-learning and library applications (ELA) and regional libraries. The City of Johannesburg Metropolitan Municipality has a knowledge management department, known as Innovation and Knowledge Management (IKM), as a separate entity, but it deals with the "City" at large, rarely coordinating with the Information Services Department and therefore underutilising the department's expertise. The bibliographic, ELA, and SERD are situated in the same vicinity, while libraries are scattered throughout the city and are divided into regions from Region A to Region G. Although history is vivid, the employees within the COJLIS do not fully comprehend all the protocols and operations of the COJLIS.

1.1.2 Theoretical framework

This study applied the knowledge conversion theory, which is famously known as the SECI model as introduced by Nonaka and Takeuchi (1995) and has thus become the cornerstone of knowledge creation and transfer theory. The acronym SECI stands for socialisation, externalisation, combination, and internalisation. According to this theoretical framework,

knowledge creation begins with socialisation, continues with externalisation, combination and internalisation and returns to socialisation, but at a new level due to the metaphor of a spiral of knowledge creation (Nonaka & Takeuchi 1995). This is illustrated in Figure 1.1.

Figure 1.1: Spiral of knowledge creation: (Adapted from Nonaka & Takeuchi 1995).

This model was applicable because it rests on the assumption that knowledge is created through social interaction between tacit and explicit knowledge.

1.2   Statement of the problem

The management of tacit knowledge is important in an organisation as it supports the organisation's competitive advantage in the knowledge economy. In the public sector, service delivery is improved. The loss of tacit knowledge, therefore, presents significant challenges for organisations' competitiveness, and as a result, organisations must tap into the wealth of knowledge and experience of their long-serving employees, together with other employees, before they leave the organisation. Research by Khatun (2018) stresses that tacit knowledge is unconsciously acquired from the experiences one has while immersed within an environment. After acquiring the knowledge, the possessor becomes the complete owner of tacit knowledge.

The question of how organisations can leverage the tacit knowledge within its workforce has been the subject of many studies in the literature. Mohajan (2017) argues that in the 21st century, knowledge has become the most important resource and vital asset, and it must be leveraged by organisations for them to build and sustain a competitive economic and business

advantage (Suppiah & Sandhu 2010). Indeed, many practitioners and researchers support the view that knowledge has emerged to be one of the most important organisational resources and it is invaluable in ensuring and sustaining long-term competitive advantage and success of any organisation (Nonaka & Takeuchi 1995). The current global economy is largely based on tacit knowledge, which indicates that tacit knowledge has been established to be a key component of organisations.

However, despite this, little is known about the management of tacit knowledge at the COJLIS. Instead, like many other organisations, the COJLIS has primarily focused on explicit knowledge and its management disregarding the perishability and short-livedness of tacit knowledge. Tacit knowledge is not only beneficial to the individual, but also to the institution, if channelled properly. Even though tacit knowledge is deeply engrained and connected to the day-to-day activities of organisations such as the COJLIS, it can be an invaluable resource. The apparent lack of tacit knowledge management at the COJLIS, therefore, leads us to some questions: "How is tacit knowledge managed at the COJLIS?", "Does the COJLIS create platforms for knowledge sharing?", "What is the role of management and technology and what management practices can be used?" In attempting to investigate these questions, this study sought to benefit the COJLIS by providing recommendations for tacit knowledge management.

1.3   Aim

The main aim of this study was to examine how tacit knowledge is managed at the COJLIS.

1.4   Objectives

Table 1.1 indicates the specific objectives of the study, research questions, as well as sources of data.

Table 1.1: Research objectives, questions, constructs and possible sources of data

Objective	Research question	Construct	Data Source
To establish how tacit knowledge is managed at the COJLIS	How is tacit knowledge managed at the COJLIS?	Socialisation Externalisation Combination Internalisation	Interviews and questionnaires
To determine the role of technology in managing tacit knowledge	What role does technology play in managing tacit knowledge?	Systemising ba Socialisation	Literature and interviews
To determine the role of management in managing tacit knowledge	What role does management play in managing tacit knowledge?	Ba: originating / Socialisation Dialoguing / Externalisation Knowledge creation Policy	Interviews and literature
To find out to what extent there is awareness of management practices for tacit knowledge	To what extent is the awareness of management practices for tacit knowledge?	Knowledge retention CoPs Mentoring Storytelling After-action reviews Knowledge sharing	Literature and interviews
To establish the barriers of tacit knowledge sharing	What are the barriers for tacit knowledge sharing?	Individual (trust) Organisational (ba) Technology (technical support)	Literature

1.5   Justification of the study

Despite its potential contribution towards filling knowledge management gaps, little, if any, attention has been paid to the management of tacit knowledge at the COJLIS. According to the researcher, the COJLIS has paid much attention to explicit knowledge, which, if not interpreted, has little relevance.

There are benefits expected to be gained through the study, such as:

- The study will contribute to the understanding of knowledge management in the organisation.
- The study will provide an evidence-based basis for the development of a manual of operation, which can be utilised in the management of tacit knowledge at the COJLIS.
- The study will be a useful and handy guide, providing both theoretical and practical explanations of current knowledge management practices for library and information science professionals.
- The study will bridge the gap of employees leaving, which will raise possible awareness of the importance of sustainable tacit knowledge management for the department.
- The study will recommend and aid in the development of essential knowledge management practices that will minimise the loss of organisational knowledge while promoting its fruitful use at the COJLIS.

The expectation is that the research findings will enable the COJLIS to deal with possible knowledge retention aspects. This will help them understand what steps to take in managing and retaining tacit knowledge.

1.6   Delimitations

The study was geographically limited to the LIS Departments within the City of Johannesburg. The study included professionals with vast experience, and those nearing retirement age, within the COJLIS.

1.7   Literature review

A comprehensive literature review is a key component of any research project. Not only does a literature review play an important role in the development of knowledge, but it also enables the researcher to situate his or her research problem within the context of what is already known (Schryen, Wagner & Benlian 2015). Thus, a literature review is not merely a description of what other researchers have published on a topic. Instead, it represents an opportunity for a researcher to systematically analyse, examine and synthesise what previous workers have done and found (Punch 2009:95), and to identify areas and gaps that require further exploration. Therefore, it is difficult, if not impossible, for one to conduct any research without any reference to other scholars who might have looked at the same or similar subject (Mavodza

2010:30). Besides, a literature review also serves to provide the reader with a clear picture or framework within which the present study fits (Mertens 2010a) by providing the background and theoretical context and basis for the study (Wright 2016:3). In light of this, the published literature on knowledge management, tacit knowledge, and its management as well as other related themes, was reviewed in Chapter 2 and Chapter 5 of this study.

1.8   Scope of the study

The study was confined to the COJLIS regardless of the different entities within the City of Johannesburg. The research participants were limited to the professionals and those with vast experience within the library information service.

1.9   Research methodology

In the present study, a qualitative research methodology was employed because it is interpretive and it allowed for in-depth interviews. These enabled participants to give their views fully by providing detailed descriptions and explanations of the situations according to their understanding. The qualitative methodology also assisted the researcher to examine in detail the experiences and insights of both the employees and the managers regarding tacit knowledge management within the COJLIS.

The study also followed the case study design. This design was deemed to be appropriate as it enables a researcher to narrow down a broad research area by intensively analysing a single entity. In this study, the case was the COJLIS.

1.10   Ethical considerations

The research was conducted in compliance with and conformed to the University of South Africa (UNISA) research ethics.

1.11   Definition of key terms

- *Knowledge*: Davenport and Prusak (2000) establish that knowledge is a fluid mix of framed experience, values, contextual information, expert insight, and grounded intuition that provides an environment and framework for evaluating and incorporating new experiences and information.
- *Tacit knowledge*: The knowledge in people's heads (Janus 2016). Tacit knowledge is personal, context specific and therefore hard to formalise and communicate. Polanyi

(1966:4) highlights that "unwritten, unspoken, and vast hidden storehouse of knowledge held by practically every normal human being, based on his or her emotions, experiences, insights, intuition, observations and internalised information" is tacit knowledge.

- *Explicit knowledge*: 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."

- *Knowledge management (KM)*: According to Janus (2016), KM is a discipline that promotes an integrated approach to identifying, capturing, evaluating, retrieving and sharing all an enterprise's knowledge assets. The World Bank (2012) describes KM as the identification, capture, and transfer of information that is used by people for competing and improving. These same views are shared on Jozinet (2018) that in the City of Johannesburg, KM is defined as processes used in creating, capturing and sharing of knowledge to increase service delivery efficiency and effectiveness that contribute to the City of Johannesburg. While Petrash (1996) sums up KM as having the right information at the right time given to right person, Janus (2016), World Bank (2012) and Jozinet (2018) place more emphasis on the process from identification, capturing, retrieving and dissemination of knowledge.

- *SECI Model*: An ongoing process of socialisation, externalisation, combination and internalisation of knowledge (Nonaka & Takeuchi 1995).

- *Knowledge sharing*: A subset of knowledge management encompassing the exchange of knowledge (information, skills, experiences, or expertise) within and across organisations (Janus 2016).

- *Knowledge retention*: Knowledge retention is the capture of critical knowledge and expertise that is at risk of loss when employees leave an organisation (Kim 2005; Dan 2008).

- *Organisational culture*: Organisational culture is defined as the beliefs and behaviours shared by the members of an organisation regarding what constitutes an appropriate way to think and act in the organisation (Hislop 2013). Therefore, KM enhances the organisational culture by the provision of a platform where knowledge is identified, captured, retrieved and disseminated. Subsequently, an organisation uses that platform to introduce the values, customs and beliefs. KM is about sharing, and everybody in the

organisation should be involved in the application and practising thereof; therefore, an organisation needs to embrace a culture of sharing tacit knowledge.

1.12   Chapter Outline

The study will consist of six chapters, and will be delineated as follows:

Chapter 1: Introduction and background of the study

This chapter provides an introduction and background to the study. The concept of tacit knowledge and its potential role and importance in knowledge management in organisations are highlighted. A brief background of the COJLIS is also given, followed by an exposition of the aims and objectives, as well as the research questions the study seeks to answer. It also provides a brief description of the research scope, methodology, and literature review. Lastly, the chapter indicates ethical considerations and definitions of some of the key terms that will be encountered in the study.

Chapter 2: Literature review on the management of tacit knowledge

This chapter reviews research that has been done previously on the research topic. It brings out gaps and contradictions in the existing literature and provides views about the research problem. It will provide an overall understanding of the management of tacit knowledge and the concept of knowledge conversions, relevant KM practices, related to the study.

Chapter 3: Research methodology

This chapter presents the plan followed in conducting this study. Methodological approaches and procedures used to conduct the study are explained by discussing the research paradigm, research method, study population, data collection procedures and instruments, data quality, data analysis and ethical considerations.

Chapter 4: Data presentation and analysis

The actual findings, analysis of data of this study are described in this chapter.

Chapter 5: Interpretation and discussion of the research findings

Data and research findings are interpreted and discussed in this chapter.

Chapter 6: Summary, conclusion and recommendations

This chapter will present the summary, conclusion and recommendations based on the findings.

1.13   Chapter summary

This chapter introduced the important concepts of the present research. The problem statement, justification of the study, purpose, research objectives and questions were highlighted. The chapter included a brief outline of the literature review and research methodology. The ethical implications of the research were also considered. Lastly, definitions were provided for some of the keywords and terms used in the study to provide readers with a better understanding of the context of the researcher's use of these words and terms. The following chapter provides an in-depth and comprehensive discussion of the relevant extant literature.

CHAPTER TWO
LITERATURE REVIEW ON THE MANAGEMENT OF TACIT KNOWLEDGE

2.1 Introduction

The previous chapter discussed the theoretical framework, statement of the problem, aim, objectives, justification of the study, delimitations, literature review, scope of the study, research methodology, ethical consideration, and definition of key terms together with the outline of chapters. In this chapter, the existing literature on the management of tacit knowledge is examined and discussed. As mentioned by Mavodza (2010:30), it is almost impossible for one to conduct any research without first studying and reviewing what other scholars have studied and found. Thus, almost every study inevitably must start with a review of existing and relevant literature (Mertens 2010b). According to Punch (2009:95), Fink highlighted that a literature review involves systematically and explicitly "identifying, evaluating and synthesising" the existing body of knowledge stemming from research conducted or produced, and recorded by other researchers. Therefore, the purpose of this literature review is beyond merely describing what is currently known about the research topic, it also includes analysing this knowledge with the view of building towards the formulating and contextualising the rationale and justification for this current study. The literature review will be conducted in such a manner that it is closely related to the present study's objectives. Different models and formulations relating to and relevant for the management of tacit knowledge will be analysed and discussed, and a justification of the preferred model will be given.

The following subsection explores in detail concepts such as knowledge, the different dimensions of knowledge, and the division of knowledge into tacit and explicit knowledge, knowledge management, the management of tacit knowledge management, the role of technology and management in the management of tacit knowledge. The literature review section will also cover the SECI model, the Japanese concept of knowledge sharing (ba), knowledge management practices and a review of empirical studies from selected countries according to relevance.

2.2 Knowledge management

Managing knowledge has been a challenge for many organisations, although they wish to remain competitive. Knowledge management is an important tool for gaining competitive

advantage and improving performance and studies by Musulin et al. (2011) revealed that the success of KM depends on dealing with complex tacit knowledge. The authors proceed to say this tacit knowledge, although difficult to represent and share, should be elicited and managed because of its strategic importance. In this subsection, the researcher will explain in detail concepts that include knowledge, tacit and explicit knowledge, dimensions of knowledge and the development of knowledge management.

2.2.1 Knowledge

Knowledge is fast becoming a very central and strategic resource in many organisations and thus has started to gain recognition as an important driver of organisational or even economic growth. Several scholars have made major contributions as to what knowledge is, and Frost (2010) feels any discussion of knowledge and knowledge management should ideally begin with a clear definition of what the word "knowledge" means.

Davenport and Prusak (2000), two of the forerunners of KM, define knowledge "as a fluid mix of framed experience, values, contextual information, expert insight, and grounded intuition that provides an environment and framework for evaluating and incorporating new experiences and information". This definition was further developed by Wang and Noe (2010:117) who include a relevance dimension to knowledge, stating that knowledge is information, ideas, facts and expertise that are relevant for the performance of tasks by individuals, teams or organisations. On the same note, Epetimehin and Ekundayo (2011), explain that knowledge is attained through complex cognitive processes that include e-learning, association, reasoning and insight. When the usefulness or otherwise of knowledge is factored in, it enables the consideration of knowledge as a resource or asset, and in this case, an invisible or intangible asset of an organisation (Epetimehin & Ekundayo 2011).

Chatterjee (2014) shares similar views and states that knowledge is attained by learning and experience. Furthermore, he articulates that its creation originates from thinking, reasoning and abstraction. It is stored within the brain. From the definitions above, it goes without doubt that one of an organisation's most important assets is its people. This is derived from Prusak (2001) who articulates that knowledge revolves around the people, and the activities that they are involved in as they gather, share, teach, learn and make use of information. Like-minding with

the latter, Ranjbar and Amiri (2015), highlight the 'person-centred' nature of knowledge when they relate most of its attributes such as its creation, application, use and transfer to a person.

In this respect, Khatun (2018) says "knowledge is what we know." He further posits that knowledge involves the mental processes of comprehension, understanding, and learning that go on in the mind and only in the mind.

2.2.2 Tacit knowledge

The two main categories of knowledge are explicit knowledge and tacit knowledge (Nonaka & Takeuchi 1995; Aljuwaiber 2016). Tacit knowledge (TK) is subjective, while explicit knowledge is unprejudiced. Tacit knowledge is obtained from experience, with the body, simultaneous, here and now, and analogous, related with practice; while the latter is rational knowledge, with the mind, sequential, there and then, digital, related to theories (Maravilhas & Martins 2018). Tacit knowledge (TK), as a concept, was first broached by Polanyi (1966:4) where he defined it as the "unwritten, unspoken, and hidden vast storehouse of knowledge held by practically every normal human being, based on his or her emotions, experiences, insights, intuition, observations and internalized information." Polanyi (1966:4) aptly captures the term 'tacit knowledge' when he states, "we know more than we can tell." This brings the fact that tacit knowledge exists in human brains, which is the knowledge that people do not know; in other words, people do not know what they know.

While the above scholars declare unwritten, the unspoken and hidden vast storehouse is tacit knowledge, Razmerita et al. (2016) assert that tacit knowledge feels the skills and intelligence and experiences that someone has. Although, explicit knowledge is easy to share or transfer, tacit knowledge, which is the focus of this study, is difficult to share and thus will be dealt with in more detail. From the researcher's perspective, there is a large amount of tacit knowledge housed at the COJLIS. This is evidenced by the experience of the researcher in the organisation.

However, according to Crain and Bontis (2014), Nonaka (1991) first introduces the connection between tacit knowledge and organisational innovation in his studies of the success of Japanese firms. This study was the precursor to Nonaka's (1994) "dynamic theory of organisational knowledge", which advocates the conversion of tacit knowledge to explicit knowledge through

mobilisation, amplification and externalisation. It is arguably the most enduring and influential theory in knowledge management, and it plays an important role in knowledge-oriented research in management (Phelps, Heidl & Wadhwa 2012). Regardless, a variety of competing conceptions have since emerged.

The difficulties encountered in the management of tacit knowledge stem from its nature and characteristics (Joia & Lemos 2010). For example, tacit knowledge mostly resides in human minds in a form that makes it difficult to express in formal language; hence, it is not accessible for verbalisation (Wang, Zeng & Zhu 2013). Most tacit knowledge stems from an individual's experiences, perceptions and values. It is highly context dependent and specific.

Sentiments by Wu and Lin (2013) disclose that tacit knowledge is impossible or difficult to represent because it is "sticky" and bound to its possessors. According to Schuller (2014), stickiness is a metaphor for the difficulties encountered in transferring knowledge. The concept of stickiness was mentioned by Von Hippel (1994), who uses the term to describe how difficult it was to pull tacit knowledge from its source due to it being socially embedded within an organisation. Thus, the subjectivity of tacit knowledge makes it difficult to capture, share and disseminate with the full context and richness of it. The stickiness emanates from the fact that tacit knowledge cannot be easily arranged according to plan, nor is it procedural. This, therefore, makes it difficult to transfer. In furtherance of Von Hippel's idea, Szulanski (1996) names three origins of stickiness, namely lack of absorptive capacity of the recipient, causal ambiguity (lack of transparency about what the factors of production are and how they interact during production), and an arduous relationship between the source and the recipient. Those three constructs represent knowledge barriers.

Vahedi and Irani (2010:445) note that tacit knowledge is often key to how people act in practice. Despite its apparent importance, tacit knowledge has generally been neglected in organisational management practices and strategies. Valuable tacit knowledge is a problematic but versatile tool to nurture. According to Calo (2008:410), together with Magnier-Watanabe, Benton & Senoo (2011), tacit knowledge is typically informal, less definable and uneasily transferable because it resides in the minds and experiences of employees. An argument from these scholars also refers to tacit knowledge to a person's "know-how" and "informal and hard-to-pin-down skills". Mahroeian and Forozia (2012:304) add that the most important feature of the tacit knowledge approach is the fundamental principle that knowledge is individual and is

therefore complicated to extract from the minds of individuals. Tacit knowledge is achieved by individual internal processes like experience, reflection, internalisation or talents. Therefore, tacit knowledge cannot be captured, it can only be transferred by the individual carrying it. If little is done to harness that expertise, tacit knowledge leaves with the sole owner.

In organisations without a culture of knowledge sharing, employees often end up being sole owners or custodians of certain organisational knowledge, which in turn means that when such employees leave the organisation, this knowledge leaves with them and is lost to the organisation (Bessick & Naicker 2013). The risk of losing valuable organisational knowledge is thus very real, especially for those organisations that do not have processes and procedures for documenting and protecting their knowledge assets (Smith 2001; Brown 2000). This reflects that knowledge remains tacit knowledge, instead of express knowledge, when retention or transfer is done poorly.

Tacit knowledge is integral to one's existence and is largely gathered through the impartation of knowledge or skills through joint interpersonal activities. Nonaka & Takeuchi (1995) further identify tacit knowledge as being action based and deep rooted in practice. As a result, explaining it or illustrating it becomes a gruesome task. Tacit knowledge is also viewed as the backdrop against which the actions of a person may be understood (Nonaka 1994; Davenport & Prusak 1998). Polanyi's invention of the term thereby agrees with the explanation mentioned above by Nonaka and Takeuchi (1995) who believe that tacit knowledge is misunderstood, undervalued and in some cases, neglected by public institutions and knowledge management programs. According to Lee and Nissen (2010), these institutions devote a large amount of time to recognisable explicit knowledge, which weakens their competitive advantage for advancement and growth in the face of other organisations' performance and target delivery.

Tacit knowledge is carried in people's minds and as such, it is unspoken, rarely expressed explicitly and difficult to obtain. Its value is seldom recognised by people, including its possessor, although it provides context for people, places, ideas and experiences as mentioned earlier. People with technical skills often know something very well, yet they do not fully comprehend that the knowledge they carry can be a stepping stone to success. In general, personal interactions (knowledge sharing) will give way to the transmission of the skill or insight possessed by the carrier (Janus 2016; Servin 2005). The automatic nature of tacit

information makes it a practical tool in decision-making and the leadership of the staff as it requires very little time when certain choices are being made (Liebowitz & Beckman 1998).

The viable advantage attributed to tacit knowledge, stems in part from the fact that it cannot be easily copied and imitated by competitors. However, this characteristic also makes it less likely to be useful to other employees within the organisation unless the organisation can find ways of getting those with tacit knowledge to share it with their fellow employees.

2.2.3 Explicit knowledge

Explicit knowledge is defined as the knowledge that can be expressed in different but verifiable forms such as words and numbers, and can be conveyed or transferred easily between individuals. Its distribution in different formats makes the articulation and capturing of this knowledge easy (Polanyi 1966:4; Aljuwaiber 2016; Sunasse & Sewry 2003).

Other writers have extended this definition to include aspects such as the ease with which such knowledge can be codified and organised into structured and systematic forms, which in turn can easily be transferred, disseminated, shared and transmitted (Joia & Lemos 2010:410; Phaladi 2011:25; Zhang 2010; Mughal 2010). Although explicit knowledge finds its roots in tacit knowledge, it is easier to document, store, express, transmit and share and technology can be employed to ensure its broad dissemination. This inevitably makes explicit knowledge relatively easy to manage for organisations.

In most cases, this type of knowledge is easily handled by KMS, which is very effective at facilitating the storage, retrieval, and modification of documents and texts. Essentially, explicit knowledge refers to "know-what" or systematic knowledge that is described in a formal language, print or electronic media, often based on established work processes, and uses people-to-documents approach (Bollinger & Smith 2001:314). Therefore, unlike the tacit knowledge that revolves in the minds of the knower, explicit knowledge is much flexible, more readable and is easily accessible.

2.2.4 Dimensions of knowledge

According to Omotayo (2015), Blackler states that there are five different forms of knowledge and these are: (i) embodied knowledge, (ii) embedded knowledge, (iii) embrained knowledge, (iv) encultured knowledge, and (v) encoded knowledge. Embodied knowledge refers to

knowledge that is acquired by physically, and mentally training a body to perform a specific task. The person masters the performance of this task such that it is impossible to separate the person (body) from the knowledge of how to perform that task. Secondly, the knowledge that is found in, and facilitates the performance of routine tasks, implementation of systems and common ways of performing tasks is known as embedded knowledge. Knowledge also often becomes embedded in an organisation's practices, values and organisational culture (Davenport & Prusak 2000). These sentiments are supported by KMT, by saying embedded knowledge can be shared when the knowledge from one product or process is incorporated into another. Management must understand what knowledge is locked within those sources and transfer the relevant parts into a different system.

The third form, embrained knowledge, refers to knowledge that a person may have within them, but which is difficult if not impossible, for the person to express in explicit ways such as in words or pictures. As a result, embrained knowledge can seldom be shared. This type of knowledge is often reflective of a person's values, morals, opinions tempered by experience over time.

When knowledge is closely linked to the culture or environment of a group of people, such knowledge is known as encultured knowledge. This includes, for example, knowing the norms and expectations of the group, as well as the norms and standards for behaviour that are acceptable to the group. The last form of knowledge is called encoded knowledge, (externalised) and this refers to knowledge that can easily be written down (as words, and diagrams), and can be stored, retrieved and transferred in many different formats and through several channels and means. Examples of encoded knowledge include organisational manuals, standard operating procedures, guidelines, and so forth. Omotayo (2015) thus surmises that within an organisation, knowledge is "embodied and embrained in the staff, embedded in routines and common tasks, encultured among the staff, and encoded in manuals, guidelines and procedures. This conceptualisation of the dimensions of knowledge was applicable in the present study at COJLIS. Therefore, from the above, it reflects that access to these dimensions of knowledge requires the knowledge conversion theory (famously known as SECI model) which was developed by Nonaka (1991) and later expanded by Takeuchi in (1995). Section 2.3.1 of this research will discuss in detail this model.

2.2.5 Development of knowledge management

KM has matured to the point that many organisations either believe they have such practices in place or at least understand they are relevant to the knowledge economy (Sanzogni, Guzman & Busch 2017). Knowledge management is an interdisciplinary field spanning disciplines such as engineering and the sciences, to economics, business management, library and information science etc. Knowledge management (KM) encompasses the creation, capture, codification, dissemination and application of knowledge (knowledge management tutorial 2015; World Bank 2012). KM processes deal with both organisational knowledge, represented as tangible (explicit) knowledge, objects and individual or tacit knowledge. Several definitions of knowledge management have been presented up in the literature. Petrash (1996:370), who defines knowledge management as the process by which "the right information is placed in front of the right people at the right time", gives one of the more results-oriented popular definitions. KM was later developed by Hislop (2013:56) who emphasises the idea that knowledge management encompasses all the deliberate efforts, methods and equipment used in managing the knowledge within an organisation. This includes the types of information communication technologies (ICT), people management practices as well as the use of organisational policies and culture in the capture, storage and retrieval of information within the organisation.

Pruzinsky and Milhalcova (2017) state that knowledge management is about how to outgrow and empower educated people to exploit and share their insight and make new knowledge. Additionally, they propose that knowledge management can sustain job satisfaction and encourage high organisational performance. For this research, the researcher adopted the sentiments from the (IT knowledge portal) which assert that knowledge management is the conversion of tacit knowledge into explicit knowledge and sharing it within the organisation. Knowledge management thus follows a series of steps such as amassing, classifying, storing and distributing both explicit and tacit knowledge to members of an organisation.

