NON-GOVERNMENT ORGANIZATIONS' ADOPTION OF KNOWLEDGE MANAGEMENT SYSTEMS TO ENHANCE SERVICE DELIVERY OF PROJECTS IN GRAHAMSTOWN IN THE MAKANA REGION OF THE EASTERN CAPE PROVINCE, SOUTH AFRICA

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ABSTRACT

The object of this research is to enhance the performance of non-government organizations in the Makana region of the Eastern Cape Province of South Africa by the use of knowledge management practices and principles. Non-government organizations face several service delivery challenges that affect their performance. Knowledge management assists in enhancing performance by means of organizational learning. However, the adoption of knowledge management systems has been limited to the profit-making sector. This study includes an evaluation of the contributing factors influencing the adoption of knowledge management and the extent to which non-government organizations use knowledge management to promote organizational learning. An interpretivist, qualitative case study approach was used on five non-government organizations cases from the Makana region of the Eastern Cape Province of South Africa. A suitability profile sampling method was developed to select the non-government organization cases. The participants in the research include non-government organizations' managers, employees and volunteers. Literature was explored to gain a better understanding of the research area. The research was initiated by an open-ended questionnaire to gather data from the participants, followed by a focus group to enrich the interpretation of the findings. The research proposes a framework to facilitate the adoption of knowledge management systems in non-government organizations. The findings of the research are intended to enhance the performance of non-government organizations projects by means of the use of knowledge management systems.

KEYWORDS: Knowledge management system; organizational learning; non-government organizations; service delivery

Declaration

I declare that the dissertation entitled 'Non-government organizations' adoption of knowledge management systems to enhance service delivery of projects in Grahamstown in the Makana region of the Eastern Cape Province, South Africa' which I hereby submit for the degree Master of Commerce in Information Systems at Rhodes University, is my own work. I also declare that this dissertation has not previously been submitted by me for a degree at this or any other tertiary institution and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Nabiha Mohammed Sherif

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SECTIONS	PURPOSE
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Section 1.2: Background	An overview of the background explains the topic area and discipline of the study.
Section 1.3: Problem statement	This section describes the problem areas, supported by literature, which are addressed in this research.
Section 1.4: Research questions	The research questions are clearly presented and briefly described as supported by the research's problem statement.
Section 1.5: Overview of methodological overview	This section briefly explains how the research was conducted.
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Section 1.8: Dissertation structure	An overview of the dissertation structure and the purpose of each chapter, are provided.

Chapter 1
Introduction and project overview

1.1 Introduction

Non-government organizations (NGOs) are facing several service delivery challenges that affect their performance. The purpose of this research is to investigate the adoption of knowledge management (KM) systems to enhance service delivery of NGO projects in Grahamstown in the Makana region of the Eastern Cape Province of South Africa. The central purpose of this chapter is to provide a brief background to NGOs and to introduce the KM discipline, as well as the research problem statement.

1.2 Background

In an ideal world NGOs would not exist (Agarwal and Siddique, 2011). NGOs are established for a specific vision, purpose or cause that an element of civil society feels strongly about (Lukaszczyk and Williamson, 2010). NGOs have a positive impact around the world and contribute to the economic and social development of society (Besler and Sezerel, 2011), which is part of the National Development Plan (NDP) of South Africa (Statistics South Africa, 2013) and the United Nation's Millennium Development Goals (MDGs) (Srinivas, 2009; Statistics South Africa, 2013). South Africa is currently facing developmental challenges, such as education, health and poverty (Barnard, 2012). Government departments and agencies are battling to respond to these problems amidst a lack of capacity and leadership, as well as corruption, amongst others (Barnard, 2012). The South African government continues to do less than is needed to provide social support and thus civil society organizations (CSOs), which include NGOs, are needed to "fill the democratic vacuum" (Stuart, 2013). Furthermore, the Eastern Cape Province of South Africa remains spatially imbalanced with deep scarcities (Eastern Cape Planning Commission, 2014) and slow developmental progress (ECNGOC, 2015).