Alias, Mansor, Rahman, Ahmad and Samsudin (2018) share similar views, reviewing Ajiferuke (2003) who states that KM incorporates the management of explicit knowledge (i.e. knowledge that has been classified in databases, pages, reports, and so on.) and sharing of employees' tacit knowledge (i.e. aptitudes, mastery, or know-how). Explicit knowledge is made inside the organisation, for example, minutes of gatherings, propositions, reminders

rules, reports, and so forth or acquired from extraneous sources, including databases, books, government data, diary articles, and so forth. Knowledge management ultimately leads to improved efficiency, productivity and transparency, and therefore can contribute immensely to the establishment and fostering of improved working relations among the employees of an organisation.

Several factors are the driving forces behind the current quest for effective knowledge management practices. Such factors include the increasingly globalised world economy in which knowledge is emerging as an important organisational asset. However, not all pressures creating an urgent need for knowledge management are external to organisations. In many organisations, the workforce is ageing or moving regularly. This creates the need to capture the intellectual capital within these employees such that it is retained by the organisation and is not lost when the employees leave the organisation. In addition to the retention of knowledge, knowledge management is also useful in that it enables organisations to share valuable insights, which in turn aids in the reduction of redundancy, wastages as employees reinvent the wheel, reduction of the time and resources required in training employees etc. (Epetimehin & Ekundayo 2011). This is all achievable when a link is established between archived organisational knowledge and the actions and decisions taken by employees based on that knowledge (Omotayo 2015).

Another benefit of knowledge management is that employees are exposed to new knowledge and technologies, which can further enhance their productivity (Omotayo 2015). From the above, it becomes apparent that new knowledge is created through the implementation of a knowledge management system. Therefore, knowledge management should not be implemented merely because it is a "nice-to-have", but because of the practical benefits, it provides an organisation.

2.2.6 Enablers of knowledge management

The creation and transfer of knowledge in an organisation have become a critical factor in an organisation's success and competitiveness (Ng 2008; Syed-Ihksan & Rowland 2004a). A variety of knowledge management enablers have been addressed in the literature. Several factors called knowledge-sharing enablers (also called knowledge enablers and knowledge management enablers) affect knowledge sharing and management (Yeh, Lai & Ho 2006).

Knowledge enablers refer to the factors that determine the effectiveness of executing knowledge management within the organisation (Yeh et al. 2006). Among these enablers are organisational culture, structure, people, and IT will be discussed briefly.

Organisational culture

According to Sawhney and Prandelli (2000), organisational culture is the most important factor for successful knowledge management. Culture defines not only what knowledge is valued, but also what knowledge must be kept inside the organisation for sustained innovative improvement. Organisations should establish an appropriate culture that encourages people to create and share knowledge within an organisation. When organisational relationships are fostered through care, knowledge can be created and shared.

Organisational structure

Gold, Malhotra and Segars (2001) posited that the organisational structure within an organisation might encourage or inhibit knowledge management. Organisations should maintain consistency between their structures to put their knowledge to use.

People

People are at the heart of creating organisational knowledge (Ndlela & Toit 2001). It is people who create and share knowledge. 0'Dell and Grayson (1999) further postulate that managing people who are willing to create and share knowledge is important. The effect is that knowledge and competence can be acquired by admitting new people with desirable skills.

Technology

Technology contributes to knowledge management (Gold et al. 2001). ITs allow an organisation to create, share, store, and use knowledge. As such, the support of IT is essential for initiating and carrying out knowledge. IT is widely employed to connect people with reusable codified knowledge, and it facilitates conversations to create new knowledge. Technology is discussed in detail in section 2.4.

2.3   Tacit knowledge management

Organisations are increasingly appreciating the relationship between organisational success and knowledge management, especially the management of tacit knowledge (Bosua & Venkitachalam 2013). Research and practice are replete with evidence linking organisational survival and competitive advantage to tacit knowledge management (Kamhawi 2012) in the face of globalisation and ageing workforces. It is indisputable that organisational competition is increasingly knowledge based as products, services and consumers are increasingly becoming complex. In this context, therefore, knowledge represents the medium within which organisations operate. As a result, managing knowledge represents the primary opportunity for achieving substantial savings, significant improvements in human performance, and competitive advantage.

Increased global competition, the speed of information and knowledge ageing, as well as the dynamics associated with product innovations, has necessitated the attention and importance attached to knowledge management in the literature (Greiner, Bohmann & Krcmar 2007). Therefore, the management of tacit knowledge is increasingly being viewed as critical to the effectiveness, efficiency, and performance of organisations (Bosua & Venkitachalem 2013).

Callahan (2006) notes that with the retirement of senior employees, years of 'know-how' are walking out the door. In addition, clients are demanding quicker answers to increasingly complex questions and problems. Companies cannot afford to make mistakes or miss opportunities, and they must, therefore, make full use of the ingenious solutions that remain hidden in every quiet corner of their organisations. The major challenge for organisations is, thus, how to create a work environment that enables knowledgeable people to learn, adapt and respond effectively to novel circumstances. One strategy that has been suggested and often implemented is to try to extract and record what people know, and to store this 'knowledge' in a database. However, this strategy is misinformed because much of this know-how is not amenable to this kind of treatment because it cannot be captured or recorded easily. The sticking question is, therefore, "How should organisations manage this tacit knowledge?"

According to Callahan (2006), communities of practices, famously abbreviated as CoPs, offer an effective and versatile solution. Communities of practice provide a deeper and wider pool of expertise from which knowledge can be drawn. Tacit knowledge is shared through the active processes of the community, thereby ensuring that it is not 'locked up' in one individual.

Communities of practice increase the interactions between members of the group, which in turn enables members to respond more rapidly to unusual and unpredictable requests.

Callahan's (2006) suggestions are based on the ideas espoused by Snyman and Snyman (2003) who postulate that organisations often fail to appreciate the fact that knowledge is more often generated and shared through the social interactions of people within the organisation. When these interpersonal relationships and interactions form a pattern, they are referred to as *social innovation capital* or just *social capital* (McElroy 2002:30). Within such communities, "individuals develop the capacity to create, refine, share and eventually apply knowledge – knowledge that makes an individual a valuable organisational resource" (Thomas 2002). Even though these communities of practice are mainly self-organisational, a certain amount of facilitation, encouragement and management would be instrumental to how knowledge is created, shared and applied, even if such interventions are only to ensure a supportive environment. A CoP differs from a team in that a team is primarily defined by the task that it must complete, while a CoP is defined by a topic of interest (Neves 2001:1).

In terms of the conversion of knowledge between tacit and explicit forms, four different modes are recognised. These are (i) tacit knowledge to tacit knowledge (socialisation); (ii) tacit knowledge to explicit knowledge (externalisation); (iii) explicit knowledge to explicit knowledge (combination); and (iv) explicit knowledge to tacit knowledge (internalisation) (Karim 2012). These modes have conveniently been abbreviated as the SECI (socialisation, externalisation, combination and internalisation) process (Nonaka et al. 1994). This model was therefore the foundation of this research in formulating the effectiveness of tacit knowledge management, within the organisations.

According to Ozmen (2010:1862), capturing the tacit knowledge in the individuals and making it widely and easily available to employees at the COJLIS are of great importance. The ability to manage tacit knowledge promises to deliver huge returns for organisations. (Banacu, Busu & Nedelcu 2013) propose a plan which can be applied in faculties to use and manage tacit knowledge. Although this was aligned to tacit knowledge management in higher education, it applies to the COJLIS to a certain extent. He proposes the following:

1. Internal initiatives – building a knowledge-sharing culture between all employees (e.g. setting up a structure of internal knowledge transfer amongst the employees). Banacu

et al. (2013) believe employees must be given the time, space and opportunity to transfer and therefore share knowledge that is transmitted verbally.

2. External initiatives – creating new revenues from existing knowledge by organising conferences on best practices.

3. Competence initiatives – creating careers based on knowledge (e.g. rewarding best knowledge sharing employees.

According to Irick (2007), McDermott proposed the concept of a "double-knit" organisation in which teams are combined with CoPs. In terms of this approach, the organisation is linked in two ways which are cross-functional where teams focus on outputs and on learning within functions or disciplines as well as on sharing information and insights. In addition to McDermont's proposals, Irick (2007) suggests the creation of a shared workspace, or environment where knowledge can be elicited and shared.

Tacit knowledge management can entail both "object-oriented thinking" and "process-oriented thinking" (Banacu et al. 2013). The object perspective implies a focus on data storage, tools, document sharing and transfer, therefore treating tacit knowledge as an object supposes investment in information technology. The process perspective implies a focus on collaborative processes and learning dynamics and therefore involves investments in people.

2.3.1 The organisational knowledge conversion theory (SECI model)

The SECI model is a well-known conceptual model that was first proposed by Nonaka (1991) and expanded by Nonaka and Takeuchi (1995). It describes how explicit and tacit knowledge is generated, transferred, and recreated in organisations. Nonaka (1996) figures that organisations create and make use of knowledge via the interaction of tacit knowledge and explicit knowledge, which is called the knowledge conversion process. Based on Nonaka (1996), the organisational knowledge conversion theory views the interaction processes of tacit and explicit knowledge as vital. This interaction between the two types of knowledge brings about what is called the four modes of knowledge conversion (Nonaka 1996), namely socialisation, externalisation, combination and internalisation, abbreviated as SECI (Nonaka 2008). These modes are based on the concept that there are two dimensions to tacit knowledge, i.e. the technical dimension and the cognitive dimension. The technical dimension incorporates informal personal skills, often referred to as someone's practical understanding or savoir-faire.

On the other hand, the cognitive dimension consists of principles, standards, ideals and mental models, which are often taken for granted (Nonaka & Konno 1998:42). The SECI model or knowledge spiral thus shows how an interface between explicit and implicit knowledge can lead to the creation of new information by describing the process in which explicit and tacit knowledge is exchanged and transformed.

Nevertheless, both types of knowledge are important and interdependent. This interdependency is explained further in Nonaka and Takeuchi's (1995) knowledge-creation model discussed below, which serves as a theoretical lens for the study. Nonaka's (1996) theory explains how to create organisational knowledge, how to share it, the conversion/ switch of knowledge from one type to another and the management of organisational knowledge. The organisational theory is illustrated in Figure 2.1 below, which incorporates the SECI and the Japanese concept for knowledge sharing ba. The diagram illustrates the four different kinds of ba: originating, dialoguing, systemising and exercising (Nonaka, Toyama & Konno 2000).
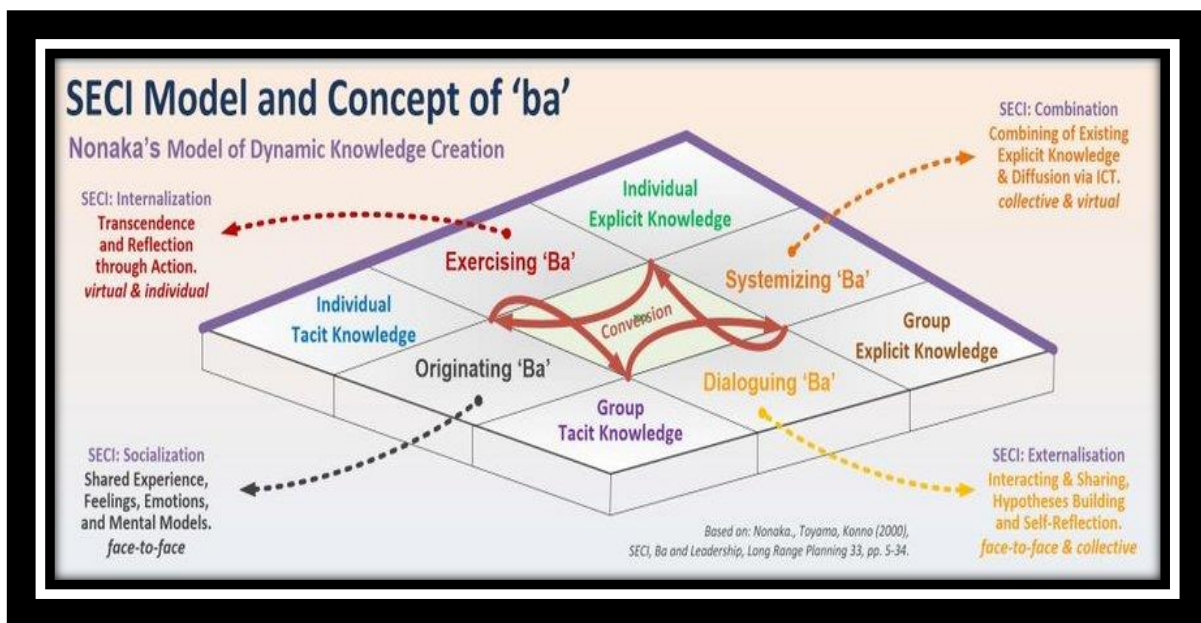
Figure 2.1: The Ba and SECI Model. Source: adapted from (Nonaka & Konno 2000)

The SECI consists of four phases, which are socialisation, externalisation, combination, and internalisation. Through the conversion process, tacit and explicit knowledge expands in both quality and quantity.

2.3.1.1 Socialisation

According to Maravilhas and Martins (2018), socialisation is a process from tacit to tacit knowledge that creates shared knowledge. It is a progression of sharing experiences, like intellectual models or technical competencies. Employees learn from each other and knowledge can be obtained directly from others, without using language, through observation, imitation, and practice. Employees at the COJLIS must learn by watching, imitating and practising with their peers. The employees can learn from the Service Extension Resource Development, E-learning Library Applications (ELA) during the presentations.

Yeh, Huang, and Yeh (2011) share similar sentiments and assert that socialisation is the process of sharing tacit knowledge through observation, imitation, practice, and participation in formal and informal communities. As illustrated in Figure 2.1 above, socialisation involves shared experiences, feelings, emotions and mental models. Yeh et al. (2011) proceed to say the socialisation process is usually pre-empted by the creation of a physical or virtual space where a given community can interact on a social level. Socialisation involves interpersonal communication between individuals or focus groups, which leads to the exchange of tacit knowledge from one person to the other. During socialisation employees at the COJLIS, the knowledge that has been acquired could be shared, and this can be done through the communities of practice and staff meetings. This is enhanced by sharing tacit to tacit knowledge. Communities of practice permit the creation and sharing of knowledge through social groups and social interaction. Therefore, socialisation is an experiential, dynamic step which involves capturing knowledge through physical proximity, by walking around and through direct collaboration with customers and suppliers outside the organisation, and people inside the organisation. However, it depends on having a collective experience, which results in assimilated skills and common mental models. (Stevens 2010).

Nonaka and Konno (1998) argue that this idea of socialisation can be put into practice using the concept of "ba". Ba is a Japanese concept which means a shared space for emerging relations. It can be physical (an office), virtual (email, teleconference), mental (shared experiences, ideas), or any combination of them. In this light, more companies, including the COJLIS, ought to create such a shared space to allow for the effective impartation and communication of tacit knowledge. The concept will be discussed in detail in Section 2.3.2 of the study.

2.3.1.2 Externalisation

The main objective of this process is to create a common understanding. This is supported by Anand and Walsh (2010: 307) who assert that externalisation enables individuals to express in words, signs or any other form the knowledge they have created jointly through the exchange and synthesis of tacit knowledge. Externalisation of tacit knowledge is a critical procedure in the KM theory according to (Virtanen 2011) because the conversion creates theoretical knowledge, which can be used by an organisation. Maravilhas and Martins (2018) state that externalisation is the conversion of tacit to explicit knowledge and tacit knowledge becomes explicit through dialogue and collective reflection using metaphors, analogies, concepts, hypothesis and models. The latter was previously articulated by Nonaka (1994), Nonaka & Takeuchi (1995) and Toyama & Konno (2000) positing that externalisation is the conversion of tacit knowledge into explicit information through the articulation of knowledge into text, diagrams or even graphs as well as metaphors and analogies. Through CoPs, coaching and mentoring management can preserve the knowledge within the COJLIS for upcoming employees. Management can come up with manuals, books, in-house letters, electronic mails or any other forms of knowledge storage after extracting tacit knowledge from the employees, as previously mentioned by Maravilhas and Martins (2018). As mentioned earlier, tacit knowledge is expensive; hence, the need to externalise which makes sharing easy.

2.3.1.3 Combination

"Combination" is when existing information collaborates into new or evolved explicit information (Alkhaldi 2003). It creates systemic knowledge (Maravilhas & Martins 2018). They further argue that combining different sets of explicit knowledge allows the creation of some new knowledge. New knowledge is created through formal training because this process encourages collaboration among employees, and it is during this grouping together that ideas are shared through personal experiences. Managers within the COJLIS should engage in training of junior employees. Nonaka and Konno (1998:42-45) similarly articulate that managers should be conscious of the combination when fostering knowledge sharing in their organisations as it can be managed by leaders who are willing to grip and adopt such an environment. At the COJLIS, this can also be achieved through the mentoring with the

Department of Arts and Culture (DAC) mentors, (where retired librarians are rehired to mentor junior librarians).

2.3.1.4 Internalisation

Internalisation converts explicit knowledge to tacit knowledge and creates operational knowledge. Internalisation is a process of expressing explicit knowledge into tacit knowledge, for example, 'learning by doing or using.' This process takes place through indoctrination or training by using videos, pictures, text and audio, for example, using an operating manual for various machines or equipment to learn how to correctly use the machine which then makes it part of one's tacit knowledge (Uriarte 2008). On the other hand, Ghaedian & Chen (2012) postulate that internalisation can be perceived as a knowledge transformation process from collective knowledge to individual knowledge. Maravilhas and Martins (2018) share similar sentiments and assert that this process is related to learn by doing. At the COJLIS, this is enhanced through training using text and ICT methods. Currently, e-learning and library applications facilitate the training of employees. In addition, Maravilhas and Martins (2018) affirm that when internalised in the knowledge base of every individual as mental models or technical know-how, those experiences through socialisation, externalisation and combination become valuable assets.

2.3.2 Ba in tacit knowledge management

Without a context, knowledge is just information. As mentioned earlier, the four kinds of ba will be explored and their relevance to SECI. Ba is a concept that was created in Japan for knowledge sharing. A study by Nonaka and Konno (1998) revealed that the concept of ba was originally proposed by Japanese philosopher Nishida (1990) and later developed by Shimizu in 1995. Nonaka and Konno (1998) define ba as a shared context in which knowledge is shared, created and utilised. It is regarded as a place in Japan; however, it does not mean it has to be a physical place, and it can be virtual space or a mental place. The concept of knowledge creation differentiates ba from ordinary human interaction (Nonaka & Konno 1998). However, the same concept can be used in Africa because of its applications that are relevant in tacit knowledge management. Furthermore, Nakamori (2006) and Zhu (2006), both cited in Buunk, Smith and Hall (2018), suggest that since the concept of ba originated in Japan, it could be difficult to adopt in the West. An understanding of the finer details of the concept of ba is compounded by

difficulties encountered when translating the concept from the Japanese language to other languages including English. Thus, this resultant and apparent lack of a shared scholarly understanding of ba can be considered a major weakness of the concept.

2.3.2.1 Originating ba

This step is the primary ba describing the initiation of the knowledge creation process, which happens when people directly encounter one another takes place. Nonaka and Konno (1998) call this socialisation phase. In support of the above sentiments, Buunk et.al (2018) aver that originating ba is an existential place in which individuals can share experiences, emotions, feelings and ideas face-to-face through a process of socialisation. Here barriers between the self and others are diminished, and organisational culture is implicitly or tacitly communicated.

2.3.2.2 Dialoguing/ interacting ba

Interacting ba represents the externalisation process (Nonaka & Konno 1998). Unlike the originating ba, the dialoguing ba is more consciously constructed through the assembly of the right participants, for example in teamwork or project work. This ba offers opportunities, both for capturing and for externalising tacit knowledge by everyone involved. In the dialoguing ba, therefore, knowledge, skills and mental models are shared among peers through an externalisation process, and where tacit knowledge is converted to explicit knowledge (Nonaka & Konno 1998; Buunk et al. 2018).

2.3.2.3 Systemising/ Cyber ba

The systemising or cyber ba represents the space where people interact in a virtual space (cyberspace) and a virtual manner. It employs electronic tools such as emails and ICT based databases and technologies (Nonaka et al. 2000). Buunk et al. (2018) share similar sentiments and highlight that such ICT-based technologies provide platforms that are conducive to and suitable for facilitating the sharing of knowledge and information. The COJLIS has the intranet (Jozinet) which all employees can access. Therefore, in principle, tacit knowledge sharing can be exercised via the Jozinet. Cyber ba represents the combination phase (Nonaka & Konno 1998).

2.3.2.4 Exercising ba

In this ba, explicit knowledge is shared through manuals or other kinds of documentation. According to Buunk et al. (2018), it represents a space where individuals absorb new knowledge and internalise it. In this ba, the emphasis is on the action of the individual, which enables them to learn by doing. The ba thus provides a platform and a foundation, for the creation of knowledge (Nonaka & Konno 1998) where tacit knowledge can also be converted to explicit knowledge. This knowledge conversion process is similar to that explained by the SECI model. The SECI model highlights that the knowledge conversion process between tacit and explicit knowledge brings the opportunity to learn new knowledge.

2.4 The role of technology in tacit knowledge management

Globalisation has inevitably led to the reliance on technology for knowledge sharing. Although the conception of externalisation of tacit knowledge was originally mostly the problem of the human-centric approach to KM, later, the problem has been addressed also from the ICT-centric approach by converting tacit knowledge to explicit by the means of information technology. In many organisations, co-workers do not necessarily work near, whereby they would be able to share knowledge and information in person (Dalkar 2016). In addition, the vast amounts and complexity of the information and knowledge that must be shared means that this cannot be done effectively without the aid of technology. Therefore, technology is a critical enabler and foundational element of a KM plan. With the advances in ICTs, KM can be attained through technological solutions. ICTs facilitate collaboration between people and teams which are geographically dispersed. ICTs also facilitate KM activities through the codification of knowledge as well as rich and interactive forms of communication through the internet (Baloh, Desouza & Paquette 2011).

However, even though the technology is important and can significantly enable KM, it is merely an enabler and not a solution in itself. Technology does not make employees within an organisation share knowledge. To this effect, when an organisation already has a knowledge management plan that must be implemented, technology can be utilised to increase the reach and scope of such plans. In other words, the mere act of setting up an ICT-based KM system does not guarantee that the people will utilise it. Therefore, the success or failure of KM initiatives depends on taking objective account of the socio-cultural factors that inhibit people's

willingness to share knowledge, such as conflict, trust, time or concerns about loss of power/status (Sun & Scott 2005).

It is generally accepted that technology is one of the most effective and efficient means for capturing, storing and disseminating knowledge (Syed-Ikhsan & Rowland 2004b). Similarly, the advent of social media provides possibilities for tacit knowledge sharing through these interactive and collaborative technologies (Panahi, Watson & Patridge 2012). Thus, as organisations grow and decentralise geographically, they must incorporate ICT systems into their business models to facilitate and enhance the creation, capturing, transfer and storage of knowledge. Organisations are using mechanisms such as corporate portals, intranet and internet.

It is important for tacit sharing of knowledge to be people and system focused. The management in an organisation should consider the execution of technological mechanisms that are user-friendly, centralised, unsophisticated in formation, flexible and easy to maintain. This, in turn, serves to facilitate the unsolidified flow of tacit knowledge within and outside the organisations. In both nature and the corporate world, success depends on changing at the right time and in the right way (Tang 2016). It lies with management to adapt to change; thus, an organisation should stay ahead of a changing world. The author further asserts that nobody is immune to the disruption that today's pace of technological advancements brings, whether business owner or employee. The new norm is innovation.

Technology can support interaction between people that are not in the same location, and some tools are designed to capture unstructured thoughts and ideas. The focus for the successful sharing of tacit knowledge must be on social interaction, problem-solving, mentoring, and teaching, and these processes must be supported by IT intelligently by means of Knowledge Management Tools (KMT 2019). Knowledge mechanisms should be built following the employees' needs and organisational processes to make it effective (Cong & Pandya 2003; Haruyama 2009). Technology also provides a harbour for sharing tacit knowledge where individuals can anonymously share their thoughts, ideas and perspectives about work-related issues and in effect enable people to arrive at new interpretations and ideas that are used for innovation (Panahi et al 2012). We can thus say IT can be useful as a forum for externalisation of tacit knowledge. The role of IT for tacit knowledge sharing was summarised by KMT

(2019), as an expert finder, as a provision of support in the socialisation and externalisation of tacit knowledge.

2.4.1 The role of IT in relation to the SECI model

Sentiments by Panahi et al (2012) articulate that researchers have been debating whether tacit knowledge sharing through IT is possible. However, with the advent of social web tools, it has been argued that most shortcomings of IT on tacit knowledge sharing are likely to disappear.

Johannessen, Olaisen and Olsen (2001) argue that tacit knowledge could not be digitised and shared using the internet, emails, or groupware applications. Nevertheless, their ideas were disparaged by Chennamaneni and Teng (2011) who concede that IT could contribute to tacit knowledge sharing, although this may not be as rich as face-to-face tacit knowledge sharing. They viewed knowledge as being on a scale that can have different degrees of tacitness and in their viewpoint, IT can easily facilitate the sharing of knowledge with a low to medium degree of tacitness and fairly support sharing of knowledge with a high degree of tacitness.

Lopez-Nicolas and Soto-Acosta (2010) also found that ICT can influence all knowledge-creation processes identified in the SECI model. Their study shows that IT can affect the socialisation of knowledge by facilitating interactions among individuals; the externalisation process by developing community-based electronic discussions and chat rooms; the combination process by supporting sorting, adding, combining, and categorising existing information; and finally, the internalisation process by facilitating informal conversations and discussions, and making the information more available. Table 2.1 outlines the IT-based knowledge-sharing mechanisms. These are adapted from Marwick (2001), Sarkiunaite and Kriksciuniene (2005) and Chatti, Klamma and Jarke (2007).