There is a growing number of non-profit organizations (NPOs) both in South Africa and around the world (Stuart, 2013). All NGOs in South Africa fall under the Nonprofit Organizations Act No. 71 of 1997 (NPO Act) (Nonprofit Organizations Act, 1997). The NPO Act defines a NPO as "a trust, establishment or group of individuals that are recognized for a public purpose in which income and property of the organization are not distributable to its supporters, except as reasonable reimbursement for services provided" (Nonprofit Organizations Act, 1997). One of the driving forces for the increase in the number of NPOs is the need for such organizations to respond to the requests of citizens (Bromideh, 2011; Stuart, 2013). The average growth of registered NPOs in South Africa over the five years period of 2009/2010 to 2014/2015 is 86% (Department of Social Development, 2015). NGOs typically have five basic features, to wit: organized, private, self-governing, non-profit distributing and voluntary/non-compulsory based (United Nations, 2003; Statistics South Africa, 2014; Statistics South Africa, 2015). The World Bank typology broadly divides and classifies NGOs into operational and advocacy NGOs (Herrmann and Fletcher, 2012). Operational NGOs design and implement projects to achieve developmental goals, while advocacy NGOs promote a specific cause by raising awareness and knowledge by means of various activities (Herrmann and Fletcher, 2012). Nonetheless, NGOs are facing several service delivery challenges that affect their performance. These challenges are highlighted in Section 1.3 of this chapter.

KM is a concept that involves the investigation and technical support of practices used in an organization "to identify, create, represent, distribute and enable the adoption and leveraging of good practices embedded in collaborative settings" (Lubega, 2010, p.83). It helps to prevent reinventing the wheel and influences organizational learning (Alavi and Leidner, 2001). KM and organizational learning are vital in order to increase organizational effectiveness and delivery of service through informed decision-making (King, 2009; Jiménez-Jiménez and Sanz-Valle, 2011; Corfield, Paton and Little, 2013). NGOs have started to implement innovative techniques to manage their operations due to the unstable and risky environment (Smith and Lumba, 2008; Lewis, 2014). One possible solution is to use KM procedures and principles to improve the situation. However, this concept has become challenging to implement for some organizations (Hardia, 2013).

An organization's competitive advantage has shifted from labour to capital and, more recently, to knowledge (Smith and Lumba, 2008). KM has been through three stages or "generations" of development. The first generation predominantly focused on information sharing through KM processes and organizational memory which assisted organizations to keep track of their records (Britton, 2005). However, the concern regarding managing knowledge itself without a way to facilitate organizational learning, is a shortcoming (Smith and Lumba, 2008). The second generation involved not only the technology of developing an organizational memory but also included the people, its processes involved, as well as the collective learning and communities of practice. Learning links the past and the future to give meaning to actions performed by NGOs and is essential in responding to the unpredictable challenges that NGOs face (Britton, 2005) since it is often difficult to apply learning to NGO projects (Britton, 2005; Kingsbury, 2013). The third generation is in its early stages of development and emphasizes action from the knowledge available. Knowledge creation and innovation, which are based on managing uncertainty, are also included. Most NGOs are on the first or second generation of development (Britton, 2005). Some KM theories include: Nonaka's knowledge spiral model (Nonaka, 1994), Wiig's model for building and using knowledge (Wiig, 1993) and Edwards' people, process and technology model (Edwards, 2011a). Common themes would appear to be the people, processes and technology (Omona, Van der Weide and Lubega, 2010; Edwards, 2011a).

Small and medium-sized enterprises (SMEs) are non-subsidiary and independent firms that contribute considerably to the economy (OECD, 2005; The Banking Association South Africa, 2015b). Small and medium-sized enterprises (SMEs) share some similarities with NGOs. Whilst acknowledging that SMEs are part of the private sector and NGOs form part of the public sector, the study draws on some KM practices adopted by SMEs, as identified in Section 3.6.2 of Chapter 3. The relationship between NGOs and SME's is further explored in Section 2.8 of Chapter 2.

1.3 Problem statement

The number of persistent challenges that NGOs face has become more complex over the years (Mitlin, Hickey and Bebbington, 2007; Hardia, 2013). These challenges often result in NGOs failing to provide an adequate level of service delivery, thus resulting in NGOs either closing down or scaling down their activities (Barnard, 2012; Hayman and Lewis, 2014). Some of these challenges include poor leadership, insufficient funding, lack of accountability and high employee turnover, as explained in Section 2.7 of Chapter 2. In 2013 the Department of Social Development of South Africa deregistered 36 488 of just over 100 000 NGOs in South Africa for being non-compliant with the NPO Act and the provisions of its constitution, which has created fear in the non-profit sector (Stuart, 2013). NGOs are obligated to demonstrate their good use of the limited resources available to them while managing to be effective; to have close relations with their stakeholders (i.e. constituencies and beneficiaries) as well as to continually attest their relevance (Stuart, 2013). The current economic environment is changing rapidly (Sain and Wilde, 2014). Some NGOs rely heavily on volunteers to deliver projects (Michael, 2004; Olczak, 2012). Workers seldom stay in one organization for many years, resulting in a high staff turnover (Sain and Wilde, 2014). Organizations, in general, including some NGOs, are currently facing knowledge loss due to staff turnover (Sain and Wilde, 2014; Constantin, 2015). This lack of retained knowledge results in NGOs failing to learn from previous successes and failures which, in turn, leads to erratic results and repeated mistakes (Horton and Roche, 2010; Kingsbury, 2013; Norwood-Young, 2014).