Table 2.1: Mechanisms for IT knowledge sharing

Socialisation (tacit to tacit)	- Online real-time meetings - Synchronous communication (Chat) - The online community of practice - Groupware systems and social media
Externalisation (tacit to explicit)	Answering questions, annotations - Blogs/Wikis, discussion forums - Collaborative systems, groupware systems - Phone/video-conferencing and indexes, etc.
Combination (explicit to explicit)	- All forms of technologies - Text search - Document categorisation - Podcast/Vodcast - Blogs/Wikis, RSS, Mashups
Internalisation	Visualisation - Video/Audio presentations - Online learning, email and webpage

Adapted from: (Marwick 2001, Sarkiunaite & Kriksciuniene 2005, Chatti et al 2007)

2.5   The role of management in tacit knowledge management

Externalisation of tacit knowledge is a critical procedure in the knowledge management theory. Virtanen (2011) quoted the sentiments of Irick (2007) that the primary task of managers is the conversion of tacit, human capital into explicit, structural capital (externalisation). It is the role of management to ensure that the organisation stays ahead of a changing world, otherwise as speculated by Peterson (2016), an organisation can become extinct like dinosaurs which failed to adapt quickly enough to change. According to Nonaka and Konno (1998), top management should come to the realisation that knowledge needs to be nurtured, supported, enhanced and cared for. Managers should act as knowledge brokers (advisors), contributing to the diffusion of knowledge across and between different groups or teams of employees of CoPs (Irick 2007). This view was discussed by Nonaka and Konno (as cited in Irick 2007) who assert that the role

of the broker is essential to the interplay of tacit and explicit knowledge. There are several ways, as highlighted by Irick (2007), in which managers can facilitate the management of tacit knowledge. He alludes that it is imperative for managers to offer personnel training and exercises to allow individuals to access the knowledge realm of the entire organisation. People need to be taught new concepts or methods for how to share knowledge.

It is the duty of managers to create a shared space that enables knowledge sharing (socialisation). This has been discussed in section 2.3.1 of this study. For management to be efficient, managers must use suitable methods of employee leadership and create conditions that support knowledge sharing, transfer and preservation. If appropriate conditions are established, employee turnover does not need to lead to the loss of knowledge possessed by knowledgeable employees (Urbancová & Linhartová 2012).

Managers should encourage referrals and internal recruitment within the organisation. One of the most effective ways of cushioning against the impacts of high staff turnover is recruiting replacements of those who would have left, from within the organisation (internal recruitment). In most cases, current employees would already be proven good fits for the organisation (Branham 2005). In addition, having current employees offer referrals to potential employees they know outside the organisation can help to minimise confusion of job expectations. Current employees can realistically describe a position and the working environment to an individual outside the organisation.

Coaching and feedback are important aspects in an organisation as such, it is important for companies to develop and avail feedback mechanisms for employees in which both the organisation and the employee may provide each other with feedback and report-backs on activities carried out during the organisation's activities. This enables employees' effort to remain aligned with the organisation's goals, while the organisation is also able to respond to any concerns and issues raised by employees. According to Branham (2005), feedback mechanisms may be either formal or informal, or even a combination of both.

Managers should also provide opportunities for growth within the organisation. Employees are more likely to stay on in a job that provides them with opportunities for personal and professional growth and development. It is, therefore, important for organisations to ensure that it provides opportunities for activities such as workshops, retreats, team building, and other

such tools that assist employees in increasing their personal understanding and enhancing their goal-setting efforts (Branham 2005). Furthermore, there should be adequate job challenges that will keep employees engaged and committed to their jobs. Lastly, employees are more likely to stay engaged in their jobs and committed to an organisation that makes investments in them and their professional development.

Managers should build a sense of trust among employees so that they are motivated to share knowledge. Communication throughout all levels of an organisation is key to building and maintaining credibility. Employees are more open to engaging in knowledge sharing if they know that their employer listens to them and is responsive to the issues they raise. Therefore, organisations may set up structures such as staff advisory councils whose function is to solicit and receive opinions and suggestions from employees and pass them on to the top management of the organisation, which in turn is duty bound to acknowledge or respond to these suggestions and opinions.

Management must also understand the value of chaos. This refers to the value of unstructured work practices that encourage experimentation and social interaction (KMT). Employees share more knowledge in a chaotic environment because there is freedom to solve problems. Table 2.2 outlines the role of management in relation to the SECI model.

Table 2.2: Role of management in relation to the SECI model

Socialisation	(tacit to tacit) - Team meetings, discussions, interpersonal interactions, apprenticeship, participation - Observation
Externalisation	(tacit to explicit) - Dialogue with a team, answering questions, storytelling - Metaphors/analogies
Combination	(explicit to explicit) - Books, papers, reports, presentations, indexes, etc.
Internalisation	(explicit to tacit)

	- Learning by doing, learning from books, reports, presentations and lectures, etc.

Adapted from: (Marwick 2001, Sarkiunaite & Kriksciuniene 2005, Chatti et al 2007)

2.5.1 Knowledge creation

Knowledge is created through the organisational theory. Organisational knowledge creation is the process of making available and amplifying knowledge created by individuals as well as crystallising and connecting it to an organisation's knowledge system Nonaka and Von Krogh (2009). The Market Business News (MBN 2019) puts it simply as the creation of ideas which is at the heart of a company's competitive advantage while Knowledge Management Tools (KMT 2019) defined it according to the SECI model and states that knowledge creation is about continuous transfer, combination, and conversion of the different types of knowledge as users practice, interact and learn. According to Peterson (2016), it is ideal to focus on best principles, especially when considering the changing nature of the workforce, rather than drawing a line in the sand with fixed best practices. It is the duty of management to create new knowledge by the implementation of IT systems that can store, retrieve, organise and helpfully present information and data. In addition, Nonaka and Konno (1998) posit that the success for knowledge creation depends on management's assumption of responsibility, justification, financial backing and caring.

2.5.2 Policy for knowledge sharing

It is the role of management to ensure that there is a written policy in the organisation that is written in clear, concise, and simple language and which should address what the rule is rather than how to implement it. The Concise English Dictionary (2007:713) defines a policy as a system of administration guided more by interest than by a principle set of ideas or plans that are used as a basis for decisions, especially in politics, economics, or business.

According to Ngulube (2003), written policies serve as binding contracts between individuals, the organisation and the stakeholders. In addition, written policies enable organisations to set and enforce standards. Written policies can also be used to motivate staff to participate in the creation, sharing, and retention of knowledge. If there are policies to reward the best knowledge sharing employees, it will be much easier.

The policy should establish a knowledge sharing and retention for an organisation. It should strengthen the effectiveness and efficiency of the COJLIS. Accordingly, an effective policy is one that can address the problem in question (Peters et al 2018). These authors agree that the effectiveness; therefore, should serve as the basic foundation of any design, upon which other goals such as efficiency and equity are constructed. Consequently, a policy should clarify the roles and responsibilities of managers and personnel in sharing knowledge, identifying, capturing, and implementing best practices and lessons learnt. For this research, this policy should include tacit knowledge management, a schedule as to when, how and who shares knowledge.

2.6   Knowledge retention

Many practices of knowledge management help reduce the loss of tacit knowledge; however, only knowledge retention and knowledge sharing will be discussed in this research. In addition, knowledge management practices for knowledge retention will be highlighted. Critical knowledge loss is not simply what the departing employees know about their job tasks, and also who they know and collaborate with to get work done on time. In this light, Levy (2011) states that a key goal of knowledge retention is to ensure that an expert's knowledge becomes an organisational asset that will remain within the organisation even if the expert were to leave. In addition, as knowledge takes an increasingly important role as a key organisational asset, knowledge retention must also become a key organisational goal.

Human resources are the life-blood of any organisation and regardless of most of the organisations being found to be technology driven, human resources are still required to run the technology (Das & Baruah 2013). Kianto et al (2016) define knowledge retention as an activity related to overseeing employee turnover and the related loss of expert knowledge, which is a key organisation asset. Similarly, Meyer and Martins (2012:80) suggest that knowledge retention involves maintaining and not losing the knowledge that exists in the minds of people, on the basis that such knowledge is vital to the organisation's overall functioning.

Knowledge retention thus encompasses all the systems and activities that capture and preserve knowledge and allow it to remain in the organisation. In other words, knowledge retention is the protection of tacit knowledge within the organisation. Doan, Rosental-Sabroux and Grundstein (2011:3) assert that knowledge retention prioritises critical knowledge which risks

being lost based on the possible knowledge breaches which could severely affect the overall performance of an organisation. Practical plans need to be developed to avert such a situation. Thus knowledge retention, at a management level, entails the process of gathering as much information/skills as possible from employees before they leave the organisation for different reasons. Although knowledge should be retained, Dube and Ngulube (2013) argue that not all knowledge in organisations is worth retaining. Only the knowledge that gives value to the organisations should be retained. Meyer and Martins (2012) insist that organisations need to focus on developing a formal retention strategy to retain critical and highly specialised knowledge in the organisation when the employees leave the organisation. According to Wright (2007), the knowledge retention process consists of three stages:

   i.   Initiation: organisations will identify positions/individuals' possible knowledge loss will be the highest and most impending.

   ii.   Implementation: all potential critical knowledge loss at this point should be addressed so that it can be captured, transferred, stored and reapplied.

   iii.   Evaluation: the implementation of the knowledge retention process can be monitored and evaluated with regard to the success of knowledge retention plans in accomplishing stated goals.

As suggested by Liebowitz (2008) , knowledge retention strategies should, therefore, be implemented right from the beginning. Well, thought out knowledge management systems can potentially offer organisations with viable knowledge retention solutions (Baker, Perez & An 2004).

In this regard, Hayward-Wright (2009) identifies two types of what he calls knowledge retention enablers, namely, (i) systems-based knowledge transfer enablers, and (ii) people-based knowledge transfer enablers. System-based enablers comprise any systematically connected activities and resources such as document management, repositories for standardised operating procedures, databases, social networks, and training programs. On the other hand, people-based enablers include activities such as mentoring, coaching, shadowing, joint decision-making, interviews, networking, communities of practices, and so forth.

Perhaps one of the most important but often neglected activities in knowledge retention is retaining those employees who possess valuable organisational knowledge. As already mentioned, increased staff turnover inevitably leads to leakage and loss of knowledge. The key

element would be to identify the factors affecting employee commitment and loyalty to the organisation. As Byrne (2001:325) puts it, "without loyalty, knowledge is lost".

Increased employee retirement also drives losses in productivity and efficiency, reduces organisational memory and depletes the supply of mentors available for coaching new employees (Aiman-Smith, Bergey, Cantwell & April 2006). It is, therefore, up to managers to seek ways in which they can recover and record the methods used by resourceful people to complete tasks to fill the knowledge gap left by former employees. Furthermore, it becomes less expensive and simpler to train the remaining employees. When an employee leaves an organisation, more focus and emphasis should be placed on trying to extract as much information from the exiting staff as is possible, instead of merely asking them to return other organisational assets such as car, laptops, identity card, and so on. A concerted effort should be made to document critical knowledge from top domain experts and key personnel before they leave the organisations. Ideally, exit interviews should be conducted with exiting staff to retrieve information and knowledge. Furthermore, Hayward-Wright (2009) recommends an information audit (focusing on explicit knowledge) and a knowledge audit (focusing on tacit knowledge) to decide what knowledge is critical to be retained or captured.

Knowledge collected over the years can be lost through employee transfers and mere reorganisation. There is no measure for knowledge loss, but non-capturing of critical knowledge will result in poor performance and subsequent yielding of bad results. Experts believe that, on average, it costs an organisation up to two years' salary for an employee to regain lost knowledge (Dewah 2012). To prepare for this loss of institutional knowledge and plan for knowledge transfer, it is a prerequisite that organisations develop strategies to ensure business continuity. As this study precedes the knowledge management practices for knowledge retention which also applies to knowledge sharing, that can minimise the loss is discussed, which are mentorship, community of practice, after-action reviews, storytelling and subject matter experts.

2.6.1 Knowledge management practices for knowledge retention

Dewah (2012) highlights that the impact of knowledge attrition could be reduced by making use of appropriate knowledge approaches to capture knowledge in the organisation. Doan et al (2011) identified three basic questions that must be asked when considering knowledge retention, namely: (i) what type or form of knowledge may be lost? (ii) What are the

consequences for the organisation should such knowledge being lost? (iii) What, if any, action can be taken to prevent this loss and retain this knowledge? These questions form the potential basis for a three-step process for developing and formulating knowledge retention strategies. The first step directly linked to the first question relates to understanding the risk factor. Risks include insufficient focus by organisations on knowledge capture, mentoring programmes, employee training, and development, as well as the relative difficulty employees' face in finding and accessing information (Liebowitz 2011). Other risks such as the high average ages of employees and high staff turnover also must be considered.

The second step, drawn from the second question, deals with understanding which knowledge is critical for the organisation and prioritising its retention (Corney 2018). Lastly, a knowledge retention strategy must then be formulated within the four categories of knowledge retention initiatives as identified by Liebowitz (2008). Examples of these strategies are:

(i) A recognition and reward structure in which an organisation offers its employees compensation and benefits such as competitive salaries, profit sharing, and bonuses. Such rewards must be meaningful enough for employees to positively impact their perception of the organisation and their role in its knowledge retention efforts (Gberevbie 2008). Management can employ intrinsic motivators such as ensuring job satisfaction (praising or recognising good work), or extrinsic motivators which offer benefits not directly related to the job such as money (Gamelgaard 2007). Even though intrinsic motivation is regarded as longer-lasting and having a bigger impact than extrinsic motivation, organisations would do well to employ a combination of both (Liebowitz 2009).

(ii) Organisations can also employ the bi-directional knowledge flow system in which knowledge is not only passed down from senior employees to juniors, but also from juniors to seniors. This instils a continuous learning culture within an organisation. The fact of the matter is that the experience of the senior employees poses a great deal in the organisation. On the contrary, junior employees may have specialised skills that can assist in the growth of an organisation.

(iii) Personalisation and codification refer to a system where the organisation connects its people, using tools such as mentoring, job rotation, knowledge fairs, communities of practice, (*socialisation)*, while codification includes tools like after-action reviews, knowledge repositories and databases, and systems lessons learned systems, (*externalisation, internalisation and combination)* (Liebowitz 2009).

(iv) The final strategy, dubbed the golden gem, entails concerted effort to bring back out of retirement some of the key employees for knowledge transfer and sharing of their know-how. This can, to a certain extent, retain some of the knowledge which would have been lost. These can be brought back as part-time workers, consultants, temporary employees or even rehired into their old positions. In addition, phased retirement can also be used to cushion against immediate loss and allow for the gradual transfer of key knowledge to the organisation. Lastly, the rehiring can help fill the gaps already within the organisation.

2.6.2 Mentorship

Mentorship is one of the most effective ways through which tacit knowledge can be passed down from an expert to an aspiring expert (Frost 2015). It entails a mentee, or junior employee, working or practising under the guidance of a mentor who is usually the expert. Apart from facilitating the transfer of tacit knowledge and retaining expertise within the organisation, it can also help the mentee to become a recognised and accepted member of the community by passing on corporate vision and values and improving his grasp of corporate networking Frost (2015). In addition, according to Lefika and Mearns (2015:27), mentoring is a relationship between two individuals, which focuses on guidance, and learning. For learning to take place knowledge, experience and wisdom must be shared and so mentoring forms as a platform for this sharing practice to happen. In most common cases, the mentor is usually an individual with a great deal of experience, who then takes this experience and sows it back into individuals who are less experienced.

2.6.3 Storytelling

Storytelling is increasingly being recognised as an effective and influential technique for knowledge transfer, and its use has been documented in various fields and practices (Frost 2015). It is based on the premise that stories can be very effective in shaping the organisational vision, in passing knowledge and wisdom, and in shaping the organisational identity and culture. In addition, Dewah (2012) believes that stories can be instrumental in bridging generational gaps, in communicating vital information about the organisation's culture and in helping employees to develop a sense of organisational identity. Swap, Leonard, Shields and Abrams (2001:103) define storytelling as a detailed narrative of past management actions, employee interactions or other intra-or extra organisational events that are communicated informally within the organisation. Liebowitz (2008) articulates that stories are instrumental

for knowledge sharing and collaboration. The retention of tacit knowledge through storytelling requires one-on-one interaction. The fact that this is not a formal way of transferring knowledge, it is easy for new employees to obtain critical knowledge about the company.

2.6.4 Subject matter experts (SME*)*

According to Mannie, Van Niekerk and Andendorf (2013:4), SMEs are recognised, empowered and used to share and retain knowledge among employees in the organisation. Frost (2018) refers to SMEs as cross-functional project teams and said that this refers to the practice of assembling project teams using members of the organisation from different functions. They create new knowledge, share knowledge and support the creation of informal knowledge networks. SMEs bring people together from different parts of the organisation, encouraging future collaboration and the expansion of informal personal networks. Upon completion of a given project, after-action reviews are used to enhance knowledge sharing and retention. It is thus imperative to identify SMEs within the COJLIS.

2.6.5 After-action reviews

After-action reviews (AARs) are professional discussion forums focusing on past events or projects with an attempt to know what worked well, what went wrong and how to sort out things and ensure that things do not go wrong again in future (Liebowitz 2008). They help provide reflective practitioners with a better understanding of why there is success or failure in a project. The nature of the investigation, therefore, makes after-action reviews an ideal mechanism for knowledge retention and transfer. Management within the COJLIS can practice these reviews after every project has been initiated to weigh the outcome.

2.6.6 Community of practice

This is one of the knowledge retention practices. This term has been mentioned and discussed briefly in section 2.4. However, there are other basic facts worth knowing concerning the communities of practice. Some organisations rely on CoPs to retain the knowledge of retiring employees (Dewa 2012). A CoP is a group of people bound together informally by shared expertise and passion for a joint enterprise (Jeon, Kim & Koh 2011:252). The benefits of using

a CoP include the concept of sharing a concern or set of problems. Through socialisation, employees within the COJLIS should implement this strategy for competitive advantage. The above-mentioned knowledge management practices for retention are also relevant to knowledge sharing.

2.7   Knowledge sharing

Employees often possess valuable organisational information. The new paradigm is that the growth of knowledge requires sharing within the organisation between management and staff (IT knowledge portal.). However, sharing and disseminating that information throughout the organisation is a challenge. For instance, a study conducted by Seba, Rowely and Delbridge (2012:134) on knowledge sharing in the Dubai Police Force, found that the main barriers to knowledge sharing were the organisational culture, lack of knowledge sharing-conscious leadership as well as the absence of specific time and other resource allocation to knowledge sharing. It is thus clear that a knowledge sharing culture is of vital importance within any organisation, and its absence could lead to employees not taking any real interest in management's objectives. It is imperative that organisational employees share problems, experiences, insights, templates, tools and best practices with the management.

Knowledge sharing is thus a very important knowledge management process within organisations. It is a process of interchanging knowledge, skills, information, expertise, experience, intelligence, and understanding (Janus 2016; Wang & Noe 2010). Knowledge sharing in an organisation is essential, as it creates awareness and acceptance of new ideas, increases coordination and improves response times (Bulchandani 2015; Amayah 2013; Jain Sandhu & Goh 2015). The creation of this awareness requires socialisation (tacit-tacit) as put across by Davenport and Prusak (2000). According to these authors, it is important to consider informal networks as they involve the day to the interaction between people within work environments. Management should be in support of these networks by providing means of communication. Japanese firms have created talk rooms where employees can engage in unstructured, unmonitored discussions. Section 2.6 of this study discussed the Japanese concept. Management should simply provide the means for employees to foster informal networks and trade tacit knowledge (KMT 2019).

Bulchandani (2015) further states that no one enjoys being out-dated, and without access to the latest information, therefore, employees should often find means to share related views and obtain proper guidance, new ideas and information. This can be done through a communities of practice and storytelling. Sentiments by Wenger, McDermott and Snyder (2013) reveal that a community of practice is crucial in knowledge sharing because it simply talks to a group of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis.

At the lower levels, such as the individual or group level, knowledge is shared through what Van den Hooff, Schouten and Simonovski (2012) call "knowledge donation" and "knowledge collection." The former involves the employees actively communicating with colleagues, whereas the latter involves consulting with colleagues to learn from them. On the other hand, knowledge sharing at the organisational level entails capturing, organising, reusing and transferring the experience-based knowledge, which resides within the organisation and making that knowledge available to all employees (Lin 2007). Thus, at the organisational level, knowledge sharing is designed to transform individual knowledge into organisational knowledge (Foss, Husted & Michailova 2010) and involves leveraging both personal and collective knowledge for the benefit of the organisation.

While knowledge sharing involves various potential benefits for a firm's innovation activities; knowledge may also flow outside organisational borders in an uncontrollable, unwanted and even harmful manner (Ahmad, Bosua, & Scheepers 2014). This phenomenon is referred to as knowledge leakage. Knowledge leakage is different from knowledge sharing in that it is unwanted (accidental or intentional) behaviour by employees who share the knowledge that the firm would rather reserve internally. Knowledge leakage has various negative effects on firms, including loss of revenue, damaged reputation, loss of productivity and costs arising from breached confidentiality agreements (Ahmad et al 2014). Therefore, when an employee leaks knowledge that is rare, inimitable and non-substitutable, recovery from such leakage can be very challenging (Ahmad et al 2014; Barney 1991). Either way, knowledge leakage is likely to happen to some extent, and more knowledge is shared externally, the more important it is to consider the leakage issue.
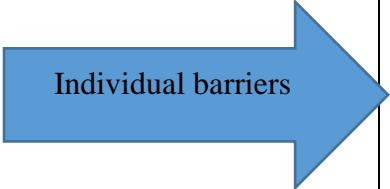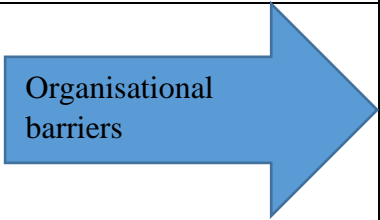
Therefore, the assumption is that sharing of tacit knowledge should largely occur spontaneously through social interactions (Agarwal & Islam 2014; Buckley & Giannakopoulos

2012). The use of the SECI model will outweigh the leakiness of knowledge. Without knowledge sharing, employees tend to operate within rigid silo-like structures, with duplication of work, resource leaks and wastages and repetition of mistakes (Gaffoor & Cloete 2010:1). Consequently, in another study, Wang and Wang (2012) posited that tacit knowledge sharing has an impact on innovation quality and operational performance. Therefore, tacit knowledge sharing depends much on socialisation, externalisation, combination, internalisation and practice to support the transfer of tacit knowledge. Knowledge sharing, however, is hindered by certain barriers which have been enlisted below.

2.7.1   Barriers of tacit knowledge sharing

Tacit knowledge is difficult to capture because of its intangible nature. Riege (2005) identified at least 39 barriers to knowledge sharing, with 26 much linked to tacit knowledge sharing. The author identified these barriers and classified them into three major barriers, namely individual, technological and organisational. This idea was supported by several authors including Laudon and Laudon (2012) , Lilleoere and Hansen (2011) and Casmir and Loon (2012). The barriers are listed in Table 2.3.

Table 2.3: summary of barriers to tacit knowledge sharing (Reige 2005).

Individual barriers	• General lack of time • The perceived or real risk to job security • Limited appreciation of the value of tacit knowledge • The dominance of explicit knowledge versus tacit knowledge • Use of strong hierarchy, position-based status, and formal power ("pull rank") • Insufficient capture, evaluation, feedback, communication, and tolerance of past mistakes that would enhance individual and organisational learning effects • Differences in age and gender as well as educational and experience levels • Poor verbal/written communication and interpersonal skills • Lack of trust • Cultural and ethical differences
Organisational barriers	• Lack of clear integration of knowledge management strategies and policies into organisational management • No clear leadership or direction • Lack of facilities and resources that promote knowledge sharing • No transparency or clarity in how recognition and reward systems are implemented • An unsupportive corporate culture • Stiff competitiveness between individuals, business units or functional areas of the same organisation (e.g. not invented here syndrome) • Communication and knowledge flow channels restricted • The physical work environment restrictive
	• Lack of integration of IT systems and processes • Lack of technical support

Technological barriers	• Unrealistic expectations of employees as to what technology can do and cannot do
	• Lack of compatibility between diverse IT systems and processes
	• Reluctance to use IT systems due to lack of familiarity and experience with them
	• Lack of training regarding employee familiarisation of new IT systems and processes
	• Lack of communication and demonstration of all the advantages of any new system over existing ones

Source: Adapted from Riege (2005:22-30)

2.7.2 Individual barriers

Nakano, Muniz and Batista (2013) emphasise that individuals are an important asset for organisations as far as knowledge resources are concerned. Individuals are important for retention and transfer of tacit knowledge. They act as the primary sources of knowledge sharing. Individuals are affected by motivation, fear, and trust which hoard them from sharing knowledge. Some individuals are obsessed with knowledge hoarding; therefore, it lies on the top management to create an atmosphere where knowledge sharing is encouraged and where employees feel safe to share their knowledge (Razmerita et al. 2016, Nonaka et al. 2000).

It is a challenge when there is a general lack of time to share knowledge and time to identify colleagues in need of specific knowledge (Riege 2005). He further points out that low awareness and realisation of the value and benefit of possessed knowledge to others is a barrier to tacit knowledge management. Riege (2005) also affirms that there should not be a dominance of sharing explicit over tacit knowledge. Wenger, McDermott, and Snyder (2002) identify pride of ownership from the employees and relate that it contributes to knowledge hoarding. Riege (2005) adds other factors which are lack of social network, the difference in educational levels, lack of trust in the accuracy and credibility of knowledge due to the source, differences in national cultures or ethnic background, age, gender differences as well as taking ownership of intellectual property. Therefore, individuals are playing a vital role in terms of sharing tacit knowledge.

2.7.2.1 Lack of trust

Trust is a prerequisite for employees to freely and willingly share knowledge. According to Riege (2005:25), most people are unlikely to share their knowledge without a feeling of trust; trust that their knowledge will not be misused or trust that knowledge is accurate and credible. This shows that the higher the level of trust, especially affect-based trust, between an organisation, directorates, sub-units and employees, the more likely knowledge-sharing engagement (Casmir & Loon 2012). Many more authors populate Riege's ideas of lack of trust as a barrier to sharing tacit knowledge (Cumberland & Githens 2012; Casmir & Loon 2012). If the organisation does not have a knowledge sharing culture, employees are more likely to hoard knowledge.

2.7.3 Organisational barriers

Organisational culture is known to be an important aspect of the formation of a learning organisation. Good relationships among workers and the best organisational culture may also inform their motivation to contribute their knowledge (Hung, Lai & Chang 2011). Riege (2005) lists several factors relating to organisational barriers. The starting point is the realisation that it is management that has a duty to create a sharing space (ba), be it a physical or virtual space, to enable and facilitate the sharing of knowledge. Management should ensure that there is an easy flow of communication and, they should create formal and informal spaces for the sharing of knowledge. Thus, when management fails to fulfil this role and the integration of KM strategies and sharing initiatives is unclear or missing, this can be considered to constitute a barrier to tacit knowledge management. The absence of leadership and direction in knowledge sharing practices and policies presents a significant challenge to tacit knowledge management.

Furthermore, according to Sarkiunaite and Kriksciuniene (2005), change of the organisational culture influences processes, how people adapt, learn new jobs, and gain new skills of employees for interaction and communication. Alienation in the workplace also influences knowledge sharing. It is one of the most important behavioural implications of IT and can be conceptualised by several main categories which are powerlessness, meaninglessness, isolation and self-estrangement. One other factor is the fear of replacement by machines. This fear is typical among people who are not highly skilled or who are performing mostly paperwork

functions. Employees' feelings about their jobs and quality of work-life issue are also regarded as obstacles.

In addition to management failure, restructuring and downsising, together with the subsequent loss of valuable tacit knowledge, may also present challenges to tacit knowledge management within organisations. Housel and Bell (2001: 5) recognise that tacit knowledge mostly resides within human minds and this can potentially be problematic when the 'headcount' is reduced due to employees leaving. This is especially so when organisations have not made any provisions to preserve the tacit knowledge possessed by their employees. Thus, valuable tacit knowledge is lost, especially when staff members who have been with an organisation over a long period and have specialised skills and expertise exit without having their knowledge documented.

Organisational factors, such as structure, management practices, and systems that discourage knowledge sharing usually fall into five basic categories (O'Dell & Grayson 1998). These authors classify the firms in which these problems occur as follows:

- The silo company where knowledge sharing is discouraged beyond the walls of a particular organisational unit
- The not-invented-here syndrome company where workers are unwilling to absorb information not created in their immediate environment
- The Babel company, characterised by chaotic systems, where the right hand does not know what the left hand is doing
- The by-the-book company, which focuses on explicit knowledge rather than tacit knowledge, and
- The bolt-it-on company, where it is expected that knowledge sharing is additional work for overworked staff

In short, the absence of retention strategies will lead to extremely high knowledge loss in the organisation.

2.7.4 Technological barriers

Information technologies have two broad types of effects on people at work. Firstly, IT causes people to change their values, which in turn affects their social relations. This negative influence on social relations will result in a reduction in opportunities for tacit knowledge sharing. Secondly, IT may lead to a significant change in the configuration of a workplace environment. As an example, key developments in IT have seen most jobs being taken over by machines. Furthermore, offices and workstations may be re-arranged to suit better technological requirements rather than to promote interactions between co-workers. Therefore, IT has a clear negative impact on the socialisation processes of knowledge management (Nadason, Saad & Ahmi 2017)

Even though technology can be useful in enhancing knowledge management practices, Riege (2005) identifies several scenarios in which technology can become a barrier to tacit knowledge management. These include a lack of technical support for end-users of technology and rather slow and untimely maintenance of integrated IT systems. Additionally, there may be a lack of, or insufficient integration of, IT systems and processes into the day to day activities of the end-users, or incompatibility between the IT systems and the end-users' way of doing things. Employees are often either reluctant to use IT systems or have unrealistic expectations of what the technology can do. Therefore, employees require training as to how to integrate IT systems into their daily operations to improve knowledge sharing and management.

2.8 Review of empirical studies

The researcher selected studies relating to tacit knowledge from Southern Africa, Australia, North America, and European countries. These studies were selected for illustrative purposes. Only those that relate closely to the management of tacit knowledge were selected.

2.8.1 Studies from selected European, and North American countries, Malaysia

Holgersson (2013) conducted a study on tacit knowledge in which he mentioned the tools for knowledge sharing as mentoring, storytelling, communities of practice and web 2.0.

Holgersson (2013) incorporated the use of the SECI model and ba into his theoretical framework as in the current study. His theoretical frameworks were more aligned to the researcher's. This thesis adopted a qualitative research method and a case study.

Wright (2008) conducted a study named "Tacit Knowledge and Pedagogy at UK Universities: Challenges for Effective Management". In his study, he posits that more emphasis should be placed on tacit knowledge in management which forms part of the core of the current research. Although he had the same emphasis, he did not incorporate the SECI model. The current research concurs with their idea that tacit knowledge should be the central activity in an organisation and every organisation should prioritise having a ba.

2.8.2 Studies from selected African countries

In a study on tacit knowledge management in Kenya, Mungai (2014) suggested the use of training programmes for employees to support tacit knowledge sharing and discourage individualism. The study adopted a qualitative research method. Interviews and observation were used as primary data collection methods. Qualitative data collected were organised, categorised and reported verbatim. Pie charts and tables are used to give a graphical representation of the biodata of respondents. The researcher feels this is an important aspect too of being implemented at the COJLIS.

Whyte and Classen (2012) conducted a study on the use of storytelling as a technique for eliciting tacit knowledge from subject matter experts (SME). Their study indicated that even though it is difficult to extract tacit knowledge from these subject matter experts, the use of storytelling presents possible opportunities. This is plausible given the idea that the human brain is wired to organise information into stories easily. In Africa, with its rich oral history tradition, storytelling comes naturally to people and is already a means of conveying indigenous knowledge. Therefore, this supports the idea by Whyte and Classen (2012) to use storytelling in the sharing of tacit knowledge. Data were analysed using grounded theory principles combined with expert reviews.

Wamundila and Ngulube (2011) conducted a study on the enhancement of knowledge retention in higher education. They found that tacit knowledge is lost through retirement and resignations, leading to the reduction of innovation and growth potential, as well as decreases in operational efficiency and effectiveness. This inevitably leads to increases in costs, thereby

affecting organisational performance. Knowledge needs to be retained in organisations to support service delivery. A quantitative case study design employing a triangulation of data collection methods was used. Data were collected using interviews and questionnaires. Purposive sampling was used to determine participants for the interviews whilst stratified random sampling was employed to select the respondents for the questionnaire. The quantitative and qualitative data were analysed using SPSS. Their findings revealed that 17 (13.7%) respondents mentioned the availability of teaching practice manuals, which already is a gap at COJLIS as observed by the researcher during document analysis. No one seems to understand what is going on in other sections of the COJLIS. The adoption of a knowledge retention framework as asserted by these scholars, from the researcher's point of view forms part of managing tacit knowledge.

2.8.3   Literature review gaps

There are gaps in KM and tacit knowledge management. While nowadays an extensive literature on explicit knowledge and KM in organisations exits, there is a lack of practical studies on how tacit knowledge can be managed. Organisations should realise and prioritise the importance of tacit knowledge. Loermans (2002:293) suggests that KM studies and practice should place more emphasis on understanding the management of tacit knowledge as opposed to explicit knowledge which thus far has been the main focus of most studies and organisation policies. Due to the sustained focus on explicit knowledge, most organisations lack the know-how to effectively utilise the tacit knowledge. In an attempt to bridge this gap, the present study examined KM practices that can be used by organisations to achieve a competitive advantage. Several scholars consider knowledge as one of the primary sources of competitive advantage, thereby making knowledge a strategic resource for business success in the 21st century (Jelenic 2011; Omotayo 2015). Organisations should adapt to the new trends of KM if they wish to survive in unpredictable and complex competitive markets.

In this regard, organisations must always ensure that they have a well-disposed knowledge management system and that employees are well-trained and gained proper knowledge to carry out the designated job excellently and securely (Jelenic 2011; Cadman 2013). The non-existence of policies on tacit knowledge management automatically creates a gap in organisations that wish to remain competitive. While it is no longer a controversy that we live in a globalised world characterised by fast information transfer across large geographic areas

through the internet, organisations should also prioritise having knowledge management policies, especially about tacit knowledge sharing. The assumption was that tacit knowledge if well managed, builds an organisation and its repletion, thus leaving it in a more competitive space.

2.9   Chapter summary

This chapter has looked at the scope of knowledge, knowledge management, developments of knowledge management, the role of management and IT concerning tacit knowledge, knowledge management practices (KS & KR), knowledge management practices for knowledge retention and the different definitions of tacit knowledge according to several scholars. KS & KR were more closely related to undergoing study. Barriers to tacit knowledge management were identified and discussed. In addition, literature from a variety of contexts such as Europe, the Americas, and Asia as well as in Africa were analysed and discussed. Using Nonaka and Takeuchi's organisational conversion theory (SECI), gaps in the existing literature were identified. The study proceeded by assuming that the COJLIS has a great deal of tacit knowledge within the organisational structures which should be harnessed and managed for organisational growth and competitive advantage. The next chapter discusses the research methodologies employed in the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1   Introduction

The previous chapter discussed the review of the literature in relation to the management of tacit knowledge. This chapter discusses the research methodology, research paradigms, research designs, data collection methods, sampling and sampling procedure, data analysis, data quality and ethical considerations. Research, as described by Mertens (2015:2), is one of many ways of knowing or understanding, a process of systematic inquiry that is designed to collect, analyse, interpret and use data. The above opinions from Mertens (2015) emanate from ideas by Leedy and Ormrod (2010:2) that research is a process that entails the collection, analysis, and interpretation of data to understand any phenomenon, which we might be interested. Put in other words, research is the process by which researchers seek answers to questions. To conduct research, a researcher must think logically, follow specific rules and perform some of the steps repeatedly (Neuman 2006). Mertens (2015) further asserts that the key terms in research are systematic and inquiry. The present chapter, therefore, describes and explains the methodologies and methods employed in this study. It discusses how the study was planned and conducted, describes and explains the methodologies and procedures employed, including the research paradigms, procedures, and instruments for data collection. Lastly, the chapter deals with the dependability and trustworthiness of the data collection instruments as well as the ethical considerations.

3.2   Research methodology

Research methodology, as discussed by Bilaua, Witta and Lilla (2018:599), is the theory and analysis of undertaking research. Methodology refers to the general approach or systematic techniques employed by a researcher when conducting research (Babbie & Mouton 2008; Leedy & Ormrod 2010). Punch (2009) explains that research methodology encompasses more than just the methods and procedures used in research and thus, he viewed methodology as the science of studying how research is done scientifically. Similarly, Blanche et al (2006) state that the research methodology of a study both describes and explains the how and the why of conducting research.

In this study, the case study methodological approach was considered the most appropriate methodology, as it would allow for an interpretive position to be adopted. The case study

approach is very useful in enabling the researcher to obtain in depth insights into the research topic by providing a systematic means for data collection, analysis, interpretation, and reporting.

3.3   Research paradigms

Maree (2016) defines a paradigm as "a set of assumptions or beliefs about fundamental aspects of reality which gives rise to a world view." In other words, paradigms serve as the principles upon which the interpretation of reality is based. Creswell (2014) avers that paradigms are 'worldviews'. According to these three scholars, a research paradigm is an all-encompassing system of interrelated practices and thinking that defines the nature of inquiry along these three dimensions. A research paradigm is a comprehensive belief system, which guides research and practice in the field. We cannot leave out the contribution by Lincoln and Guba (1985:15) that says paradigms represent what we think about the world (but cannot prove), which eventually lead to the conclusion that as we think, so do we act.

Schwartz and Ogilvy (1980:1) explain that paradigms enable researchers to report coherently on the findings of their research in ways that are both meaningful and functional. However, the overarching theme is that, as explained above, paradigms comprise the underlying beliefs or understanding shared by researchers on how research questions should be understood and investigated, what methods and tools should be used and how obtained data should be analysed and interpreted, and so on (Matthews & Ross 2010; Kuhn 1962). Creswell (2013) describes three research paradigms, namely, positivism, interpretivism and pragmatism. In this study, the interpretivism paradigm was applied.

3.3.1   Interpretivism

According to Hussain, Elyas and Nasseef (2013:2376), interpretivism is related to constructivism, humanistic, naturalistic and anti-positivist. Interpretivism often addresses essential features of shared meaning and understanding, whereas constructivism extends this concern with knowledge as produced and interpreted.

Interpretivism paradigm is originally rooted in the fact that methods used to understand knowledge related to human and social sciences cannot be the same as its usage in physical

sciences because human interprets their world and then acts based on such interpretation while the world does not (Hammersley 2013:26). Mathews and Ross (2010:476) define interpretivism as a research paradigm that prioritises the participant's "subjective interpretations and understandings of social phenomena and their actions." Interpretivism is based on the belief that there is no single correct route or method to the acquisition of knowledge (Willis 1995), and there are no correct or incorrect theories. Instead, theories should be assessed according to how much interest they generate within the research community as well as in the mind of each researcher. In interpretivism, researchers deduce hypotheses from detailed examination and analysis of the phenomenon of interest. In this way, as argued by Gephart (1999), knowledge and meaning are a matter of interpretation, which in turn means that there is no objective knowledge, which is not influenced in one way or the other by subjective human reasoning. Sentiments by Gentles, Charles, Ploeg and McKibbon (2015:1777) indicate that there are three approaches in selecting a sample in interpretivism. These include purposive, convenience and theoretical sampling, with the purposive sampling technique being the most commonly used as highlighted by Ponelis (2015:540).

Interpretation, on the other hand, entails giving meaning and generating understanding of the information, and this may include the drawing of inferences from the observed phenomena or making comparisons between the information and any other comparable abstract patterns (Aikenhead 1997). The focus of the interpretive paradigm is thus to contextualise any analysis of the information and the inferences that may be made (Reeves & Hedberg 2003:32). In addition, the interpretive paradigm entails understanding the world through the lens of the subjective experiences of individuals using meaning oriented methodologies as opposed to measurement-oriented methodologies. Examples of such methodologies include participant observation, and or interviews, based on a subjective relationship between the researcher and the participants. In this study, such interviews, as well as participant observation, were employed.

The interpretive approach is aimed at explaining the subjective reasons and understandings upon which social action is based on examining and considering the details and meanings in people's daily lives. The interpretive approach employs the use of research designs such as ethnography, case study, grounded theory, historical, narrative and phenomenology. Data are collected via instruments such as open-ended questionnaires, semi-structured and unstructured interviews, participant observation and document analysis. Sampling can be done using any

one or a combination of either purposive, convenience or theoretical sampling (Gentles et al 2015:1777). Ponelis (2015:540) suggests that of these sampling methods, purposive sampling is the most popular and most commonly used. Some debate exists in the literature on the relevance of trying to determine the reliability and validity of these approaches and methods in qualitative research. Mouton (1996) argues that reliability and validity measures can be employed in qualitative research in the same way that they are employed in quantitative research. On the contrary, other researchers argue that reliability and validity are not relevant to qualitative research. Another group of researchers prefers instead, to employ the use of other less controversial terms such as credibility and trustworthiness instead (Lincoln & Guba 1994).

3.3.2   Positivist paradigm

To provide context for the research approach used in this study, the researcher found it best to explore details regarding positivism. The basic belief in positivism is that the world is external (Carson, Gilmore, Perry & Gronhaug 2001) and that to every real-life scenario or phenomenon there is only a single and objective reality that is independent of the subjective beliefs or perspective of the researcher. Positivist research thus fully relies on objective statistical and mathematical techniques, which are specifically designed and structured to uncover the single and objective reality (Carson et al 2001). One of the fundamental goals of positivist research, therefore, is to produce generalisations that can be applied to different times, locations and or contexts. To positivists, human actions can be explained by real causes that temporarily precedes their behaviour and that the researcher and his research subjects are independent and do not influence each other (Hudson & Ozanne 1988).

3.3.3   Pragmatism

The nature of truth has been a central topic for pragmatists and a source of much trouble in classical theory. It rejects theories of truth, theories that claim that a true belief or a statement is one which represents the world as it is (Godfrey-Smith 2013). Although pragmatists stress the role of knowledge in guiding action and solving practical problems, it is an error to see pragmatism as claiming that the direction of research, or choices between rival theories, should be guided substantially by practical and commercial demands (James 1956). Godfrey-Smith (2013) also adds that these pragmatists generally reject to understand human knowledge by appeal to some special beliefs that support all the others.

3.3.4 Justification of using interpretivism

The current study used interviews and observation for data collection, as supported by the interpretive approach. The COJLIS predicament for the management of tacit knowledge needs a comprehensive understanding. Therefore, this research adopted the interpretive philosophical research paradigm to achieve its objectives. This paradigm was acknowledged for its significance in providing contextual depth in determining how tacit knowledge is managed in the COJLIS. It allowed the researcher to secure a rich understanding of key matters affecting the managing of tacit knowledge at the COJLIS. Interpretivism's main principle is that research can never be empirically perceived from the outside. Instead, it must be witnessed from inside through the direct experience of the people. This is evidenced by the fact that interpretivism integrates human interest into a study. The interpretivist approach is based on a naturalistic approach of data collection. As alluded to above, the interpretive paradigm is based on making and interpreting observations. To 'observe' refers to the collection of information about events. The researcher collected all the information about events on tacit knowledge management at the COJLIS.

Carson et al (2001) outline that interpretivists avoid rigid structural frameworks such as those found under positivism. It is flexible. Thus, interpretivism allowed the researcher to embrace a more flexible and personal research structure, which is vital in apprehending significant aspects during interactions with research participants. On the other hand, Aliyu, Bello, Kassim and Martin (2014:89) state that primary data collected under this paradigm can also be associated with high levels of validity because it tends to be trustworthy. The researcher also had the liberty to interpret the research findings based on the understanding of the subject at hand and the researcher is open to new knowledge throughout the study, which would be brought about by the research participants.

3.4   Research approaches/design

Creswell (2015:3) defines research design as plans and procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis. Three types of designs were further discussed hereunder, namely qualitative, quantitative and mixed research approaches.

Research design or approach determines and controls how data are going to be collected and analysed (Ngulube 2015a:41). Creswell (2014:41) states that it is crucial for the researcher to decide beforehand which of these three approaches (qualitative, quantitative and mixed methods) he or she is going to employ within the study. This decision, in turn, will provide the researcher with specific direction on specific procedures and tools for conducting the research. According to Bless, Higson-Smith and Sithole (2013:130), the research design is directly related to the research question. Bless and Higson-Smith (1995) articulate that research design has two meanings. Firstly, it can be understood as the planning of any scientific research from the first to the last step, and secondly, it can refer to the specification of the most adequate operations to be performed to test specific hypotheses under given conditions.

Similarly, a research design can be described as an outline of how the researcher will go about seeking answers to the research questions. It assists the researcher by directing him or her towards specific and necessary information that is required to answer the specific research questions, and by so doing, makes the research effort as efficient as possible (Kothari 1995; Ngulube 2005a). The research design is an action plan that covers the population or a sample, period for data collection, and design considerations, for instance exploratory, explanatory, experimental or correctional. According to (Ngulube 2015a:42), the major function of a research design is to enable the researcher to anticipate what the appropriate research decisions are likely to be and to maximise the validity of the eventual results.

Mavodza (2010) adds that this process includes all, or some combination of, the following different forms of research, namely measurement, observation, survey, intellectual inquiry, scholarship, innovation with the view of generating new knowledge or a new and novel understanding of a scenario or phenomenon. Three types of research methodologies primarily used in the social sciences are qualitative, quantitative and mixed methods research (Punch 2009:209).

3.4.1 Quantitative research

Quantitative research is descriptive, and it makes use of formal numerical measurements of phenomena or variables, which are then subjected to statistical analysis (Stangor 2011:15). Quantitative research is therefore useful when one seeks to examine the relationships between and among different variables. As described by Creswell (2009), in quantitative research, the researcher uses positivist claims to develop knowledge. In other words, the cause and effect thinking, and reduction to specific variables and hypotheses and questions are used to come up with claims (hypotheses) which are then tested through data collected by experiments, surveys, content analysis as well as existing statistics (Neuman 2011:22). In this way, quantitative research can be said to present statistical results in the form of numerical data, whilst qualitative research produces narrative and descriptive data in the form of words through which researchers attempt to explain things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them. (Denzin & Lincoln 2000:3).

Quantitative research makes use of questionnaires, surveys, and experiments to gather information, which is expressed numerically to facilitate statistical analysis (Hittleman & Simon 1997:31). In quantitative research, researchers select a sample of the population from which variables are then measured and recorded. Relationships between the variables are then determined by statistically determining tests such as correlations, relative frequencies, or differences between means. The focus of quantitative research is thus to test theories and hypotheses. Creswell (2009) explains that in quantitative research, research problems or questions are identified based on some observed trends or the need to explain why something occurs.

3.4.2 Qualitative research

Qualitative research is a process of real-life analysis that focuses on the "why" rather than the "what" of social phenomena. It relies on the direct expertise of human beings and generates rich, detailed data that leave the participants' perspectives intact and provide multiple contexts for understanding the phenomenon under study. In this way, qualitative research can be used to demonstrate phenomena vividly or to conduct cross-case comparisons and analyses of individuals or groups. Qualitative research thus relies on linguistic tools (words) instead of

numerical data, and it employs meaning-based rather than statistical forms of data analysis (Maree 2016:53). A qualitative approach will help the researcher to have a deeper understanding of the matter being analysed. Alpaslan (2017) posits that qualitative methods are used when the phenomenon being studied is deeply rooted in the participants' knowledge or understanding of themselves. This is the case at the COJLIS. It is an approach that will enable the researcher to answer questions by providing a rich picture of the actual conditions surrounding COJLIS. The weight of this research lies heavily in the qualitative research approach.

According to Babbie (2010:23), the "distinction between qualitative and quantitative data in social research is essentially the distinction between numerical and non-numerical data." From these sentiments, Babbie (2010:391) explains that qualitative data analysis is an assessment of non-numerical data collected through, for example, participant observation, content analysis, in-depth interviews, and other qualitative techniques. While quantitative research was originally developed to study natural science such as mathematics, qualitative research is rooted in the socio-cultural sciences (Creswell 2009).

Stangor (2011:15) asserts that qualitative research is concerned with observing and describing events as they occur. In this context, the main aim of qualitative research is to capture the full and rich picture of the everyday behaviours of the participants. On the same note, Maree (2012:14) defines qualitative research as a method designed to scientifically explain events by using words and phrases and does not depend on numerical data to make conclusions. Qualitative research employs multiple methods involving an interpretive, naturalistic approach to its subject matter. It offers many advantages. It is unstructured, and this offers flexibility to the researcher to probe respondents when a new and interesting issue comes up (Leedy & Ormrod 2010:95). In qualitative research data collection, the collection is carried out using unstructured or semi-structured techniques such as focus groups, interviews, and observation of participants by sampling a small size, which is representative of the whole quota in its natural setting (Wyse 2011). Qualitative research is, therefore, aimed at assisting researchers in understanding better people as well as the socio-cultural contexts within which they live (Myers 2009).

Here, researchers are more interested in understanding how human societies or communities arrange themselves as well as how individuals make sense of their surroundings through tools

such as symbols, rituals, social structures and social roles (Maree 2016). Qualitative research thus involves a naturalistic and interpretive approach to the subject matter, and the researcher seeks to make sense of, or to interpret, phenomena in terms of the meanings people bring to them (Denzin & Lincoln 2003). When using this approach, the researcher must either explicitly or implicitly describe and explain the purpose of the research as well as the roles of the researcher and research participants, the stages of the research and the methods of data collection and analysis. The researcher used a qualitative research method because it is interpretive. It allowed in-depth interviews afforded respondents to give their views by describing and explaining the situation, as they understood it. Qualitative research helped the researcher to determine the experiences and perceptions of employees and managers regarding tacit knowledge management.

3.5   Design of qualitative research

Astalin (2013) asserts that there are four major qualitative research designs, namely phenomenology, ethnography, grounded theory, and case study. Furthermore, Astalin (2013) posits that the design of qualitative research is a general way of thinking about conducting qualitative research that describes, either explicitly or implicitly, the purpose of the qualitative research, the role of the researcher(s), the stages of research, and the method of data analysis. The current research employed the case study which will be explored below.

3.5.1 Case study

A case study research method is mostly used in qualitative research, where the researcher focuses on a single entity or unit in which he or she then study intensively, collecting as much relevant information as is possible, upon which the correct inferences may be made (Kothari 2004; Creswell 2009). These scholars argue that a case study is an exhaustive and comprehensive look at the depth rather than the breath of a specific unit. Case studies also probe the contextual realities and differences between what was planned and what occurs, focusing on an issue, feature or unit of analysis.

Even though case studies are more commonly used in qualitative research, they are also often employed in quantitative research (Kumar 2011). Ragin and Becker (1992) point out that there is little consensus on what may constitute a case, and the term is used broadly. However, as already alluded to above, it is generally accepted that a case study is an in-depth examination

of a single instance of the phenomenon, such as an individual, a family, group, community or even an event or episode (Babbie 2010:309). According to Burns (1997:364) to qualify as a case study, it must be a bounded system; an entity. A case study should focus on a bounded subject/ unit that is either very representative or extremely atypical. A case study, according to Grinnell (1981:302), is characterised by a very flexible and open-ended technique of data collection and analysis. Case studies employ multiple methods of data collection, which include interviews, document reviews, archival records, and direct and participant observations and subsequently 'thick descriptions' of the phenomena under study (Yin 2003). In selecting a case study, therefore, you usually use purposive or judgemental or information-oriented sampling techniques. The case study, in this case, will be the COJLIS.

3.5.1.1 Justification for the selected research method/design

The case study method was selected for this research project, as it provided the researcher with enough allowance to comprehensively and critically study tacit knowledge management in detail within the COJLIS – the institution under study. A case study in qualitative research places its emphasis on how and why questions (Meyer 2009) and for this reason are appropriate for descriptive and exploratory studies. According to Stake (2005), a case study can focus on describing processes, individual or group behaviour in its total setting.

3.6   Population and sampling

Polit and Hungler (1999) state that population is an aggregation or totality of all the objects, subjects or members that conform to a set of specifications. Babbie (2011:117) defines a population as "group of people about which the study wants to draw conclusions and which the researcher would like to be able to generalise a specific sample study." The researcher used the definition from Puhan (2013:1) that a population is the entire group of individuals or objects to which researchers are interested in generalising conclusions. This research drew its population from COJLIS employees who are experienced with more than ten years. The research population included the assistant directors, director, deputy director, managers, senior librarians, librarians, and other experienced senior library assistants.

3.6.1   Sampling

According to Leedy and Ormrod (2010), there are two kinds of sampling methods that are commonly used in research and these are probability sampling and non-probability sampling. Probability sampling methods are based on the principles of randomness and probability theory while non-probability methods are not (Maree & Pietersen 2016). Non-probability sampling is widely used in qualitative research. The most common non-probability sampling techniques are: convenience sampling, quota sampling, snowball sampling, purposive sampling and theoretical sampling (Bryman 2016; Sarantakos 2013:177). The researcher focused and discussed only the applicable sampling method used in the study.