Most KM has been limited to the profit-making sector and only minimal analysis has been applied to the non-profit sector (Renshaw and Krishnaswamy, 2009; Huck, Al and Rathi, 2011; Given, Forcier and Rathi, 2013; Rathi, Given and Forcier, 2014). Most of the surveyed NGOs have not embraced KM principles as there remains uncertainty regarding the contribution that KM makes to increase effectiveness (Smith and Lumba, 2008; Soakell-Ho and Myers, 2011). Soakell-Ho and Myers (2011) suggest that there is a belief amongst NGOs that ineffective KM practices are caused by the adoption of an incorrect KM strategy, such as those intended for profit-making organizations. NGOs are often criticized for being ineffective, unaccountable to beneficiaries and have even been linked to opportunism and corruption (Lewis, 2014). There are concerns regarding the sharing of lessons learnt on NGO projects, especially in respect of projects that have not achieved their goals (Britton, 2005).

1.4 Research questions

The main research question is; "How can NGOs adopt knowledge management systems to enhance service delivery?" The limitations and delimitations of the study are presented in Section 8.4 of Chapter 8.

1.4.1 Sub-questions and purpose of each question

The following research sub-questions were answered in the research:

1. What are the service delivery challenges facing NGOs in Grahamstown in the Makana region of the Eastern Cape Province?
    - NGOs often work in unsupported, unstable and risky environments (Lewis, 2003b; Smith and Lumba, 2008; Lewis, 2014). The aim of this sub-question is to identify the prominent challenges that influence the performance of NGOs.
2. What are the factors influencing organizational learning in NGOs in Grahamstown in the Makana region of the Eastern Cape Province?

  - Learning is the means of creating new knowledge and of improving one's actions (Huber, 1991; Slater and Narver, 1995; Britton, 2005). Organizational learning and KM are similar and commonly interchangeable concepts (King, 2009). Therefore, the aim of this sub-question is to assess the factors that influence organizational learning in NGOs in Grahamstown in the Makana region of the Eastern Cape Province of South Africa.

3. What do NGOs understand by KM and to what extent are they adopting KM practices and principles?
    - The purpose of this sub-question is to assess the awareness and use of KM by NGOs.
4. What KM techniques and technologies would be most appropriate for supporting KM within NGOs in Grahamstown in the Makana region of the Eastern Cape Province?
    - The objective of this sub-question is to assess the possible technologies and techniques in adopting KM practices for NGOs, which include information communication technologies (ICT) and non-ICT based approaches. According to Dalkir (2005) technologies help to enable crucial communication, collaboration and content management in order to better capture, apply and distribute knowledge in the organization. The unwillingness to use technology in NGOs implies that there is a deficiency of technological skills and a lack of appreciation for its use to increase organizational performance (Hackler and Saxton, 2007).

1.5 Overview of the methodological approach

A literature review was conducted on a wide range of sources, such as books, journals and internet sources. It is important to ensure that the literature review is rigorous. Thus, this is done by first clearly identifying the research questions, as identified earlier in Section 1.4, and making them as explicit as possible (Hagen-Zanker and Mallett, 2013). Secondly, a set layout of the research that is clear to understand should be made, as illustrated in Section 1.8 (Hagen-Zanker and Mallett, 2013). This will assist to guide the research in a structured manner. Thereafter the inclusive and exclusive criterion has to be established at the beginning of the process to ensure that the research screening is done in a consistent form to promote rigorousness and transparency. The following stage should include the correct search strings as it affects the resource material found (Hagen-Zanker and Mallett, 2013). The relevant keywords from the research topic should be identified and the corresponding synonyms need to be included in the search string to ensure broader search findings. The searches should always relate to the research questions. However, this research may contain some expected limitations and bias, such as human error/judgment (Hagen-Zanker and Mallett, 2013).

An interpretivist, qualitative case study approach was used on five selected NGOs from the Makana region of the Eastern Cape Province. A case study method involves an in-depth study to increase understanding of the phenomena being studied within a real-life context (Yin, 1994; Jackson, 2008). Eisenhardt (1989) suggests that the use of four to ten cases is desirable for theory generation through the use of case studies. Multiple-case design was selected to enable cross-case analysis and comparison (Yin, 1994). A suitability profile was developed as a sampling technique, which provided the requirements applied to select the five NGO cases (Remenyi, 2012). The participants in the research are NGO managers and staff members and/or volunteer workers that are involved in the organization's services. An open-ended questionnaire was initially used to gather data from the participants. This was followed by a focus group interview being conducted to enrich the interpretation of the findings. The questionnaire was sectioned into the four research sub-questions, as stated in Section 1.4, to analyse the data easily. The data was analysed by means of Atlas.ti to help discover and analyse complex phenomena (Lewins and Silver, 2007).