Purposive sampling

Purposive sampling, also called judgmental sampling (Maree & Pietersen 2016), is a type of non-probability sampling is often used when sampling is done with a specific purpose in mind. Respectably the specific purpose was to find out how tacit knowledge is managed at the COJLIS. Similar sentiments are shared by Sarantakos (2013) who defines purposive sampling as a non-random sampling technique in which researchers select subjects based on their relevance to the study. Babbie (2010) also highlights that purposive sampling is the one in which the units to be observed are selected based on the researcher's judgment about which ones will be the most useful or representative. Purposive sampling decisively selects information-rich units and cases in a population for in-depth study to achieve the desired results. These units were selected by the researcher in an impartial and unprejudiced manner to ensure the reliability of the results. This sampling method was appropriate for this research because the population was convenient and inexpensive, and the choice of the sample population was appropriate.

Neuman (2000) suggests that purposive sampling uses interviewees that best enable the researcher to meet the research objective. The researcher identified the population that met the objective of the study by evaluating the characteristics, creativity, and significance in the context of the research objective. Purposive sampling is ideal with small samples where the researcher requires a selected case that provides information necessary to the study. The emphasis is on obtaining a substantial amount of information and data form the population working in knowledge in-depth areas of the organisation.

3.7   Data collection methods and procedures

Qualitative data analysis tends to be an ongoing and iterative (non-linear) process, implying that data collection, processing, analysis, and reporting are intertwined and not merely several successive steps. Creswell (2014:189) argues that the data collection steps include setting the boundaries for the study, collecting information through unstructured or semi-structured interviews and observations, documents, and visual materials as well as establishing the protocol for recording information. Thus to yield the data for the investigation, different instruments were employed.

3.7.1   Observation

Observation is the systematic process of recording the behavioural patterns of participants, objects, and occurrences without necessarily questioning or communicating with them (Maree 2016). As a qualitative data-gathering method, observation is used to enable the researcher to gain deeper insight into and understanding of the phenomenon under observation. Observation uses our senses (touch, feel, smell, hear and taste). Maree (2016) elaborates that observation allows the researcher to hear, see and experience reality as participants do. There are four types of observation used in qualitative research. Maree (2016:91) identifies these types as a complete observer, observer as a participant, participant as an observer and complete participant.

i.   *Complete observer:* it is the least form of observation with the limitation that the researcher does not become immersed in the situation and does not understand what he/she observes. The researcher becomes an etic or outsider meaning that as a non-participant observer, he looks at the situation from a distance (Maree 2016).

ii.   *Observer as a participant:* the researcher gets into the situation with the focus on his/her role as an observer in the situation (Maree 2016).

iii.   *Participant as an observer*: this is typically found in action research projects. Here the researcher becomes part of the research process and works with the participants in the situation to design and develop intervention strategies. As opposed to the complete observer, the researcher becomes an emic (insider) perspective.

iv.   *Complete participant*: the researcher gets completely immersed in the setting to such an extent that those being observed are unaware of the scenario. This raises serious ethical issues, so it is seldom used. Usually used in the grounded theory.

Data collection through observation involves the researcher collecting information without any effort from the respondent. In the observation method, the subjective bias is eliminated, and information is based on the current activities of the persons being observed (Neuman 2002; Kothari 2004; Creswell 2009). It is imperative that the researcher utilises an observation schedule. According to Creswell (2014:244), this is a page that separates descriptive notes, that is, the participants and their setting, from the reflective notes, which are the researcher's thoughts and feelings. The observation schedule for this study included general information about the observation such as dates and times when meetings and programmes were conducted, the interaction between the librarians and management to see how tacit knowledge is shared at the COJLIS. The researcher observed how tacit knowledge is shared among the peers, and also how technologies are used to support knowledge sharing. The researcher also observed if participants had knowledge of the existence of the knowledge repository within the workplace. Data collected through the observation method were presented.

3.7.2 Interviews

An interview is a two-way conversation in which the interviewer asks the participants questions to collect data and to learn about the ideas, beliefs views, opinions and behaviours of the participant. The aim of the qualitative interview is to see the world through the eyes of the participant, and they can be a valuable source of information only when used correctly (Maree 2016). Creswell (2013:190) argues that in qualitative interviews, the researcher conducts face-to-face or telephonic interviews with participants, or engages in focus group interviews with six to eight interviewees in each group. Creswell (2013) further articulates that the interviews usually involve a few unstructured and generally open-ended questions that intend to elicit the views and opinions of the participants.

There are three types of interview methods found in qualitative research, namely structured, semi-structured and unstructured (Nieuwenhuis 2016:93) and the elaboration of these methods is given below. However, all being qualitative, the researcher used the semi-structured as it suited the study to interview respondents to answer the objectives of this study individually. The interview guide was arranged according to the objectives and where necessary follow-up questions were asked to get the in-depth information. Each interview lasted for at 45 minutes

with some stretching to an hour all guided by the number of questions in the interview schedule (See Appendix B).

3.7.2.1 Unstructured interview/ open-ended

This type of interview often takes the form of a conversation with the intention that the researcher explores with the participant his ideas, views, beliefs, and attitudes about certain events or phenomena (Nieuwenhuis 2016:93). According to Sarantakos (2013:278), the wording and order in unstructured interviews can be changed at will. Lofland and Lofland (1995) as cited in Nieuwenhuis (2016) point out that in-depth (or ethnographic) interviewing and participant observation go hand in hand, and the data gathered during this process comes from informal interviewing in the field. Lastly, open-ended interviews are normally spread over a period and consist of a series of interviews

3.7.2.2 Structured interviews

In this interview, technique questions are detailed and developed in advance, much as they are in survey research (Nieuwenhuis 2016). The scholar probes that the interviewer controls the pace of the interview by treating the interview questions in a standardised and straightforward manner. All the participants receive the same questions, the same order or sequence by the same interviewer. They are excellent instruments to be used in qualitative descriptive studies where the researcher is interested in more factual data. Even though structured interviews can be used to collect qualitative data, they are popularly used to quantitative source data.

3.7.2.3 Semi-structured interview

This type is commonly used in research projects to corroborate data emerging from other data sources. Semi-structured interviews are usually based on the line of inquiry developed by the researcher in advance of the interview. The researcher should be attentive to the responses of the participants to identify new emerging lines of inquiry that are direct to the phenomenon being studied (Nieuwenhuis 2016). Sarantakos (2013) shares similar views and postulates that semi-structured interviews contain elements of both structured interviews and unstructured interviews. Furthermore, the degree to which interviews are structured depends on the research topic and purpose, resources, methodological standards and preferences, and literature review, which is determined by the research objectives. This technique can be used to collect both qualitative and quantitative data.

In this current study, the researcher employed the semi-structured type of interview. Qualitative data were collected from the field through face-to-face and in-depth interviews with the selected sample population. Following the sentiments of Maree (2016) and Creswell (2013), the researcher conducted face-to-face in-depth qualitative interviews to see the world through the eyes of the participants. The researcher made appointments with the participants' place of work. All the interviews were conducted in a user-friendly environment. The researcher prepared an interview schedule containing questions listed according to the objectives of the study. The questions asked were aimed at addressing the research questions of the study. The flow of discussions determined which questions were asked and which ones were left out so that there were no interruptions. The choice of this technique was guided by Bryman (2012) who posits that semi-structured interviews offer flexibility to approach different respondents in different ways while covering the same areas of data collection and as qualitative produce data, which deal with topics in detail. Some of the advantages that also guided the researcher (UNISA 2009; Kothari 2004; Welman & Kruger 2001) included the refinement of the interview language, observation of respondent's gestures and non-verbal answers, and probing further to obtain in-depth information.

3.7.3 Content analysis

Neuendorf (2002:1) defines content analysis as 'the systematic, objective, quantitative analysis of message characteristics.' His definition was further extended by Krippendorf (2004) who defines content analysis as 'a research technique for making replicable and valid interferences from data to their context'. Similarly, these definitions were further developed by Leedy and Ormrod (2010) who affirm that content analysis is a detailed and systematic examination of the contents of a body of material for identifying patterns, themes, or biases. On the same note, Bryman (2012:289) accentuates that content analysis is an approach to the analysis of documents and texts (which may be printed or visual) that seek to quantify content in terms of predetermined categories and a systematic and replicable manner.

Consequently, with the nature of the current research, the researcher adopted the qualitative content analysis definition by Shannon (2005:2) who perceives qualitative content analysis "as a research method for the subjectivist interpretation of text and data through the systematic

classification process of coding and identifying themes or patterns." Content analysis is typically performed on forms of human communication, including books, newspapers, films, television, art, music, videotape, and human interactions, transcripts of conversions, and internet blogs and internet board entries. Therefore, content analysis according to Hall (n.d.) is an observational research method used to systematically evaluate the actual and symbolic content of all forms of recorded communication including not only text, but also visual and aural data.

For this study, the company reports, newsletters, minutes of the meetings, circulars, notices website, procedures and policies about tacit knowledge management were consulted to obtain data about the current state of tacit knowledge management at the COJLIS. Following this regard, the researcher read document/contents as part of her duties and mandatory since it is the working environment.

3.8   Data analysis and interpretation

According to Nieuwenhuis (2016:110), the analysis of texts and narrative data must be guided by the rigour and procedures of the specific type of analysis to be followed by the researcher who in turn determines the data collection procedure. Keyton (2006:290) defines data analysis as the process of labelling and breaking down raw data to find patterns, themes, concepts and propositions that exist in the dataset. In the same way, qualitative data are described as data that are in the form of text, written words, phrases or symbols describing or representing people, actions and events in social life (Neuman 2006:457; Neuman 2011:507; Denscombe 2007: 286).

As indicated by Creswell (2014:245), data analysis and interpretation intend to make sense out of the text and image data through segmentation and taking the data apart, then putting it together again. This data need to be arranged into a small number of relevant themes, disregarding the irrelevant parts. Ngulube (2015b:138) narrates that data analysis entails categorising, ordering, manipulating and summarising data to find answers to the research questions. On the same note, Ngulube, Mathipa and Gumbo (2015) aver that thematic analysis is a method for identifying themes and patterns of meaning across a dataset with a research question.

Nieuwenhuis (2016) concurs with the above scholars and further probes that data analysis can be done through, hermeneutics, content analysis, conversation analysis, discourse analysis, and narrative analysis. Similarly, Petty, Thomson and Stew (2012:381) state that qualitative data can be analysed by using the following methods: thematic analysis, discourse analysis, critical discourse analysis, conversation analysis and analysis of narratives. Petty et al (2012:381) contend that data analysis in qualitative research can be an extremely time-consuming and laborious process because the data are commonly in the form of numerous pages of written words, which need to be analysed and interpreted by the researcher. Although there seems to be a great deal of software for analysing qualitative data, there is, of course, what may at first glance appear to be disadvantages of using computer programs, namely the cost of software licences as well as the fact that the researcher has to be well trained in the use of the software programs. No software was used.

In this respect, data collected for this study were in the form of text which stemmed from notes by the researcher during observation, document analysis, oral interviews, and audio recordings during the interviews. Audio recordings were transcribed in an MS word document and analysed according to the objectives of the study. In the present study, the analysis of oral interviews with participants was transcribed in an MS Word document and analysed according to the themes or objectives of the study. The data were grouped according to each theme emanating from the objectives of the study. This means that all responses addressing a particular objective were grouped. A similar approach was taken to data collected through observation and document analysis. The data obtained from document analysis and observations were integrated and grouped thematically with the data obtained from interviews to answer the research questions.

Additionally, in terms of document analysis, the researcher reads document/contents as part of her duties and mandatory since it is the working environment. The company reports, newsletters, minutes of the meetings, circulars, notices website, procedures and policies about tacit knowledge management were consulted to get data about the *status quo* of tacit knowledge management at the COJLIS. The questions posed by the researcher were in line with the study objectives and guided by the interview schedules. Data on quantitative nature were interpreted using graphs and pie charts.

3.9   Data quality

According to Bryman (2012), the quality of qualitative data can be achieved through trustworthiness and authenticity. Neuman (2011) points out that the main aim of qualitative research is to get rich data, which have to be gathered systematically. Authenticity and trustworthiness were elaborated below.

3.9.1   Trustworthiness

Where reliability and validity are the key measures in quantitative research, trustworthiness is of the utmost importance in qualitative research (Nieuwenhuis 2016). The author further says assessing trustworthiness is the acid test of data analysis, findings, and conclusions. Guba (1981) proposes qualitative researchers in pursuit of a trustworthy study, which is credibility, transferability, dependability, and conformability. All four criteria have an equivalent in quantitative research and as put across by Gunawani (2015:11); trustworthiness was ensured by utilising strategies such as member checking, and triangulation, detailed transcription, systematic plan, and coding.

Credibility deals with questions such as how similar to reality the findings are and therefore works well with purposive sampling. Credibility is also enhanced through the development of an early familiarity with the participants and participating organisation as well as a well-defined purposive sampling, detailed data collection methods and triangulation (Lincoln & Guba 1985) as cited in Maree (2016:123). In this research, purposive sampling was employed to support the sentiments of a well-defined purposive sampling, as asserted by Lincoln and Guba (1985). According to Holloway and Wheeler (2010), credibility is defined as the confidence that can be placed in the truth of the research findings.

Lincoln and Guba (1985) posit that the construct to be used in qualitative research should be transferability. Transferability, therefore, refers to the degree to which the results of qualitative research can be transferred to other contexts with other respondents. This is derived from an assertion by Denzin (1983) that qualitative research rejects generalisation as a goal as it rarely aims to draw randomly selected samples. Participants should be well informed of the phenomena being studied (Maree 2016). In this study, interviews were written down, audiotaped and transcribed.

In qualitative research, the concept of "dependability" is used in preference to reliability. Dependability refers to the stability of findings over time, based on the way proper procedures have been maintained throughout the process. The analysis process should be documented so on how the decision was made, how the analysis went through, and how the interpretations were reached (Niewenhuis 2016). Dependability is therefore demonstrated through the research design and its implementation.

To achieve conformability, the true value, consistency, and applicability of the study should be addressed (Noble & Smith 2015:2). Conformability, which parallels objectivity, refers to the degree of neutrality of the extent to which the findings of a study are shaped by the participants and not by researcher bias, motivation or interest. Conformability, therefore, refers to the extent to which the outcomes of the research can be confirmed by other researchers (Niewenhuis 2016). The strategies for enhancing conformability of a study include precisely documenting every step of the study, in particular, the methods and procedures so that these may be checked and rechecked throughout the study. An audit trail assists result to be verified by others. The researcher kept an audit trail of all the interviews for rechecking.

3.9.2 Authenticity

Authenticity focuses on the degree to which researchers faithfully and described the participant's experiences. Schwandt, Lincoln and Guba (2007) argue that authenticity is an extension of the trustworthiness criteria that enables questions to be asked about how interpretations are made and how this process is evolved. They further state that authenticity principle recognises that inquiry and understanding are a process of learning, changing, negotiating and ultimately acting. According to Lincoln and Guba (1985), authenticity is best described using five criteria, which are fairness, ontological, educative, and catalytic and tactic. These five criteria are explained in brief as postulated by Bryman (2012):

- Fairness deals with fair representation of all different viewpoints by the participants.
- Ontological authenticity necessitates that the researcher should help the participants to understand their social environment much better.
- Educative authenticity requires the researcher to help the participants to appreciate the perspectives of others in the same social setting.
- Catalytic authenticity implies that a researcher should act as a catalyst or agent that helps the members to engage in action or research to change their circumstances.

- Tactical authenticity requires the researcher to empower the participants to take the necessary steps to engage in action or research.

To ensure authenticity, the researcher looked for the participants who had more than ten years of experience working in the COJLIS and helped participants to understand their social environment.

3.10   Ethical considerations

The study conformed to the UNISA ethical policy. Data collection should be ethical, and it should respect individuals and sites. According to Neuman (2006:129), ethics are defined as what is legitimate to do and what not, or what moral research procedures involve. Welman, Kruger and Mitchell (2006:181) state that the general principles usually invoked in codes of research ethics are, firstly, that no harm should befall the research subject and, secondly, that subject should take part freely based on informed consent. In simpler terms, ethics can be viewed as standards, rules, and a set of philosophies or a code of conduct that is aimed at regulating a group (Hornby 2013). Welman, Kruger and Mitchell (2005:201) list four ethical considerations to which a researcher should pay attention: informed consent, right to privacy, protection from harm and involvement of the researcher. Similarly, the Unisa Policy on Research Ethics (2007:18) mentions that "ethics apply to considerations whether actions are regarded as good or bad, right or wrong". It is important to always consider research ethics when doing research because research is a public trust that must be ethically conducted, trustworthy and socially responsible if the results are to be valuable (The University of Minnesota 2003:6). The following are examples of moral principles of the research involving human participants (UNISA Policy on Research Ethics 2007:9):
- Autonomy (research should respect the autonomy, rights, and dignity of research participants)
- Beneficence (research should make a positive contribution to the welfare of people)
- Non-maleficence (research should not cause harm to the research participants or the people in general)
- Justice (the benefits and risks of research should be fairly distributed among people) the protection of human participants in any research study is very important, and this study was no exception. Obtaining permission before starting to collect data is not only

a part of the informed consent process but is also an ethical practice. Protecting the anonymity of individuals by assigning numbers to returned instruments and keeping the identity of individuals confidential offers privacy to participants. In this honour, the researcher notified the identified population before requesting them to participate, in the aims, methods and anticipated benefits of the research.

- The participants were informed of their right to withdraw at any time. The researcher made it clear that the participants' names would not be used for any other purposes, nor will information be shared that reveals their identity in any way. Permission to conduct the study was obtained from the Deputy Director of the COJLIS and is attached (as Appendix A). Consequently, the researcher obtained ethical clearance from the department of information science ethics review committee, which is attached (as Appendix C) at the end of this dissertation. All the other appendices are attached at the end of this dissertation.

3.11   Chapter summary

This chapter looked at the methodology and research design, research paradigms, population and sampling employed in conducting this study. It also discussed the data analysis, and interpretation, content analysis as well as addressing issues of ethics and trustworthiness. The next chapter presents and analyses the data obtained.

CHAPTER FOUR
DATA PRESENTATION AND ANALYSIS

4.1 Introduction

The previous chapter discussed the research design and methodologies employed to conduct this study. The chapter looked at ways that were philosophical underpinnings that were followed in conducting this study. This chapter will now present the findings that arose from the collected data. All the findings were based on the conducted qualitative interviews, observations and content analysis. Opinions by De Vos, Strydom, Fouche and Delport (2011) highlights that the presentation and analysis of the findings are important because it allows the researcher to reduce data to an intelligible and interpretable form so that the relations of research problems can be studied and tested, and conclusions are drawn. Data were presented according to the following research objectives.

- To establish how tacit knowledge is managed at the COJLIS
- To determine the role of technology in managing tacit knowledge
- To determine the role of management in managing tacit knowledge
- To find out the extent to which there is awareness of management practices for tacit knowledge
- To establish the barriers of tacit knowledge sharing

4.2 Data presentation

To begin with, as highlighted in section 3.7.2.3, a semi-structured interview was used to gather data from COJLIS staff with more than ten years of experience and in the Innovation and Knowledge Management unit. Data were gathered from a director, assistant directors, managers, senior librarians, librarians and senior library assistant. The researcher prepared an interview schedule with questions according to the objectives of the study. The questions asked were targeted to address the research questions of the study. The researcher allowed a free flow of the discussion to obtain all the answers. All the interviews were conducted at the comfort zones of participants at their preferred times. The interviews were conducted in November and December 2018. The researcher explained to all participants the purpose of the study and requested permission to record them. The recording was done to get in-depth knowledge since some information was missed out during scribing. A transcribe was sourced. The researcher highlighted that participation was voluntary, with no remuneration offered for the interview. The researcher also explained to the participants that they would remain anonymous and the interviews were strictly confidential.

Secondly, the researcher has been involved as an observer for all the time in the service and during the interview processes. The researcher observed that employees within the COJLIS seldom use the intranet (Jozinet) for knowledge sharing. In terms of managing the tacit knowledge, the researcher observed that nothing is done towards retaining any knowledge within those who are close to retiring or the ones still active. There is no effective job rotation within the different sections. Although the Jozinet is open to all employees, it is not fully utilised. The researcher observed that at the time of the interviews there was a knowledge repository called (Joburg Insider), but no one seemed to have an idea as to what it entails. The researcher also observed that a knowledge management unit exists within the COJLIS, but it resorts under Information Commons at the E-learning Library Applications although it is idle. The observation was not enough to represent the entire population under study, therefore the researcher completed with content analysis and interviews.

Lastly, the researcher read the document/contents as part of her duties; this was mandatory since it is a working environment. The company reports, newsletters, minutes of the meetings, circulars, and notices website were consulted. The main aim was to investigate if there was any document relating to knowledge audit within the library information services (LIS). The researcher further consulted the procedures and policies on the Jozinet Library web page. The data collection process stopped when the researcher felt data saturation was reached. The researcher will include an estimate of the age of the participants. This chapter is concluded by a summary.

4.3   Background of participants

This is a qualitative study, as a result, the researcher will not be discussing issues related to the study's response rate and representativeness because the results of the study will not be generalised. In support with the above statement, Neuman (2006:219) contends that for qualitative studies, researchers should focus less on the sample's representativeness and more on how the sample or small collection of cases, units or activities illuminates social life. Participants varied from those with 10 to more than 20 years of experience within the COJLIS. These included three librarians, six senior librarians, three managers, three assistant directors, one senior library assistant, and one director from a different directorate but were relevant for the study. Of the 17 participants, seven were males and 10 females. Figure 4.1 presents the background of participants according to gender.
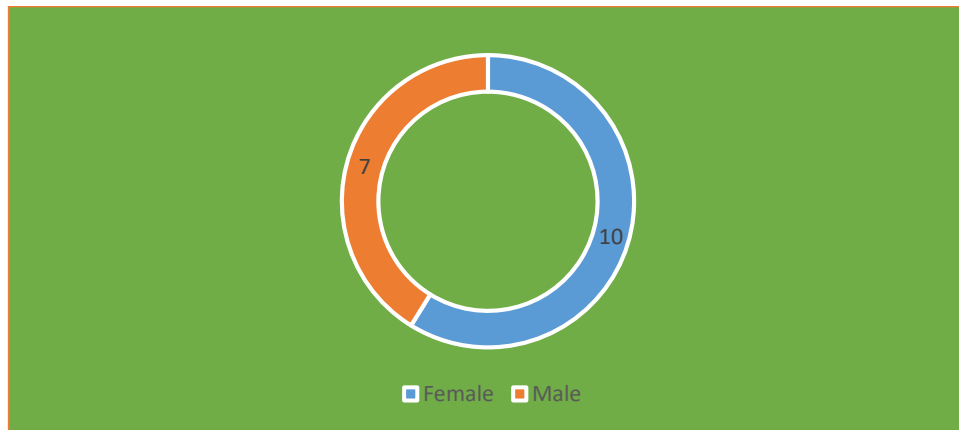
Figure 4.1: Background of participants

4.4 Respondents and their positions

The researcher purposively selected the respondents according to the years of experience in the organisation. They comprised three librarians, six senior librarians, three managers, three assistant directors, one senior library assistant, and one director. Figure 4.2 shows the respondent's positions and the total number of the respondents according to their positions.
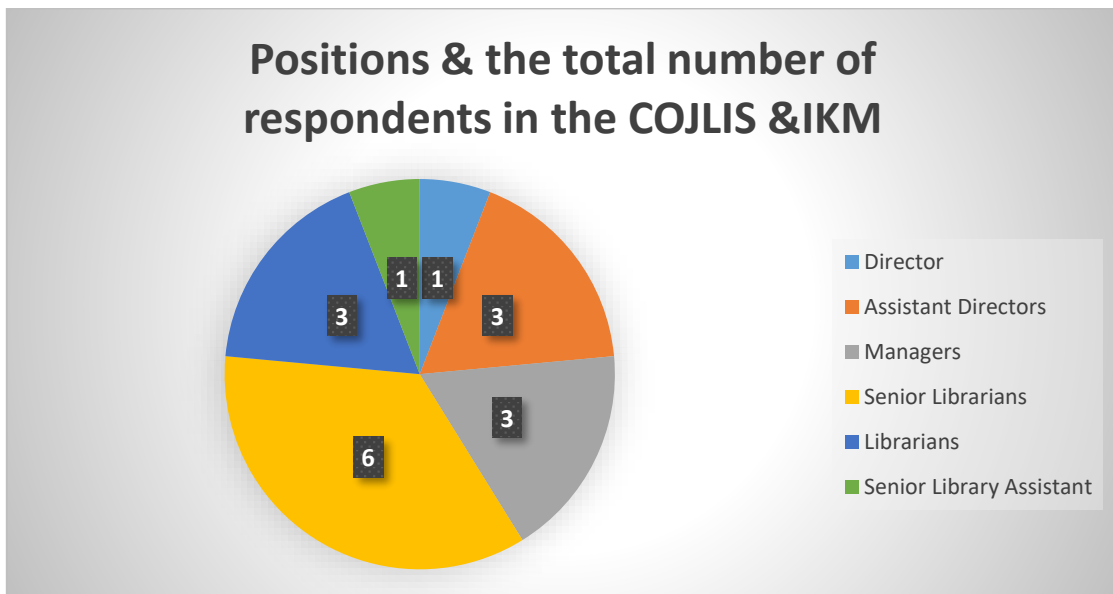
Figure 4.2: Positions and the total number of the respondents according to their positions in the COJLIS & IKM

4.5   Highest qualification

Figures 4.3 and 4.4 illustrate the highest qualification of respondents and years of service of respondents. The researcher believes that the more years in service, the more accumulation of experience. The numbers indicated the number of respondents with master's degree, honours degree, bachelor's degree, postgraduate diploma, diploma and matric.
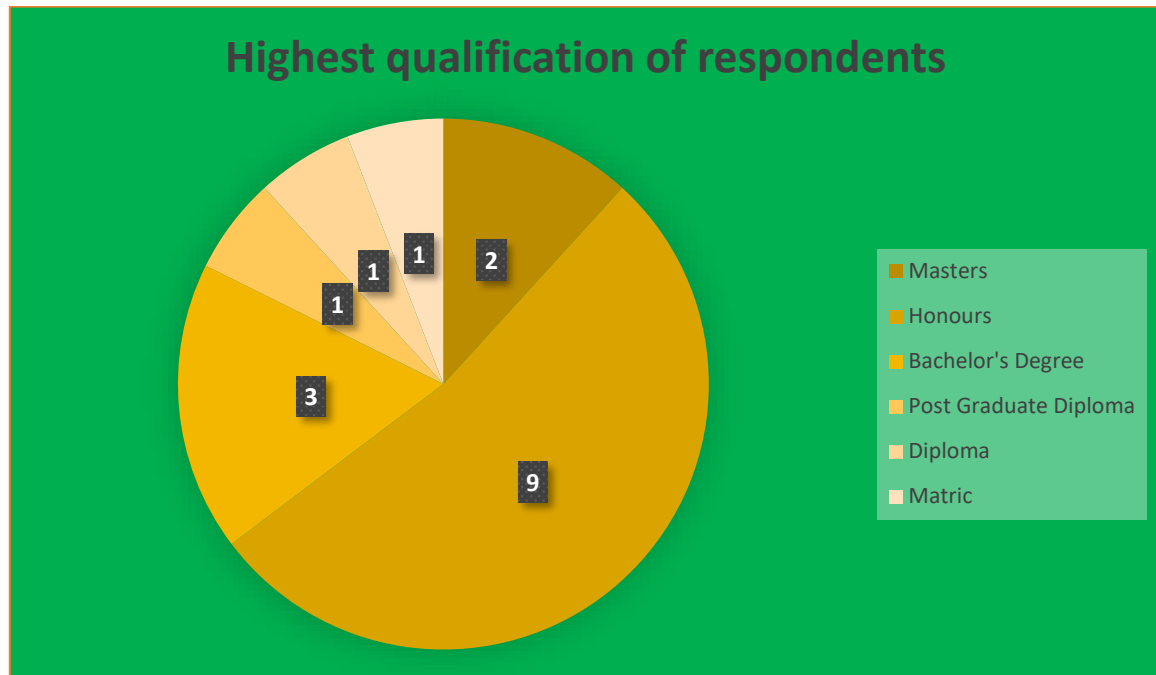
Figure 4.3: Highest qualification of respondents
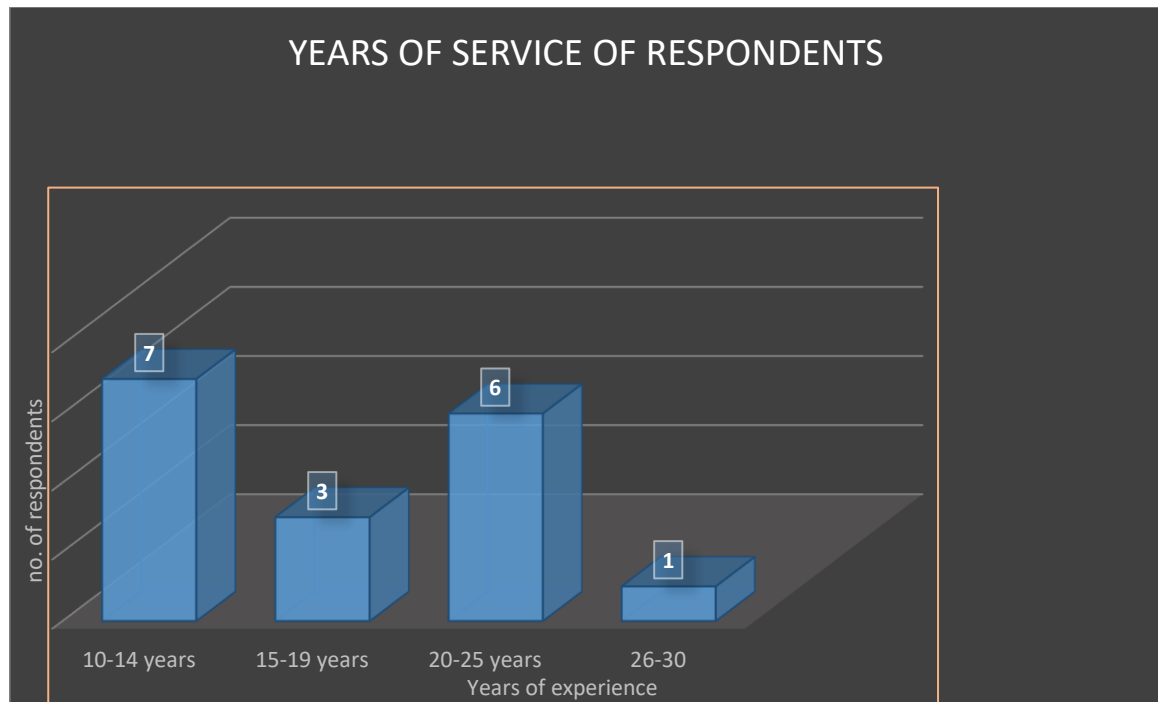
Figure 4.4: Number of years of service of respondents

4.6 Management of tacit knowledge at the COJLIS

A great challenge in many organisations is sharing tacit knowledge. Organisations need to seek and identify tacit knowledge that is useful to the organisation and manage it well if they wish to remain competitive. To get a deeper understanding of the management of tacit knowledge, the researcher asked the participants how knowledge accumulated through the years remains in the organisation when employees leave the company because of retirement, death, resignation or any other cause. The aim was to find out if there is any evidence of tacit knowledge being recorded and managed. Table 4.1 highlights the participants' responses. In cases where the same response was given, the researcher grouped similar ones (See Table 4.1).

Table 4.1: How knowledge remains in the organisation when employees leave

Participant	Response
Participant A Gender: Male Age: 36 years	*Coaching and mentoring are the best strategy to ensure that knowledge is passed on.*
Participant B Gender: Male	*By mentoring*

Age: 52 years	
Participant C Gender: Male Age: 40 years	*Shared drive, accessed by heads and librarians approached KM unit of the city and submitted innovation worthy archiving.*
Participant D Gender: Male Age: 51 years	*It is not easy as it will be from individuals, learners and knowledge transfers, or tutor.*
Participant E Gender: Female Age: 58 years	*What we do in librarian services we develop manuals, and we also go through training as part of information dissemination and all that which we hope will remain in the company. We hope that when we have developed manuals, they reach facilities where they are supposed to be utilised, that is the only way we do. However, we do not have an archive or a data management centre, a repository we have got all our manuals; we can retrieve them that way.*
Participant F Gender: Male Age: 43 years	*I am not sure if there is any*
Participant G Gender: Female Age: 42 years	*It is lost it is not passed to junior staff; there is no way of passing the knowledge.*
Participant H Gender: Female Age: 39 years	*No plan in place*
Participant I Gender: Female Age: 38 years	*We do on-the-job training, and we give access to the files to the staff so that they check whatever they want. They get back to us for further explanation and detail.*
Participant J Gender: Male Age: 42 years	*Even though they are not formal, we have some mentoring programmes.* *We do have some storytelling programmes and normally even though some of the programmes are not*

	formalised and we sit down sometime we identify the knowledgeable employees, and you document the information try to pass that information in writing. *Some staff members cannot write or extract information from their minds, so are some kind of informal programmes. It is just per unit or section in the library.*
Participant K Gender: Female Age: 63 years	*There must be a succession plan of which we do not have that is the only way to pass the information that we have.*
Participant L Gender: Female Age: 40 years	*We have the standard operating procedures that are documented and filed to make sure that I share my knowledge and train juniors under me.*
Participant M Gender: Female Age: 58 years	*I think that the knowledge that is gained over the years is eventually lost in the company when people leave. Some of it may be passed by more senior staff working with junior staff and pass on the knowledge they have. A lot of tacit knowledge possessed by employees is lost because there is no way of passing it.*
Participant N Gender: Female Age: 46 years	*I haven't had anybody leaving my section but we try to do procedures so that at least in terms of some leaving routines and things like that and it is a bit of a problem when you have so few people so you don't have multiple people at the same level so you can't say ok you do this part of the job you do that part you do, and you can swap over six months' time so that you get to experience.* *So, basically, regular routines are documented* *It is difficult, though for the e-learning section because there are no back-ups.*

Participant O Gender: Male Age: 62 years	*Knowledge management can never be centralised; it has to be 100% decentralised and localised.* *Each unit/ directorate should have their knowledge systems in place.* *Each department must have a knowledge champion, to practice and teach other employees the key things.* *A case studies on key city programmes.* *Employee learning sessions which assist with sharing and capturing knowledge.* *For instance, we had an employee who was 40 years old who left without nothing documented.* *As a practice, we need not wait for people to retire* *But to capture, and capture.* *Knowledge management is about peer learning.* *KM works best if supported by an effective IT system.* *KM should be people and IT focus.*

Knowledge is a key ingredient in any organisation that cannot be ignored as non-existing. Knowledge required during periods of need from the most experienced staff is not always available and is diminishing as a result of retirement and resignations. How then can this priceless knowledge of experts be captured and made readily available during an abnormal situation? To this effect, the interviewer asked the participants about the methods/ways the COJLIS uses to capture the knowledge or tap in the experiences of the leaving or retiring employees. (e.g. interviews, mentoring young/junior employees, document it on a book, record conversation. The following answers were provided.

Table 4.2: Methods of capturing the knowledge/ tap in the rich experiences of retiring or leaving employees

Participants	**Response**
Participant A Gender: Female Age: 59 years	*By rehiring mentors with extensive knowledge who are experienced former librarians from the COJLIS. They are called DAC mentors.*

	However, we do not have a system where we do part of the succession planning to ensure that there is what we call understudy. If we have systems like an understudy, you know an employee who is retiring or resigning beforehand.
	Other than talking, planning and lamenting about the brain drain there is no system in place
	However, implementation is not coming into form what I have observed is that individuals within their regions do it so in a nutshell, it is not systematic.
	Sections within LIS are working in silos.
Participant B Gender: Female Age: 58 years	*On-the-job training.* *COJLIS is only using exit interviews when the staff leaves, and it is a paper exercise for HR, but I do not think it used for the organisation.*
Participant C Gender: Female Age: 38 years	*I…know…I am not sure if ok with me when I leave it was not like that it was just a hand over it was not even monitored it just that you handover but, I know that if you are retiring or resigning there is this exit interview that you do, I know for sure it's there but m not sure if it's that interview.*
Participant D Gender: Female Age: 63 years	*There is nothing. You know by right when people leave the company there must be an interview done by the HR so that they know to motivate you after you have retired. The pros and cons of retirement prepare you for those, but there are no preparations by our*

	HR Community Development under LIS. A person goes without any exit.
Participant E Gender: Male Age: 43 years	*Not aware of such practice.*
Participant F Gender: Male Age: 42 years	*The retired former workers come back and teach/mentor the newly appointed librarians.*
Participant G` Gender: Male 51 years	*COJLIS is only using interviews and mostly during the exit time.*
Participant H Gender: Male 52 years	*The knowledge is managed very poorly, and when it happens, it is through informal mentoring. The City's policy encourages proper, fair, recruitment policy,* *You cannot mentor someone into your position.*
Participant I Gender: Male Age: 36 years	*Informal mentoring is the most used method whereby experienced employees share their knowledge with junior employees. This can be in the form of consultation regarding library operations, standards, and other topics.*
Participant J Gender: Female Age: 42	*Mentoring young and junior employees.*
Participant K Gender: Female Age: 40 years	*There is no method or structure for LIS.* *You must learn for yourself and use your personal experience with the new job. I had to take part in a new initiative where I ended up training, mentoring to most of the people.*

	If you decide to leave, you leave with your own experience.
Participant L Gender: Male Age: 40 years	*The directorate has e-learning champions, who meet quarterly to brainstorm and collect ideas, and they are shared via emails, WhatsApp.* *They are encouraged to share with the remaining staff in regions but not sure if that takes place.*
Participant N Gender: Female Age: 46 years	*Handover priority tasks.* *Go through with supervisor.* *No succession planning.* *You are never a handover to your successor.* *Meetings – can be either feedback presentation.*
Participant O Gender: Male Age: 63	*We have a central knowledge repository (Joburg Insider - it is on share point. It is accessed via Jozinet. It's got subsidies.* *Not sure if departments are making use of it.*

Knowledge sharing is important in organisations. An assertion from Ngulube (2012) suggests that the true value of knowledge is often realised when it is shared with those who can potentially make use of it. Ngulube (2012:69) further emphasises the two-way process for knowledge sharing, which provides, direction, information, ideas and advice to another who in turn learns from the former by observing, listening as well as asking. Having noted the above, in Table 4.3, the researcher asked the interviewees ways in which the COJLIS shares knowledge.

Table 4.3: Ways in which the COJLIS shares knowledge

Participant A Gender: Female Age: 62 years	*What has been more of a culture is to ensure that we do internal training and also what we call each one teach one. Storytelling is also used.*

	Yesteryear, what we had was a group of employees developing a training manual, In a nutshell, these are individual efforts, but ...so far I haven't seen anything that we can say we have a unit or structure it is haphazard.
Participant B Gender: Female Age: 42 years	*You know we have got the library page...but don't know how much knowledge is shared on the intranet.* *Sometimes knowledge is shared through formal meetings. Only representatives from different sections attend these meetings and give feedback. No one follows up whether feedback was given with these representatives.*
Participant C Gender: Female Age: 38 years	*You search for yourself; truthfully, there is no baby sitter here. You must go to the intranet that is where you find most of the stuff or you ask. If you don't have the internet, you will see how to go through whatever it is.*
Participant D Gender: Female Age: 40 years	*We request training in an area of interest. For example, MANCO meeting, tackle one chapter, share your views, and provide feedback to your staff after the meeting.*
Participant E Gender: Male Age: 36 years	*Staff meetings and workshops at all levels are the core ways for knowledge sharing. In addition, informally staff consult each other when in need of certain knowledge.*
Participant F Gender: Male Age: 40 years	*Nothing, no mechanisms – passing information is not easy.* *No – newsletter you only approach one when the need arises.*

	Trying to organise a share point, but there are challenges.
Participant G Gender: Male Age: 42 years	*We use what we call electronic repository, which is on the Jozinet website on the library page, where you can access the manuals. We also identify some experts within, such as from HR, finance and other sections which support library institutions to do presentations*
Participant H Gender: Female Age: 46 years	*One-on-one meetings/discussions.* *Direct shadowing, handover meetings, written reports.* *Printed and electronic documentation* *Meetings – though, there is not much internal training.* *Systems management/specifically to sharing of experiences.*
Participant I Gender: Male Age: 63 years	*Peer learning conversations.* *We track study tours.* *Share it through focus groups.* *Exchange within provinces.*

Tacit knowledge transfer is essential in any organisation, and consequently, there is increasing evidence of tacit knowledge being regarded as an important strategic resource that aids in accomplishing a task (Woo, Clayton, Johnson, Flores, & Ellis 2004). This is because competence needs to be built to help novices and intermediates. Views shared by Leonard (2014) indicate that the knowledge gap that is caused by departing employees can be costly and time-consuming or impossible to replace, therefore a need to transfer tacit knowledge. Based on this, the participants were asked how the COJLIS ensures that knowledge is transferred among employees. The aim was to understand the level of interaction among the participants and their colleagues before departure. (See Table 4.4).

Table 4.4: How knowledge transfer occurs at the COJLIS

Participant	Response
Participant A Gender: Male Age: 36 years	*Induction as soon as new employees are hired.* *Training, Mentoring, coaching*
Participant B Gender: Female Age: 40 years	*I give feedback from the meetings and insist they write minutes.*
Participant C Gender: Female Age: 38 years	*Truthfully, I have never seen it being done. I remember where I was working I was given my library for the first time and I was only a year in the city they just took me there and said this is the library just the introduction to the staff, and from there you are on your own I didn't know where the key to the safe is. It's like being drawn in the sea, and you learn how to swim*
Participant D Gender: Male Age: 43 years	*For me, I am not aware if there is a culture of sharing or the structures of knowledge transfer even the ICT for facilitating the use of information, there are no strategies in place there are no plans in place if you consider maybe there is a caucus KM is not even mentioned in this caucus.*
Participant E Gender: Male Age: 51 years	*Through procedures in the manuals, for example, the library operating system (symphony).*
Participant F Gender: Female Age: 63 years	*Through our internal staff training, meetings, workshops and during the induction period.*
Participant G Gender: Male Age: 52 years	*Currently, on the web page (Jozinet), some policies are shared. Not sure if employees have access to them, though intranet is open for all employees.*

Participant H	We do not have a system in place/except the things like filing important documents.
Gender: Female	
Age: 43 years	
Participant I	Through feedback meetings and through inviting people who specialise in areas we do not know about.
Gender: Male	
Age: 40 years	
Participant J	We do not have as a city instead the city should adopt proper mentoring.
Gender: Male	
Age: 63 years	

4.7 The role of technology in tacit knowledge sharing

The review of the literature showed that technology is a critical enabler and foundational element of a KM plan, and with the advances in ICTs, KM can be attained through technological solutions. These sentiments are supported by Chennamaneni and Teng (2011) who concede that IT can contribute to tacit knowledge sharing, although this may not be as rich as face-to-face tacit knowledge sharing. Therefore, it is imperative to learn that technology plays a major role in knowledge sharing. In this light, the interviewer sought to understand the role of technology in tacit knowledge sharing. Table 4.5 shows the responses regarding the role of technology.

Table 4.5: How technology enables tacit knowledge sharing at the COJLIS

Participant	Response
Participants A	Documents and messages are shared on emails.
Gender: Male	Information about events and other information relevant to the particular group is shared on WhatsApp groups.
Age: 63 years	Jozinet (intranet) has information which is relevant to LIS about things like projects, policies and procedures and statistics.
	Information is uploaded on a shared, which is accessible to all employees.

	We have an electronic repository on Jozinet
Participants B Gender: Female Age: 40 years	*Through WhatsApp's, emails, intranet.*
Participant C Gender: Female Age: 46 years	*Technology is the best these days; we are not based in one building; we are spread across. At the same time through the use of emails; we use our work email channel.* *We have a centralised shared server (Jozinet) where we share information on the intranet, which is accessible to all city of Johannesburg staff members.* *The City of Johannesburg has created the knowledge management system, but COJ LIS has not started using the Joburg Insider platform.* *It is quite structured; we can create more folders and files and create a link for only intended recipients. Documents are edited on this Joburg Insider; in fact, you can see who made changes. This help to avoid duplication, because it keeps tracks of changes.*
Participant D Gender: Male Age: 63 years	*We are in the information business, but our transfers are not very effective; if you can think about how information is lost when someone leaves, it is pathetic.* *Training sessions from Innovation and Knowledge management should be implemented.*

Participant C	Use emails, request slots in regional meetings and do a PowerPoint presentation.
Gender: Male	
Age: 43 years	

4.8 The role of management in tacit knowledge sharing

Effective knowledge sharing has many dependants with the involvement of management. Smith and Schurink (2005) highlight that successful KM is reliant on senior management's understanding of the benefits of internal knowledge and how they see it unfold in the organisation. Management is required to promote a knowledge-sharing culture, manage infrastructure and more. It is the role of management to ensure that the organisation stays ahead of a changing world, otherwise as speculated by Peterson (2016), an organisation can become extinct as in the case of dinosaurs, which failed to adapt quickly enough to change. Concerning these views above, the participants were again asked for their involvement in the sharing knowledge at the COJLIS. The principal researcher wanted to know the role of management in tacit knowledge sharing, other than the organisation not having a sharing culture. The researcher wanted to find out what the extent of knowledge creation through socialisation was (Refer to Table 4.6).

Table 4.6: How do managers assist in tacit knowledge sharing at the COJLIS?

Participant	Response
Participant A Gender: Female Age: 62 years	*Coaching, mentoring and reviewing.* *On-the-job training.* *Provide feedback from meetings.* *Workshops or during the induction period.* *Training newly appointed junior staff as well as mentoring them. Having informal sessions with other colleagues about any knowledge gap.*
Participant B Gender: Male Age: 54 years	*Engagement shares interesting articles with others and conversation with key city initiatives.*
Participant C Gender: Male Age: 43 years	*Training for e-resources.* *Public awareness sessions/on-going as and when.* *Presentations that are done to supplement.*

Participants	Responses
	Provide documentation.
Participant D Gender: Male Age: 51 years	*Management should create a platform.*
Participant E Gender: Female Age: 46 years	*Management should create an environment that is enabled.* *Should create platforms for knowledge sharing.* *Ensure to have a functional CoP and make sure it is effective.* *Management should ensure there is succession planning.* *Should encourage people to learn.* *The city shouldn't be in a crisis because someone is retiring.* *Without all these, I feel there is nothing that can work.*

Employees are kept away from complaints, and daily routines, skills and knowledge about jobs are improved with the aid of job rotation. Job rotation has an increase in employee performance as well as the profit of a company or organisation (UKEssays 2018). The observation from the researcher is that there seems to be a gap as far as job rotation is concerned within the COJLIS. As mentioned before, the interviews have in-depth information; therefore, the researcher obtained detailed information through the interviews and thus asked if there was an existence of job rotation within the COJLIS. (Table 4.7 shows responses that were given).

Table 4.7: Existence of job rotation within the COJLIS

Participants	Responses
Participant A Gender: Female Age: 53 years	*In my personal view, COJLIS sections work in silos. However, we find ourselves at crossroads. We lament about brain drain precisely because we do not take advantage of the rotation, which forms part of what I can call succession planning. As a professional librarian, I want to believe that*

	you are trained in all aspects of the profession; therefore, it is necessary that this can be done in the job. We do not do it, however, in one of the sections to make just an example…it is a cataloguing and classification succession BIDS section seniors at this section they usually say it takes time to train people. However, we do not look at it going forward what it means if you are told the most senior member retires and leaves a huge vacuum we do not know how to do…this most hit section is the one I made an example.
Participant B Gender: Male Age: 51 years	*There is no plan job rotation in the city, but what does happen is with the time you are all moved and you would get experience from one section to the other. It would meet the needs of the organisation other more than to train the staff or if you have a particular interest in a section of the library you would ask for a chance to learn about that section or else you can be moved because there is a vacant and they need someone to come and move work there.*
Participant C Gender: Female Age: 40 years	*There is no job rotation because if you want to rotate from the regional library and come to be at the library you have to have the classification…experiences which most of us we do not have that most of the people who did it cannot do it anymore. No there is no rotation. Unless if it's that requested.*
Participant D Gender: Male	*No… this is one our change management planner…we have realised that the only way*

Age: 41 years	*for employees to have a good knowledge of various sections within the city there must be the job rotation to learning in various section of the library…normally it works when the employee approaches the management… we can consider that. In addition, the management sometimes identifies some employees as part of succession planning, career growth that working in some departments…and on that sometimes you may identify some employees and some employees they make excuses not understanding the vision of the city and understanding the issue of knowledge management how does it work. Maybe they do not know the strategy that the job training and rotation are part of knowledge management processes. It might be the issue. That means there must some training to understand the concept of knowledge management.*
Participant E Gender: Male Age: 53 years	*There is nothing like that. It is because of those units that specialise if I tell one to go to e-learning you must specialise on it and if at all you want to go to BIDS know something that is happening at BIDS you must know to catalogue.*
Participant F Gender: Male Age: 43 years	*No exposure.*
Participant G Gender: Female Age: 40 years	*No exposure.* *No job rotation.*

	No opportunities to explore other sections because of specialisation.
Participant H Gender: Male Age: 36 years	*No. Majority of employees remain in one section for their period of employment, for instance if you are public librarian, you remain stationed in public libraries.*
Participant I Gender: Female Age: 40 years	*There is no job rotation, but people themselves can ask to be put to another section with specialised work.* *This happens per request, and they give you the opportunity and assessment is done.*
Participant J Gender: Female Age: 46 years	*There is no job rotation within the directorate precisely because other units are specialised.* *Sections work in silos.* *Set up is not well organised and efforts have not been successful.* *However, once a year employees are given an opportunity for lateral movement.*
Participant K Gender: Female Age: 41 years	*That is hard to establish, some are allowed to move, some are not*
Participant L Gender: Female Age: 44 years	*N/A*
Participant M Gender: Male Age: 62 years	*Team work-team leaders meeting.* *Directors unit.* *Knowledge exchange and learning.*

Participant N	*The set-up is not well organised.*
Gender: Male	*Efforts have not been successful.*
Age: 43 years	*No job rotation.*
	COJLIS is divided.
	Only when there is pressure.
	Has been sharing by force.

Knowledge sharing does not come naturally. It occurs within a safe and trusting environment. Time, opportunities, structures, policies, and procedures need to be established and aligned with the aim to connect people and encourage them to start talking to one another (Smith & Schurink 2005). It is true that a knowledge management platform connects an organisation and enables the sharing of knowledge among colleagues within a safe and social environment. Table 4.9 shows the responses regarding the creation of platforms for knowledge sharing. The main aim was to obtain insight into whether the COJLIS creates the platforms for knowledge sharing or ba within all the sections, for instance BIDS, SERD, e-learning library applications and regional libraries. The question below emanates from the fact that knowledge is well shared if there is a conducive environment, as aligned to the Japanese concept of ba and externalisation, socialisation within the SECI model. Table 4.8 provides responses that were given.

Table 4.8: Knowledge creation platform within the COJLIS

Participant A	*I would say no…I think people are*
Gender: Female	*protecting their spaces… knowledge*
Age: 46 years	*hoarding where I think I really don't*
	understand …the reason behind it because
	we will eventually suffer the brain drain
	precisely.
Participant B	*No.*
Gender: Female	
Age: 43 years	
Participant C	*When I came here, I did not know what to*
Gender: Female	*do. I proposed that since its December and*
Age: 38 years	*we are not doing much why can't we have*

	a regional programmes meeting and we let them know what is happening in our section. Truthfully, people do not know what is happening here and I do not know what is happening.
Participant D Gender: Male Age: 36 years	*Not at all.*
Participant E Gender: Male Age: 51 years	*No. Maybe other sections can move not with regional libraries. Those who cannot be moved are disadvantaged.*
Participant F Gender: Female Age: 41 years	*Yes.*
Participant G Gender: Male Age: 40 years	*Yes, with the emerging of technological innovations, we see WhatsApp groups, formed for knowledge sharing. For instance e-learning library applications department has a group where champions can share solutions about a particular challenge or matter.*
Participant H Gender: Female Age: 38 years	*No.*
Participant K Gender: Female Age: 46 years	*There is not/COM DEV, library people have different expectations.* *There is knowledge sharing forums at Joburg insiders but not sure if COJLIS knows about it*
Participant L Gender: Male Age:60 years	*Yes, we have through employee learning sessions, brown bag, and lunchtime in a more relaxed setup platform.*

| | *Joburg insiders allow employees to post areas of interest.* |

The responsibility of an effective reward systems lies within management and as posited by Wang and Noe (2010) rewards such as promotions, bonuses and higher salaries are linked positively to a higher rate of knowledge sharing within organisations. On the same note, sentiments by Islam, Ahmed, Hasan and Ahmed (2011) indicate that employees are motivated to share knowledge among themselves by an effective reward system. In Table 4.9, the researcher sought to investigate if the COJLIS rewards employees in a way to ensure that tacit knowledge is prevented from getting lost at all costs.

Table 4.9: Employee rewards system at the COJLIS

Participants	Response
Participant A Gender: Female Age: 42 years	*There is nothing like that.*
Participant B Gender: Female Age: 56 years	*There hasn't been any for 28 years we are waiting for these benefits because you have contributed so much to the pension already but there is nothing like that ...the only thing that we get for performance reward is a little four days Non-financial reward.*
Participant C Gender: Female Age: 38 years	*They do not, there is no motivation whatsoever, and they do not. You will find that you resign today they will just sign as nothing happened.*
Participant D Gender: Male Age:56 years	*There are no incentives in place, we have lost so many experienced employees, we are struggling to recruit people who are experienced, and the trend is still on-going. The trend of staff leaving the organisation.*
Participant E Gender: Male Age: 52 years	*We do not have that system in place. If you want to leave, you just leave. You just leave with what you have.*

Participant F Gender: Female Age: 38 years	*No motivation for staff.*
Participant G Gender: Male Age: 61 years	*None – apart from the non-financial reward days, which are given as a PMS requirement.* *It is not enough to keep employees.*
Participant H Gender: Male Age: 40 years	*No rewards.*
Participant I Gender: Male Age: 42 years	*No, there is no effective reward system in place except days after achieving all targets.*
Participant J Gender: Male Age: 60 years	*I do not think so, even though there is a rewards system via PMS, It is not enough to stop people from leaving.*
Participant K Gender: Female: Age:46 years	*There is not. Theoretically yes…cannot change anything.*

Any organisation can be successful if it is guided by policy. With this in mind, the researcher asked the participants whether there was a policy for knowledge management, especially, knowledge sharing and retention at the COJLIS. The overall response was none, and also results from observation by the principal researcher were the same. Table 4.10 shows the responses in regards to knowledge sharing policy.

Table 4.10: Policy for knowledge sharing at the COJLIS

Participants	*Response*
Participant A Gender: Female Age: 58 years	*There is no knowledge sharing policy at COJLIS/*
Participant B Gender: Female Age: 46 years	*We hope to have it.*

Participant C Gender: Male Age: 51 years	*We have other policies but haven't heard or seen the knowledge sharing policy.*
Participant D Gender: male Age: 36 years	*No.*

4.9 Awareness of knowledge management practices at the COJLIS

Tacit knowledge sharing and can be achieved using the management practices for tacit knowledge sharing such as mentoring, training, storytelling, after-action reviews, subject matter experts and community of practice. The researcher asked about the management practices that the COJLIS was aware of. The participants were asked to select which practices are often practised at the COJLIS (see Figure 4.5).
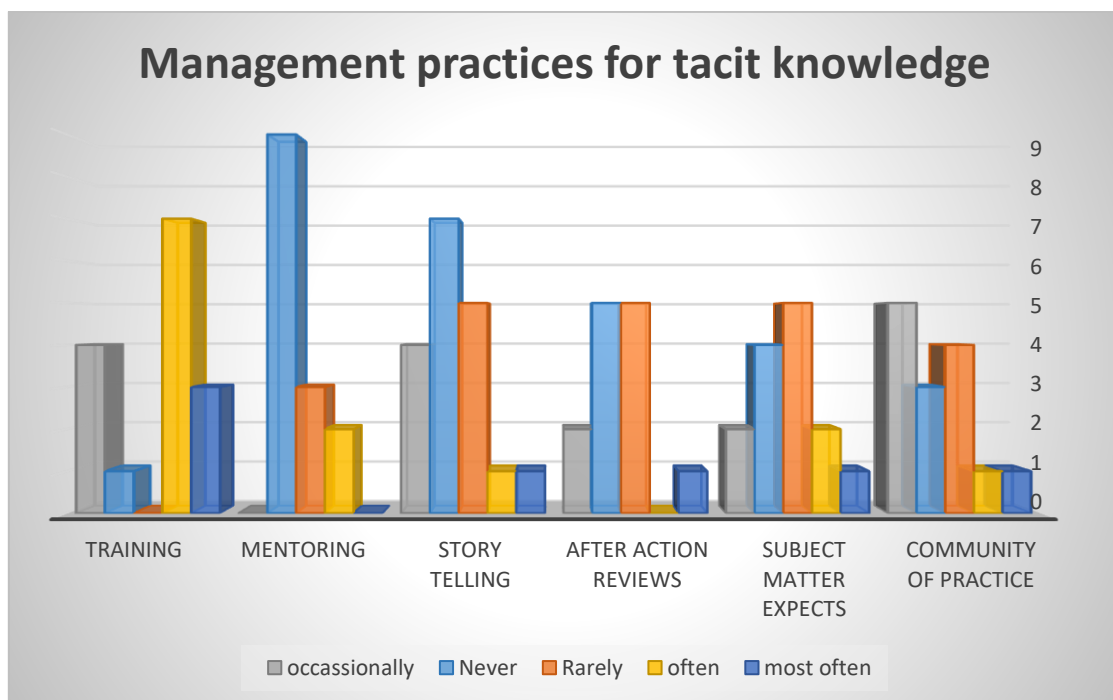
Figure 4.5: Management practices for tacit knowledge sharing

4.10 The barriers of tacit knowledge sharing

The next important step was to identify the cause of not sharing knowledge. A review of the literature shows that there are barriers to knowledge sharing. Barriers are factors that obstruct the sharing of tacit knowledge. These can be either, IT-related (technology), organisational and/or individual. Knowledge sharing is hindered by many attributes when it comes to its sharing. According to Riege (2005), most people are unlikely to share their knowledge without

a feeling of trust. Employees may decide to hoard knowledge for unknown reasons. With this background, the researcher wanted to find out the reasons why knowledge is not shared effectively within the COJLIS (see Table 4.11).

Table 4.11: Barriers to tacit knowledge sharing

Participant	Response
Participant A Gender: Female Age: 42 years	*I do not trust the system that is why I keep my knowledge to myself.*
Participant B Gender: Female Age: 41 years	*As I mentioned before, I was left alone to swim in a sea, so why would I share. Individual learning, according to me is the best.*
Participant C Gender: Male Age:42 years	*No intranet, no network and I am from the old school and trust the old methods, not technology.*
Participant D Gender: Female Age: 58 years	*No space or time is given for sharing the knowledge.*
Participant E Gender: Male Age: 62 years	*Ignorance, I would say, majority of employees within the libraries have no idea as to what this animal (called knowledge sharing) is.*
Participant F Gender: Female Age: 43 years	*There are no satisfying rewards in this organisation.*

Finally, in Table 4.12, the participants were asked if there is anything else they wanted to add to the discussion. The aim was to gather the information that could have been left out in the designed questions. It was done to get information that could be used in providing recommendations the COJLIS could make use of in their strategic planning. The following were the main answers recorded.

Table 4.12: Additional information from participants

Participants	Responses
Participant A Gender: Male Age: 36 years	*COJLIS should have a repository where we constantly visit.* *Have an effective community of practice*
Participant B *Gender: Female* *Age:58 years*	*Well, it would be very nice to improve on how this system works because a lot of valuable knowledge is lost when people retire or leave because there is no way to capture it. It really leaves us behind.*
Participant C *Gender: Male* *Age: 40 years*	*No. I am done. Thank you.*
Participant D *Gender: Male* *Age: 42 years*	*Support from senior management to junior staff.* *Incentives for sharing information to reduce knowledge hoarding.* *Need a reliable ICT infrastructure with an on-going network for effective knowledge sharing.* *There should be a culture in an organisation that promotes knowledge sharing.* *After-action reviews, must not be limited to the senior management it should also embrace juniors, especially in project management skills for example…* *Lastly, the COJLIS must be pro-active in capturing or retaining knowledge on a continuous basis as part of their daily operations.*
Participant E *Gender: Male* *Age: 60 years*	*Knowledge management must be decentralised.* *Each unit must have a local knowledge management system in place.* *Effective harness various programmes.* *Group KM strategy.*

	Decentralise city of Joburg knowledge champion…capacitate the knowledge.
Participant F *Gender: Female* *Age:46 years*	*It has been long we have been talking we believe we need a person who has a knowledge of knowledge management to capture any information relevant to our directorate. We need to have a person in charge of that. Who can capture all the things that are happening in our directorate? Then that person can just update the information. Therefore, always we are always reinventing the wheel. Each department has its own knowledge management unit and ours do not have*
Participant G *Gender: Male* *Age: 51 years*	*I recommend that COJLIS should have a directorate or section, specifically to focus on knowledge management and retention. In addition, I recommend this formation of effective CoP*
Participant H *Gender: Female* *Age: 63 years*	*Managers should have training because they are hoarding knowledge of 100 years, 40 years. They do not want to change; they must not hoard knowledge. There should be a plan to include change management. Management should not resist change. There is no down to top communication (juniors contributions are treated as less important.*
Participant I *Gender: Male* *Age:52 years*	*I hope that COJLIS will adopt a knowledge management retention strategy for the future.* *There should be a policy for knowledge management practices*

Participant J *Gender: Female* *Age: 46 years*	*With the introduction of the Joburg insider, I would love to see it working effectively thought it would take time.* *With change management, it should be easy.* *We do not realise what we lost until it is gone.* *Doesn't realise the value and standard.* *You do not necessarily lower the standard, but you can change them.*

4.11   Summary

This chapter presented data gathered through semi-structured interviews, observations and content analysis. The presentation was focused on data on the management of tacit knowledge at the COJLIS. The results were obtained from the employees within the COJLIS. The actual words of the participants were used to help express the ideas.

This chapter raised the following crucial issues:

4.11.1 Management of tacit knowledge at the COJLIS

- Coaching, mentoring is the best strategy, so emphasis should be on rehiring mentors
- Regular routines are documented but there are no back-ups
- We develop manuals with much anticipation that they will be used
- Through standardised operating procedures (SOP)
- It is difficult as it is from individuals
- Case studies on key city programmes
- Shared drive though not formalised
- On-the-job training
- Peer learning conversations
- We track study tours
- Share it through focus groups
- Through succession planning

4.11.2 The role of technology in sharing tacit knowledge

- Documents and messages are shared via emails
- Other related information is shared on WhatsApp groups
- The library page on Jozinet has policies that can be shared though not pertaining to knowledge sharing
- Shared drive that is accessible to all COJLIS staff
- The technology works as an enabler for knowledge management

4.11.3 The role of management in tacit knowledge sharing

- Managers are responsible for change management within an organisation
- Managers are responsible for creating a culture for knowledge sharing that includes incentives
- Managers are responsible for job rotation so that all employees are well versed with other sections
- Managers should ensure sections do not work in silos
- Managers are responsible for knowledge creation and development of a policy

4.11.4 Awareness of management practices for tacit knowledge at the COJLIS

- There are many practices for tacit knowledge retention and sharing, but not all employees understand them or use them effectively. The participants mentioned that there is no formal mentoring and there is the existence of storytelling although it is not formal.
- Training is often after-action reviews, subject matter experts and community of practice are rarely practised at the COJLIS.

4.11.5 The barriers of tacit knowledge sharing

- **Individual barriers** with trust being highlighted as essential for employees to freely and willingly share their knowledge, which, in turn, create new ideas.
- **Technological barriers** – not willing to share via technological mechanism and the ongoing network challenges
- **Organisational barriers –** the culture is not well organised; hence, no space and time allocation for knowledge sharing and time is not allocated for knowledge sharing.

The next chapter discusses the findings.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1   Introduction

The preceding chapter analysed and presented the results of data obtained through interviews, observations and document analysis. The present chapter provides the interpretation and discussion of these findings. The interpretation and discussion of the findings are very important because it allows the researcher an opportunity to indicate how the current study emphasises what is already known or how it varies from other comparable studies (Blaxter & Tight 1998:196). The interpretation and discussion of findings were based on the objectives of the study. The discussion of the findings was also guided by the knowledge conversion theory, which was explained in chapter two of this study.

5.2   Management of tacit knowledge at the COJLIS

The researcher collected data regarding the positions of the participants. The assumption was that the more senior the person is, the more he/she can share knowledge. This assumption is based on previous studies that have examined the influence of job position on knowledge sharing within organisations. Ardichvili, Maurer, Li, Wentling, and Stuedemann (2006:102) conducted a study where the top and middle management were found to not be very keenly interested in knowledge sharing activities because of fear of either losing the job positions or giving up power and authority. Collin (2004:112), however, states that some of the senior employees often acted as mentors for their junior colleagues. This finding is supported by the assertion by Sackmann and Friesl (2007:150), who state that senior employees have involved the most common vehicle for knowledge sharing as a mentoring relationship.

The current study established that the participants interviewed concurred that knowledge accumulated throughout the years remains in the organisation through methods such as mentoring, coaching and training. Although the results from interviews reflect that the COJLIS does not have a formalised type of mentoring, participants believed that these are the best strategies to ensure that knowledge remains in the organisation. As highlighted in section 2.7.1.2, mentoring is a key process of knowledge management, which the researcher believes has been proven to be one of the successful ways of transferring knowledge within an organisation. Mentoring is an ideal way to use current employees to show new employees the ropes (Pena 2013). He carries on saying if possible (for example, if an employee will not be leaving for several months), have the current employee train their successor. It is the most direct way for a new employee to understand the reality of their job. At the COJLIS,

socialisation-originating ba occurred during coaching and mentoring sessions. These include face-to-face or human interactions. As supported by Arora and Rangnekar (2014), mentoring is a relationship between two individuals, which focuses on guidance and learning. For this learning to take place, knowledge, wisdom and experience must be shared.

At least there should be a mentorship programme to familiarise new entrants with the systems, processes and practices of the COJLIS. Mentors have the opportunity to share their knowledge, wisdom, experience and insight into how to get things accomplished, give back to the organisation, build trust through increased communication and be recognised as one of the outstanding mentors (Liebowitz 2009). To enhance knowledge retention through mentorship programmes a clear regulatory framework with clear guidelines, targets and evaluation mechanisms are needed (Ngulube & Dube 2013).

Therefore, socialisation, as articulated by Nonaka and Takeuchi (1995), is the process of sharing knowledge between the experts, mentors and retirees from whom juniors and new entrants at work can learn, and in the process create tacit knowledge such as technical skills that may be obtained through observation, imitation and practice.

Busch, Venkitachalam and Richards (2008:46) aver that organisations, including libraries, rely on experienced employees to take up management and strategic positions and, at the same time, junior librarians should learn from the experienced managers and other library experts. Results from the interviews indicated the need for succession planning. The learning process and transfer of critical tacit work-related knowledge between experienced employees and inexperienced employees will position the library to support succession planning.

This succession planning as articulated by Weare Jr. (2015:1-4), is a process generally used to identify, train, and prepare select employees to fill key leadership roles within the organisations as baby boomers (1946-1964) retire, such as executive director, library directors, chief librarian, principal librarian. Indeed, proper mentoring may contribute to successful succession planning, because succession planning ensures that there is a well-equipped pool of suitably experienced talent for internal recruitment.

Sloan (2007:776) describes succession planning as an attempt to have "the right leaders in the right place at the right time", which then becomes part of a broader strategy in the provision of

continuity, ease management transitions, and perpetuate the organisation. Galbraith, Smith and Walker (2012) believe that libraries need to make succession planning a priority or strategic plan to minimise the loss of tacit knowledge. The participants revealed that succession planning could help in the management of tacit knowledge, but the findings indicated that there is no evidence of such at the COJLIS.

Findings from the interview indicated that there is externalisation within the COJLIS as other participants confirmed the availability of manuals, case studies and training. Findings from observation and document analysis show that management developed these manuals, which they hope will be used at some point. This is evidence of externalisation. Opinions by Kaufman (2011) reveal that externalisation takes advantage of our perceptual abilities in a very intelligent way. He supports ideas of Nonaka and Konno (1998) that the conversion of internal thought (tacit) processes into an external form (explicit), gives the ability to re-input information into our brains via a different channel, which gives us access to additional cognitive resources we can use to process the same information in a different way.

Nonaka and Konno (1998) and Kaufman (2011) disclose that there are two primary ways to externalise thoughts, which are writing (articulation of tacit knowledge) and speaking (translating the tacit knowledge). Kaufman (2011) posits that writing (or drawing) is the best way to capture ideas, plans, and tasks as it enables the ability to store information in a form that can be referenced later. He further avers that capturing ideas on paper makes it easier to share with others. This process of externalisation intertwines with the interacting ba, which is described as more consciously constructed (Nonaka & Konno 1998). Through dialogue, individuals' mental models and skills are converted into common terms and concepts.

Therefore, a dialogue is key for such conversions, and the extensive use of metaphors is one of the conversion skills required. The interacting ba provides a place for dialogue where people engage jointly in the creation of meaning and value. Kaufman (2011), who opines that speaking to oneself or another person is another effective method of externalisation, reinforces this. Consequently, the key to vocal externalisation (training) is to find an audience who is willing to listen patiently and avoid interrupting you as you talk through an issue. However, the study reveals that the COJLIS does not provide a formal place for dialogue.

5.3   The role of technology in sharing tacit knowledge

Technology has a prominent role in the sharing of knowledge. Interpretations by Hortovanyi and Ferincz (2015:4), declare that IT can help organisations to be more efficient and innovative by making knowledge visible and accessible among employees. Sefollahi (2018) shares similar views, that ICT is a technology that facilitates the management or transfer of knowledge and facilitates it. Communication, coordination, and group process support functions offered by IT are useful in facilitating the socialisation process. ICT tools mentioned by Dewah (2014) and Sefollahi (2018) include intranets, emails, groupware and data warehousing; video-conferencing facilitates the capture, storage, dissemination and sharing of knowledge. These ICT tools enable the spread of organisational knowledge (Nemani 2010). Through ICT, there is evidence of a combination of the organisational theory. Nonaka et al. (2000) outline that new explicit knowledge within a company is preferably done by using ICT tools.

Findings from the interviews showed that some participants are techno-savvy. They acknowledged the use of social media in interacting with colleagues such as an intranet, WhatsApp and Facebook as well as email. Email, according to Sefollahi (2018), is suitable for transferring and sharing knowledge because of its affordable nature. Through emails, intranet, training, and brainstorming activities, tacit knowledge was transferred from one employee to another employee.

The failure by some staff to use ICT was caused by the fact that there is no training in place to equip the staff with the necessary skills. The challenge in accessing some of the knowledge is that some tools for communication and shared drives are not easily accessible, and neither are they user-friendly. A grounded ICT structure will advance the sharing and transfer of tacit knowledge. However, there is no guarantee that tacit knowledge will be shared, even if the COJLIS invests in these ICT resources. Most people interviewed have been employed for many years, and as a result, they might be reluctant to adapt to change or harbour the fear of losing their jobs.

As an example, results from interviews indicated that the City of Joburg (COJ) had introduced the Joburg Insider Repository for its employees, which can be accessed on the Jozinet (intranet). However, not all employees are aware of this. Therefore, organisations need to

understand how knowledge is created, captured, applied and shared within the organisation for capitalisation of the possessed knowledge (Jozinet 2018).

The Joburg Insider was born from the need to create an organisational knowledge repository, which would be a central point of access for all COJ strategic knowledge. The Joburg Insider is about connecting people, promoting spaces to share and creating knowledge collectively. Below are the four KM pillars identified to support and facilitate the City's strategic goals as well as improve policy implementation and outcomes. The four pillars correlate with the organisational knowledge theory from Nonaka and Takeuchi (1995).
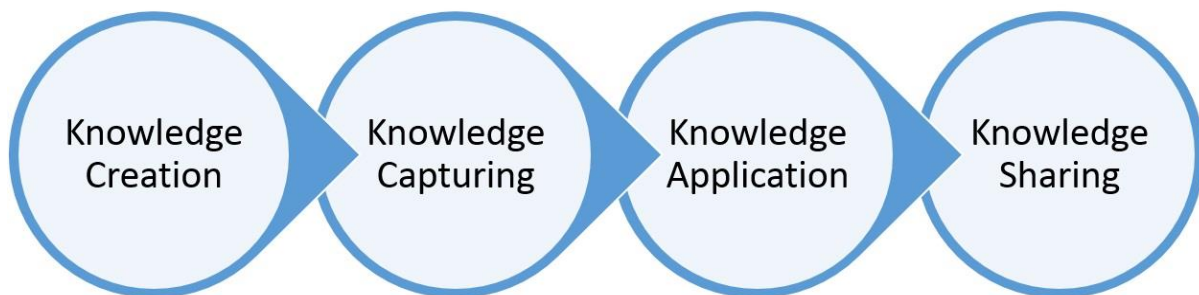
Figure 5.1: Adapted from Jozinet (2019)

Therefore, effective knowledge management requires appropriate use of organisational strategies as well as IT.

5.4   The role of management in tacit knowledge sharing

Knowledge sharing should be a culture for any organisation, and its success depends on the management. The findings of the observation research show that knowledge management can only be a success if the organisation's management is very involved. The findings indicate that it is the role of management to coach, train, and mentor employees as well as to create knowledge-sharing platforms, knowledge sharing policies and so on. Mentoring has been explained in section 5.2.1 of Chapter Five. Coaching happens during the process of mentoring in an organisation.

From the findings, participants divulged that knowledge at the COJLIS is transferred during coaching. Assertions from Michael (2008) indicate that coaching is an important tool for knowledge transfer because it provides individuals and teams with opportunities for gaining

new skills and personal development support. Results from observation and interviews indicate that the COJLIS uses coaching as the major source of knowledge sharing and transfer. Furthermore, coaching involves guiding and monitoring a trainee's progress with training given in order to consolidate the trainee's operationally relevant knowledge, which enhances such a trainee's performance. It usually takes place on a one-to-one basis and has a very specific purpose (Michael 2008).

Findings from observation and interviews showed that within the COJLIS, coaching is done face to face using manuals and coaching guidelines. Based on the above sentiments, the researcher adopts the emphasis from Nonaka and Konno (1998) that socialisation stems from exchanging tacit knowledge through joint activities such as being together. Results from the interviews indicate the need to create formal platforms. However, the results from observation indicated that there is an informal existence of ba within the COJLIS. From the observation by the researcher, at the COJLIS, management to an extent creates a platform (ba) to share knowledge during the coaching sessions. Findings from interviews indicated the use of workshops, and training facilitates knowledge sharing. This is comparable to the findings by Jacobs and Roodt (2011) that strategies and interventions are planned by management to provide opportunities to share, including training courses, workshops and sharing in informal settings. Socialisation involves the sharing of tacit knowledge within individuals (Nonaka & Konno 1998). All these activities mentioned above confirm Nonaka and Takeuchi's (1995) stage of socialisation within the SECI model.

Management is also responsible for knowledge creation at the COJLIS. Creating knowledge refers to the ability of organisations to create new and useful ideas and solutions (Sefollahi 2018). According to Mahapatra and Sarkar (2000), knowledge creation takes place through the transformation of tacit knowledge to explicit knowledge and back to tacit knowledge through the four processes (socialisation, externalisation, combination, and internalisation). Interview results, however, showed that even though it is happening, this practice occurs at a minimal level at the COJLIS.

Results from the interviews indicated that there are no policies for knowledge sharing at the COJLIS. Rather, findings from the content analysis indicated that there are three policies under library services, which are the caretaker policy, policy for the selection of materials for the public libraries of the City of Johannesburg and minimum standards for the public library

services of the City of Johannesburg. Participants felt the responsibility lies with management to create a KM policy, which will serve as a guide. There should be a policy for knowledge management practices within any organisation.

Ngulube (2003) asserts that written policies serve as binding contracts between individuals, the organisation and stakeholders. This definition was further developed by Ikelegbe (2006) who viewed a policy as actions taken and actions not taken by the organisation. Consequently, it refers to a statement of what an organisation wants to do, what it is doing, what it is not doing and what would not be done, which could be in the area of knowledge preservation, sharing, and retention. The more tacit knowledge is preserved, the greater the chance of it being passed on to future generations.

From all the participants, there is a consensus that the COJLIS needs to put a reward system in place to avoid brain drain as the organisation is disadvantaging itself. Employees share knowledge if there are incentives provided. Sentiments by Gaffoor and Cloete (2010) affirm that rewards and incentives for employees have a major contribution towards knowledge sharing. These factors also create an environment that facilitates knowledge sharing. Results from interviews and content analysis revealed that only four non-financial rewards are given as an incentive to employees at the COJLIS, which is not enough to keep them or create an interest to share knowledge. Randell (2014) states that when good performance is observed and then rewarded, the chances of it being repeated are increased, while poor performance is discouraged or even punished to decrease the chance of it happening again. Kibichii, Kiptum, and Chege (2013) believe that all this can better be achieved through recognition, visibility and the inclusion of knowledge-performance in appraisal systems and incentives within an organisation. The participants suggested that there should be a holistic engagement of management and staff in mapping a way forward in as much as the management of tacit knowledge is concerned to achieve desired results.

Pena (2013) believes the organisation should provide succinct materials that will help new employees. According to him, manuals should not just be handed over, and expect new employees to absorb all that information. Instead, he suggests asking the employee leaving the position to write a page or two about the important aspects of the job. That way the new employee will have current, valuable information. However, some participants bemoan that

knowledge accumulated over the years is eventually lost since there is no standardised way of capturing it.

In recent times, the practice of exit interviews (Serrat 2017) has been revisited as a knowledge management tool to capture and store knowledge from departing employees and minimise losses through staff turnover. Although exit interviews have been regarded as tools to capture knowledge, the participants at the COJLIS indicated that they are aware of the exit interviews, but it is only done when an employee has resigned and about to leave. Results from interviews indicated that exit interviews are only a paper-based exercise done by the human resource department and no one else has access to those documents. Furthermore, results from content analysis, interviews, and observation also revealed that exit interviews at the COJLIS are asset based. Consequently, this is at odds with Serrat (2017) who believes that exit interviews should provide feedback on why employees leave, what they liked about their job, and where the organisation needs improvement. Serrat (2017) also articulates that exit interviews help to retain vital knowledge in the organisation and inform management succession planning. It is, however, worthwhile to note that the less tacit and explicit knowledge an organisation captures from staff regularly, the more it needs to be captured on exit.

5.5   Awareness of management practices for tacit knowledge at the COJLIS

There are various management practices, but for this specific study, only the ones relating to tacit knowledge sharing were discussed. The results from interviews showed that there is extensive use of mentoring, although it is not formal. However, some participants emphasised the need for formal mentoring. The researcher discussed this practice in section 5.2.1.

Participants confessed to using storytelling for knowledge sharing and transfer within the COJLIS. Knowledge acquired from storytelling is likely to remain in the organisation for a long time because of its flexibility. The researcher observed that storytelling is done in a more relaxed setup, and employees share ideas more willingly during tea breaks or lunchtime. Swap et al (2001) defined an organisational story as a detailed narrative of past management actions, employee interactions, or other intra- or extra-organisational events. These stories are usually communicated informally within the organisation. Storytelling as a mechanism for disclosing knowledge can be a helpful tool to get hold of the valuable tacit knowledge of members of the organisation. It creates a self-sustaining, low-cost means by which knowledge can be captured

on an on-going basis (Steven 2016). The COJLIS should often practice storytelling as a way of sharing tacit knowledge.

On the other hand, results from interviews revealed that there is no evidence of a community of practice within the COJLIS. While CoPs play a major role in the management of tacit knowledge, they are not regarded as tools for knowledge sharing and transfer at the COJLIS. Some participants had no idea what a CoP entails. CoPs are formal or informal groupings of employees whose common goal is to share operational knowledge.

Results from observation and interviews indicated minimal use of subject matter experts. Although different sections exist within the COJLIS directorate, only BIDS and e-learning make use of SMEs, and even then only to a certain extent. From the interview results, some participants were not aware of such practice, and hence they did not use it. The Essential Guide to Working with Subject Matter Experts establishes that subject matter experts (SMEs) are experts in their fields whose brains are packed full of the content, experience, and insights needed by other employees to do their jobs better. In most cases, they invest much time in developing their expertise and have a nuanced understanding that goes far beyond just the facts. Similar views are shared by Larmore (2011) that SMEs are indeed thought of as individuals that contribute to an endeavour, such as a programme or a project, with the expectation that their knowledge and expertise exceed the rest of the organisation. Furthermore, the SME as articulated by Fajardo (2010) is also an advisor, who originates and participates in advisory boards with special in depth knowledge of a business or technical area that is often critical to the project organisations success. From the above, SMEs support tacit knowledge sharing during socialisation.

Results from interviews indicated that after-action reviews are rarely used. After-action reviews are a type of work meeting in which people discuss, interpret and endeavour to learn from a recent event during which they collaborated (Scott, Allen, Bonilla, Baran, & Murphy 2013). Although it is most often done in military organisations, it also applies to the COJLIS. As delineated by Scott, Dunn, Williams and Allen (2015) AARs attempt to seek answers that emanate from the viewpoints about what went well, what was supposed to happen, what actually happened, why were there differences, what worked, what did not, and why and how should it be done differently next time? It is always vital to know where one is going and

coming from. Furthermore, Scott et al (2015) assert that AARs can be used to compile, integrate and continuously update and improve reliability enhancing organisational knowledge.

5.6   The barriers of tacit knowledge sharing

Some of the barriers revealed by the study are people's attitudes and perceptions as well as physical barriers. The literature identifies individual, organisational cultural and technological barriers. Results from the interviews indicated that, in terms of individual barriers, most of the participants interviewed noted that some people hoard information and they are reluctant to share it for the benefit of others because they do not trust the system. The processes of sharing, distributing and utilising knowledge as articulated by Ngulube (2005b) largely depend on trust. Knowledge hoarding occurs when an individual has accumulated valuable knowledge but fails to share it (Connelly et al 2008) which is caused by a lack of motivation on the staff. This is supported by an assertion from Razmerita et al. (2016) who opine that knowledge hoarding results from lack of trust, lack of motivation, and fear. Some people fear that the information will be abused by the recipients. As a result, they do not see the gain or benefit in sharing their knowledge. However, Nakano et al (2013) emphasise that individuals are an important asset as far as knowledge resources are concerned therefore should be given attention. Furthermore, a study by Dube and Ngulube (2012) posited that the lack of trust amongst colleagues, especially across racial lines, created a "them" and "us" environment and mentality, which in turn is a barrier to knowledge sharing.

Although technology plays a major role in sharing tacit knowledge, it poses a challenge in instances where individuals lack knowledge in technology and do not know how to apply it in an organisational setting (Paulin & Suneson 2012). Other results from interviews posited that as an old school, technology comes as a secondary form for knowledge sharing.
Similarly, organisational culture plays an important role in knowledge sharing. According to Janus (2016), becoming a knowledge-sharing organisation requires leadership that encourages the required changes in culture, provides supportive governance structures and financing, as well as external partnerships.

Results from the interviews indicated that participants have no trust in the organisation and this hinders them from sharing knowledge. However, opinions from Amayah (2013) reveal that there must be trust and mutual understanding within the organisation. Trust leads to increased

knowledge sharing, making knowledge sharing less costly, and increase the likelihood of knowledge acquired from a fellow employee to be effectively understood (Seba et al 2012). Trust can be maintained by making sure that collaboration is based on clear rules which are understood, accepted and followed by everyone involved (Dube & Ngulube 2012:75). This can be summarised by contributions from Bessick and Naicker (2013) that organisations need to provide employees with incentives, financial or non-financial rewards, encouragement from management to share knowledge among employees, career development and mentoring programmes to retain knowledge to overcome barriers.

5.7   Summary

This chapter interpreted and discussed the research findings of this study based on the presented data in Chapter Four, together with the literature reviewed in Chapter Two. The findings suggested that there should be a systematic way of managing tacit knowledge through the use of management practices for tacit knowledge sharing. The findings indicated that the COJLIS uses mentoring and coaching for knowledge sharing, although it is not formal. The results also showed that the COJLIS does not have a culture for knowledge sharing. Participants were aware of the loss of knowledge due to resignation, death and retirement and therefore expressed a desire for a policy that enforces tacit knowledge sharing and effective succession planning.

Participants believe that libraries need to make succession planning a priority to minimise the loss of tacit knowledge. According to the interpretation, the COJLIS needs a reliable ICT infrastructure and effective use of the Joburg Insider. Strategies to minimise loss of tacit knowledge were found to be lacking at the COJLIS. For example, the absence of job rotation poses a threat to the employees. The results from the interviews indicated that knowledge management should be decentralised. However, the findings also indicated elements of the knowledge conversion theory within the COJLIS, although the participants were not aware of it as such.

Bessick and Naicker (2013) state that barriers to knowledge retention do exist and organisations need to provide employees with incentives: financial or non-financial rewards, encouragement from management to share knowledge among employees, career development and mentoring

programmes to retain knowledge. The next chapter provides the summary conclusions and recommendations on the management of tacit knowledge based on the findings of this study.

CHAPTER SIX
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

6.1   Introduction

The preceding chapter provided the interpretation and discussion of the data presented in Chapter Four. This chapter summarises the research findings and conclusions and recommendations of the study. The summary was based on the presented, analysed and interpreted data in Chapter Four and Chapter Five as well as a literature review in Chapter Two. Based on the findings, this chapter also provides recommendations for the management of tacit knowledge at the COJLIS.

The study used a qualitative approach and interviews, content analysis and observation for data collection. Kalusopa (2011) suggests that when writing conclusions and recommendations, the researcher should consider the following factors:

- Conclusions and recommendations should be related to the findings.
- The researcher should not over-conclude, which means that unwarranted conclusions and generalisations need to be avoided.
- All research questions should be answered.

The study aimed to examine the management of tacit knowledge at the COJLIS. To accomplish this aim, the study was guided with the following objectives from Chapter One:

- To establish how tacit knowledge is managed at the COJLIS.
- To determine the role of technology in managing tacit knowledge.
- To determine the role of management in managing tacit knowledge.
- To find out the extent to which there is awareness of management practices for tacit knowledge.
- To establish the barriers of tacit knowledge sharing.

6.2   Summary

This section discusses the study summary according to the objectives to be achieved by the study. The study investigated the management of tacit knowledge at the COJLIS, South Africa. The findings suggested the following answers to the five main objectives, which were formulated into five research questions, which guided this study.

6.2.1 Summary on the management of tacit knowledge at the COJLIS

Tacit knowledge needs to be shared in face-to-face interactions and communications, which in turn leads to the creation and application of new knowledge in the organisation. The employees can act based on their experiences and learned knowledge (Shah 2014). Although the interview results indicated that knowledge in the organisation remains in the organisation through methods such as mentoring, coaching and training, the process of managing tacit knowledge at the COJLIS is generally poor. Results from interviews reflect that the COJLIS does not have a formalised type of mentoring. Regardless of the importance and a clear need for succession planning, there is however no evidence of such at the COJLIS.

6.2.2 The role of technology in sharing tacit knowledge

The results of the interviews showed that participants are techno-savvy. They acknowledged the use of ICT and social media in interacting with colleagues, including the intranet, WhatsApp and Facebook as well as emails. However, there is still a need to provide training to others who cannot use these technologies. Although the City of Joburg has created the knowledge management system, results from the interviews indicated that the COJLIS has not started using the Joburg Insider platform. Most of the participants were not aware of the Joburg insider or how it works. Although IT is an enabler for knowledge sharing, results from the interviews indicated that there were no specific ICT platforms designated for tacit knowledge management at the COJLIS. Like in many other organisations, ICT platforms at the COJLIS are currently being used for managing explicit knowledge only (Davidaviciene & Raudeliunien 2010).

6.2.3 The role of management in tacit knowledge sharing

The findings indicated that it is the role of management to coach, mentor, create knowledge-sharing platforms, create a knowledge sharing policy, train, establish effective CoPs, workshops and do performance reviews. Furthermore, participants agreed that it is the duty of management to create a knowledge-sharing platform. Results indicated that management should consider the implementation of an effective CoP. Interview results also showed that there is no job rotation within the COJLIS and the employee rewards system is not motivational enough. Participants indicated that management should provide documentation for tacit

knowledge sharing. Interview results showed that there is a need for a knowledge sharing policy at the COJLIS. Results from the interviews indicated that exit interviews are practised at the COJLIS; however, there are paper and asset-based.

6.2.4 Awareness of management practices for tacit knowledge at the COJLIS

Interview results indicated that participants have knowledge of mentoring, but it is not formally structured or planned. One respondent mentioned that "you cannot mentor someone into your position." Results from the interviews thus indicated the non-existence of CoP at the COJLIS. Results from observation and interviews by the researcher indicated minimal use of subject matter experts. Results from the interviews indicated that participants use storytelling for knowledge sharing and transfer within the COJLIS. Results from interviews indicate that after-action reviews are rarely used. The participants had little or no knowledge of the concept. Concisely, there is little knowledge on the awareness of management practices.

6.2.5 The barriers of tacit knowledge sharing

Results from the interviews indicated a lack of trust in the system within the organisation. Participants indicated the challenges of a network (technology) that hamper the sharing of knowledge. In addition, interview results showed that there is no culture of sharing knowledge within the COJLIS.

6.3 Conclusions

This section concludes the study based on the completed investigations. Following the suggestion of Bryman (2006), the conclusion returns to the research questions and spells out the implications of the findings. Leedy and Ormrod (2010: 296) point out that "the conclusions should be entirely supported by the data presented". In drawing conclusions, only the major findings that directly addressed the research questions were conferred. The conclusions of the investigations are organised according to the objectives of the study, as outlined in Chapter One.

6.3.1 Conclusions on the management of tacit knowledge at the COJLIS

Outcomes from the interviews indicated that there is an existence of the knowledge conversion theory within the COJLIS, although the practice is not formal. The findings from some

participants indicated that knowledge accumulated over the years is captured through mentoring. However, other respondents felt it is eventually lost as there is no formal method of capturing that knowledge. Although a concern arose from participants that there should be succession planning at the COJLIS, there is no evidence of such practice.

The management and successful sharing of tacit knowledge is a process that should be carefully planned. The knowledge possessed by experienced employees should be examined to have real-time information on existing knowledge. Quite often, the importance of tacit knowledge is noticed only when a new employee takes over the experienced employee's tasks. The challenges and lack of information are signs of tacit knowledge that has left with the experienced employee. To prevent this loss of tacit knowledge, the management must value the tacit knowledge and possibly deal with the difficulties in the identification of tacit knowledge.

6.3.2   Conclusions on the role of technology in sharing tacit knowledge at the COJLIS

About the role of technology and how it is used for knowledge sharing, the findings indicated that most participants are techno-savvy. They use some technological tools to share knowledge, for example, through emails and social media such as Facebook. However, in contrast, some participants either had no idea of the Joburg Insider as a tool for knowledge sharing or lacked the training and skills on the use of these technological tools for knowledge sharing. This study concluded that a grounded ICT structure would advance the sharing and transfer of tacit knowledge.

6.3.3   Conclusions on the role of management in tacit knowledge sharing at the COJLIS

Valuing the employees and their tacit knowledge helps in capturing and retaining the knowledge within the organisation. The data obtained revealed that it is a core mandate for management to coach, mentor, create knowledge sharing platforms, create a knowledge sharing policy, train, establish effective CoPs, workshops and do performance reviews. The findings also indicated that the establishment of an effective CoP will increase the chances of tacit knowledge sharing. Currently, at the COJLIS, there is no job rotation and a lack of proper exit interviews. According to the researcher's personal experiences, as well as information obtained

from interviews, there is a lack of proper exit interviews, and the incentives are not good enough to keep and encourage employees to share knowledge.

While it is imperative to have a policy that guides every practice within an organisation, results from the interviews and content analysis indicated that there is no policy for tacit knowledge sharing. The policy is of critical value as it serves as a guide for the sharing and retention of tacit knowledge, which then becomes institutional knowledge. Mavodza and Ngulube (2011) articulate that the presence of a policy acts as guidance on how to preserve knowledge within an organisation. A policy promotes the integration of lessons learnt, best practices and other operational knowledge into work processes and knowledge sharing. The study concludes that through developing a KM policy (tacit knowledge sharing and retention), the COJLIS will position itself to compete effectively in this Fourth Industrial Revolution.

6.3.4 Conclusions on the awareness of management practices for tacit knowledge at the COJLIS

The conclusion of the awareness of the investigated practices indicated detrimental results. The study found that participants had minimal or no knowledge of some of the practices. For example, although CoPs are vital, the participants did not have any knowledge of them. The sentiments by Chigada (2014:211) stated that KM practices should not be based on the preconception that an organisation can mandate people to share their knowledge. The study concludes that management should be well versed with these management practices for effective tacit knowledge sharing and retention.

6.3.5 Conclusions on the barriers of tacit knowledge sharing at the COJLIS

The barriers identified were technology, individual and organisational culture. Results from observation and interviews indicated that fear is a major factor; fear of losing my position, fear of demotion and more. Findings assert the dominance of explicit knowledge. Seemingly, explicit knowledge has precedence over tacit knowledge, which should be corrected. The current challenges identified in literature and interview, speak to the organisational culture of the COJLIS. It should be noted that the starting point is the realisation that management has a duty to create a sharing space (ba), be it a physical or virtual space, to enable and facilitate the sharing of knowledge. The lack of effective reward systems contributes toward the low level

of tacit knowledge sharing and general lack of time to share knowledge, and time to identify colleagues in need of specific knowledge. Consequently, this has created a culture of knowledge hoarding within the COJLIS. The study concluded that the fear of being replaced by the machines, as well as the insufficient integration of IT systems, poses a great danger at the COJLIS and should be minimised.

6.4 Recommendations

Tacit knowledge is crucial and beneficial, and provides a competitive advantage for organisations who wish to remain successful. Regardless of the extensive literature on the importance of tacit knowledge management, there remains a knowledge gap in the field. In this light, this section makes recommendations on possible future areas of study and indicates other areas that could not be covered by this study.

6.4.1 Recommendations on the management of tacit knowledge at the COJLIS

Managing tacit knowledge is an important exercise that organisations ought to carry out every day to stimulate overall performance and growth.

- Tacit knowledge can well be managed by practising the SECI model. If knowledge goes through the SECI process, the quality and quantity of tacit knowledge will be enriched. The SECI model promotes self-sufficiency at every level of the company by removing information hierarchies and allowing everyone to access the same knowledge, no matter their department or role.

- Knowledge management should be decentralised. This implies that the COJLIS should have its own effective KM section with a knowledge champion. The success of tacit knowledge management at the COJLIS lies in its decentralisation.

6.4.2 Recommendations on the role of technology in sharing tacit knowledge

Training in, and the effective utilisation of, the Joburg Insider Repository. The aim of the Joburg Insider is to connect people, promote spaces to share and create knowledge collectively. The researcher recommends that the COJLIS should work closely with the IKM unit, because of the enlisted aims of the Joburg Insider.The study recommends the IKM unit to create awareness of Joburg Insider repository.The researcher recommends the COJLIS to have the right tools and technology for effective knowledge sharing, retention and transfer. The COJLIS should provide a user-friendly technology as either software or a platform that requires minimum training.

6.4.3 Recommendations on the role of management in tacit knowledge sharing.

The top management needs to have a knowledge vision, which needs to be spread within the company (Nonaka et al. 2000).

- Creation of a KM policy that will serve as a guide for knowledge sharing at the COJLIS. It should be sufficient to deliver the required knowledge management values. The availability of policy implies that it becomes mandatory that at a certain level, an individual should start sharing knowledge, for example, 10 years. A knowledge sharing policy should be a mandate at the COJLIS, thus minimising the loss of accumulated knowledge. In addition, a knowledge sharing policy would help alleviate intricacy by supporting teamwork and coordination.
- The COJLIS should not only concentrate on the asset-based exit interviews and should rather adapt to the proper exit interview that also encourages retention of tacit knowledge. Management should create new knowledge by applying the SECI model in their routines.
- Although the COJLIS is engaged in the coaching sessions, it should establish a formal knowledge sharing platform (ba).
- Management should establish an organisational structure that rewards employees for sharing knowledge, encourage job training and encourage employees to learn constantly.
- Management should be able to adapt to change within an organisation.
- At least the COJLIs should create a culture for knowledge sharing that includes incentives.
- There should be job rotation so that all employees are well versed with other sections. Sections should avoid working in silos. Management should re-hire within the COJLIS.

6.4.4 Recommendations on the awareness of management practices for tacit knowledge at the COJLIS

The researcher recommends the establishment of an effective CoP at the COJLIS for the following advantages:

- Minimising the loss of organisational knowledge while promoting its fruitful use at the COJLIS.
- Increasing the interaction of peers.

- Minimising knowledge hoarding.
- Establishing effective collaboration and coordination.
- The study also encourages the use of other management practices for tacit knowledge sharing and retention.

6.4.5 Recommendations on the barriers of tacit knowledge sharing

- This study recommends the creation and maintenance of a culture that cultivates knowledge-friendliness, which should ultimately lead to the sharing of knowledge between and among employees.
- The study also recommends an introduction of the reward system/incentives to employees who engage in knowledge sharing. The researcher further recommends a more critical analysis of the reward systems. The effective reward system will increase the sharing of knowledge, as well as minimising knowledge hoarding. In this instance, employees will look forward to sharing the knowledge that they possess.

6.5 Further research

This study was qualitative, which used document analysis, observation and interviews to collect data from the participants. The current study focused only on the City of Joburg Library and Information Services (COJLIS) in the Johannesburg Metropolitan, Gauteng, South Africa.

6.6 Final conclusion

This study investigated how tacit knowledge is managed at the COJLIS. The study recommends the development of a framework for tacit knowledge management within the COJLIS. A further study on how decentralisation of KM can enhance tacit knowledge management is recommended for all departments within the City of Johannesburg Metropolitan.

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LIST OF APPENDICES

Appendix A: Request for permission

December 29, 2017

Mr Ben Ramela

Deputy Director: City of Johannesburg Library and Information Services

22 Solomon Street

BenRamela@joburg.org.za

REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT CITY OF JOHANNESBURG LIBRARY AND INFORMATION SERVICES.

Dear Mr B Ramela

l, **Lydia Nkomo**, am doing research with Patrick Ngulube, a Professor in the Department of Information Science towards a Masters, at the University of South Africa. My research topic is entitled: **Management of Tacit Knowledge at The City of Johannesburg Library Information Services, South Africa**. I am writing to request you to allow me to conduct in depth interviews with you and the other library staff members. I will introduce myself and give a brief about the research to the respondent, before the interview. I will also give a consent form to the respondent to sign before I conduct the interview. Your Institution has been selected because the researcher is familiar with the organisation and it is convenient and has identified the knowledge gap in the management of tacit knowledge.

The study will bridge the gap of leaving employees, which will raise possible awareness of the importance of sustainable tacit knowledge management for the department.

There are benefits expected to be gained through the study, such as:

- The study will contribute to the understanding of knowledge management in the organisation
- The study will provide an evidence-based basis for the development of a manual of operation, which can be utilised in the management of tacit knowledge at COJLIS.
- The study will be a useful and handy guide, providing both theoretical and practical explanations of current knowledge management practices for library and information science professionals.
- The study will recommend, and aid in the development of essential knowledge management practices strategies that will minimise the loss of organisational knowledge whilst promoting its fruitful use at COJLIS.

The expectation is that the research findings will enable the COJLIS to deal with possible knowledge retention aspects. This will help them understand what steps to take in managing and retaining tacit knowledge.

There will be no harm from your participation.

Yours sincerely

Lydia Nkomo

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Lydia Nkomo

3137 Diokane Drive

Central Western Jabavu

08 January 2018

Dear Ms Nkomo

REQUEST FOR APPROVAL TO CONDUCT A RESEARCH IN THE CITY OF JOHANNESBURG LIBRARY AND INFORMATION SERVICES DIRECTORATE (COJLIS)

Your request to conduct a research in the City of Johannesburg Library and Information Services libraries as per your letter dated 29 December 2017 is granted. The permission is granted solely for the purpose of your request and may not be used for any other purpose other than indicated on your letter. You will be required to present your findings and recommendations to COJLIS Management.

Please indicate on which dates you will be conducting your research.

Regards

Monyatsi Ben Ramela

1

Appendix B: Interview Guide

Dear Interviewee

My name is Lydia Nkomo and I am currently studying for a Master's degree in Information Science with the University of South Africa. My research title is: **Management of tacit knowledge at City of Johannesburg Library & Information Services (COJLIS), South Africa.** Participating in this study is voluntary, and you are under no obligation to consent to participation. There is no penalty or loss of benefit for non-participation and you are free to withdraw at any time. The interview will take approximately 30 minutes of your time. All data collected will be treated with confidentiality and will be used for academic purposes only.

Interview questions:

Management of tacit knowledge at the City of Johannesburg Library & Information Services (COJLIS), South Africa

Section A: General Information

1. Sex: Male [ ] Female [ ]

2. Age: 30-40 [ ]　　　40 -50 [ ]　　　50-60 [ ]　　　60- [ ]

3. Highest Academic Qualification

Matric [ ]　Diploma [ ] Bachelor's degree [ ] Honours [ ] Masters [ ] Post graduate [ ]

4. Section:

[ ] E-learning Library Applications

[ ] Bibliographic and Distribution Services

[ ] Service Extension & Resource Development

[ ] Regional libraries

5. Position:

[ ] Senior Library Assistant

[ ] Librarian

[ ] Senior Librarian

[ ] Manager

[ ] Assistant Director

[ ] Director

6. How long have you worked for the organisation (COJLIS)?

[ ] 10-14 years

[ ] 15-19 years

[ ] 20- 25 years

[ ] over 25 years

<u>SECTION B</u>: **Management of tacit knowledge at the COJLIS**

7. How do you ensure knowledge accumulated through the years remains in the organisation when employees leave the company?

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8. How does your organisation (COJLIS) capture the knowledge/ tap in the rich experiences of retiring or leaving employees?

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9. Which ways does COJLIS share knowledge?

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10. How does knowledge transfer occur at COJLIS?

SECTION C: The role of technology in tacit knowledge sharing at the COJLIS.

11. How does technology enable tacit knowledge sharing at COJLIS?

SECTION D: The role of management in tacit knowledge sharing at the COJLIS.

12. How does management assist in tacit knowledge sharing at COJLIS?

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13. Does management offer job rotation opportunities at COJLIS?

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14. Does management create knowledge sharing platforms within COJLIS?

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15. What motivates the employees to share knowledge at COJLIS? Is there an effective employee reward system?

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16. Does COJLIS have a policy for knowledge sharing at COJLIS?

SECTION E: Awareness of knowledge management practices for knowledge retention at the COJLIS

17. Using the guideline below from never- most often, which of the management practices does COJLIS use for tacit knowledge sharing?

Management practice	Never	Rarely	Occasionally	Often	Most Often
Training					
Mentoring					
Storytelling					
After Action Review					
Subject Matter Expert					
Community of Practice					

SECTION F: The barriers of tacit knowledge sharing

18. What are the challenges of tacit knowledge sharing at COJLIS?

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19. Do you have anything that you would like to add or contribute?

Thank you for your participation!

Appendix C: Ethical Clearance

DEPARTMENT OF INFORMATION SCIENCE ETHICS REVIEW COMMITTEE

22 November 2018

Dear Ms Lydia Nkomo

Decision:

**Ethics Approval from 22
November 2018 to 20
November 2021**

Researcher(s): Lydia Nkomo

Supervisor(s): Prof P Ngulube & Dr JR Maluleka

**Management of tacit knowledge at the City of Johannesburg Library
Information Services, South Africa**

Qualifications: Masters in Information Science

Open Rubric

Thank you for the application for research ethics clearance by the Unisa Department of Information Science Research Ethics Committee for the above-mentioned research. Ethics approval is granted for three years.

The *low risk application* was reviewed and expedited by the Department of Information Science Research Ethics Committee on 22 November 2018 in compliance with the Unisa Policy on Research Ethics and the Standards Operating Procedure on Research Ethics Risk Assessment. The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy of Research Ethics.

2. Any adverse circumstances arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the Department of Information Science Ethics Review Committee.

3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.

4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards the protection of participants' privacy and the confidentiality of the data should be reported to the Committee in writing, accompanied by a progress report.

5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no. 4 of 2013; Children's Act no. 38 of 2005 and the National Health Act, no. 61 of 2003.

6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.

7. No field work activities may continue after the expiry date of 20 November 2021. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

The reference number 2018-LIS-0002 should be clearly indicated on all forms of communication with the intended research participants, as well as the Committee.

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Yours sincerely

Dr Isabel Schellnack-Kelly
Department of Information Science: Ethics Committee

Appendix D: Informed consent

CONSENT TO PARTICIPATE IN THIS STUDY

I, _____(participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet.

I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable).

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

I have received a signed copy of the informed consent agreement.

Participant Name & Surname……………………………………… (please print)

Participant Signature………………………………………..Date…………………

Researcher's Name & Surname…………………………………… (please print)

Researcher's signature………………………………………..Date…………………

APPENDIX E: TURNITIN REPORT

turnitin

Digital Receipt

This receipt acknowledges that Turnitin received your paper. Below you will find the receipt information regarding your submission.

The first page of your submissions is displayed below.

Submission author:	Lydia Nkomo
Assignment title:	Complete dissertation/thesis submis…
Submission title:	MANAGEMENT OF TACIT KNOWL…
File name:	Nkomo Lydia Dissertation 19-08-20…
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