The following four steps were undertaken:

1. Conduct a critical review of the literature in order to:
    - Understand service delivery challenges and the role of KM in addressing them;
    - Identify and describe KM models and frameworks such as Nonaka's knowledge spiral model and Wiig's model for building and using knowledge, amongst others;
    - Explore current adoption practices of KM in NGOs and comparable organizations such as SMEs; and
    - Identify and describe some possible KM tools (techniques and technologies) that could be used in NGOs and SMEs.
2. Construct a preliminary theoretical framework to guide NGOs in their adoption of KM.
3. Explore the use of KM in South African NGOs in Grahamstown in the Makana region of the Eastern Cape Province.

- Assess the current means by which NGO's acquire, distil, share, store and use KM in general and in projects in particular;
- Examine the extent to which the organizations are learning from previous projects;
- Identify the KM techniques and technologies that would be most appropriate for supporting KM systems within NGOs; and
- Evaluate the extent to which the proposed framework may be used to guide the successful adoption of KM systems in NGOs.

4. Analyse the findings and update the proposed framework based on the analysis of the results.

1.6 Research contribution

The purpose of this study is to investigate how NGOs, in Grahamstown in the Makana region of the Eastern Cape Province, adopt KM systems to enhance service delivery as formed by the four research sub-questions highlighted in Section 1.4.1. The study includes an evaluation of the contributing factors influencing the adoption of KM and the extent to which NGOs use KM to promote organizational learning. Three key elements, namely people, technology and its processes, were assessed (Omona, Van Der Weide and Lubega, 2010; Edwards, 2011a; Uden, Herrera, Pérez and Rodríguez, 2012). The research aims to develop a framework to aid NGOs in their adoption of KM systems. The recommendations of the research are envisaged to strengthen the performance of NGO projects through KM. However, the research presents several limitations as explained in Section 8.4 of Chapter 8.

There is little reliable information available regarding NGOs in South Africa (Charities Aid Foundation Southern Africa, 2012). Furthermore, Bromideh (2011) recognizes that, due to the growing number of NGOs that operate in developing countries, there is a lack of clear official statistics. This is due, firstly, to the difficulty in gaining finance to fund research about NPOs and, secondly, because of reluctance by the government agencies (e.g. Stats SA) to include this sector in the surveys and frameworks in their research (Charities Aid Foundation Southern Africa, 2012). A study conducted by Kareithi and Lund (2012) investigated published academic journals between 1996 and 2008. The latter concluded that there are few published researchers on NGO performance in Africa. In addition, there is a need for new conceptual frameworks and models that are more adaptive and receptive to KM challenges to solve challenges faced by NGOs (Lubega, 2010). In conclusion: the proposed descriptive research contributes to the existing body of knowledge within the context of South Africa. In addition, thereto the proposed research aims to provide a framework for the adoption of KM systems to increase service delivery of NGO projects.

1.7 Terms and definitions

The following terms and definitions have been prominently used in the research:

- CSO: civil society organization (as mentioned in Chapter 2)

  A CSO comprises of a wide range of organizations, networks, associations and movements that are independent from government and that sometimes come together to advance their common interests through collective action (Chakib, 2014).

- KM: knowledge management (as mentioned in Chapter 3)

  KM is defined by Jennex (2009, p.4) as "the practice of selectively applying knowledge from previous experiences of decision making to current and future decision-making activities with the express purpose of improving the organization's effectiveness".

- NGO: non-government organization (as mentioned in Chapter 2)

  NGOs are established for a specific vision or purpose or a cause that an element of civil society feels strongly about (Lukaszczyk and Williamson, 2010).

- NPO: non-profit organization (as mentioned in Chapter 2)

  The NPO Act defines a NPO as a trust, establishment or group of individuals that are recognized for a public purpose in which income and property of the organization are not distributable to its supporters, except as reasonable reimbursement for services provided (Nonprofit Organizations Act, 1997).

- SME: small and medium-sized enterprises (as mentioned in Chapter 2)

  SMEs are non-subsidiary and independent firms that contribute considerably to the economy (OECD, 2005; The Banking Association South Africa, 2015b).

1.8 Dissertation structure

The dissertation consists of eight chapters which each build on the previous chapter. Figure 1 provides an overview of the layout of the dissertation along with the methodology steps, as identified in Section 1.5 and the various sub-questions, as identified in Section 1.4.1, that are addressed within each chapter.

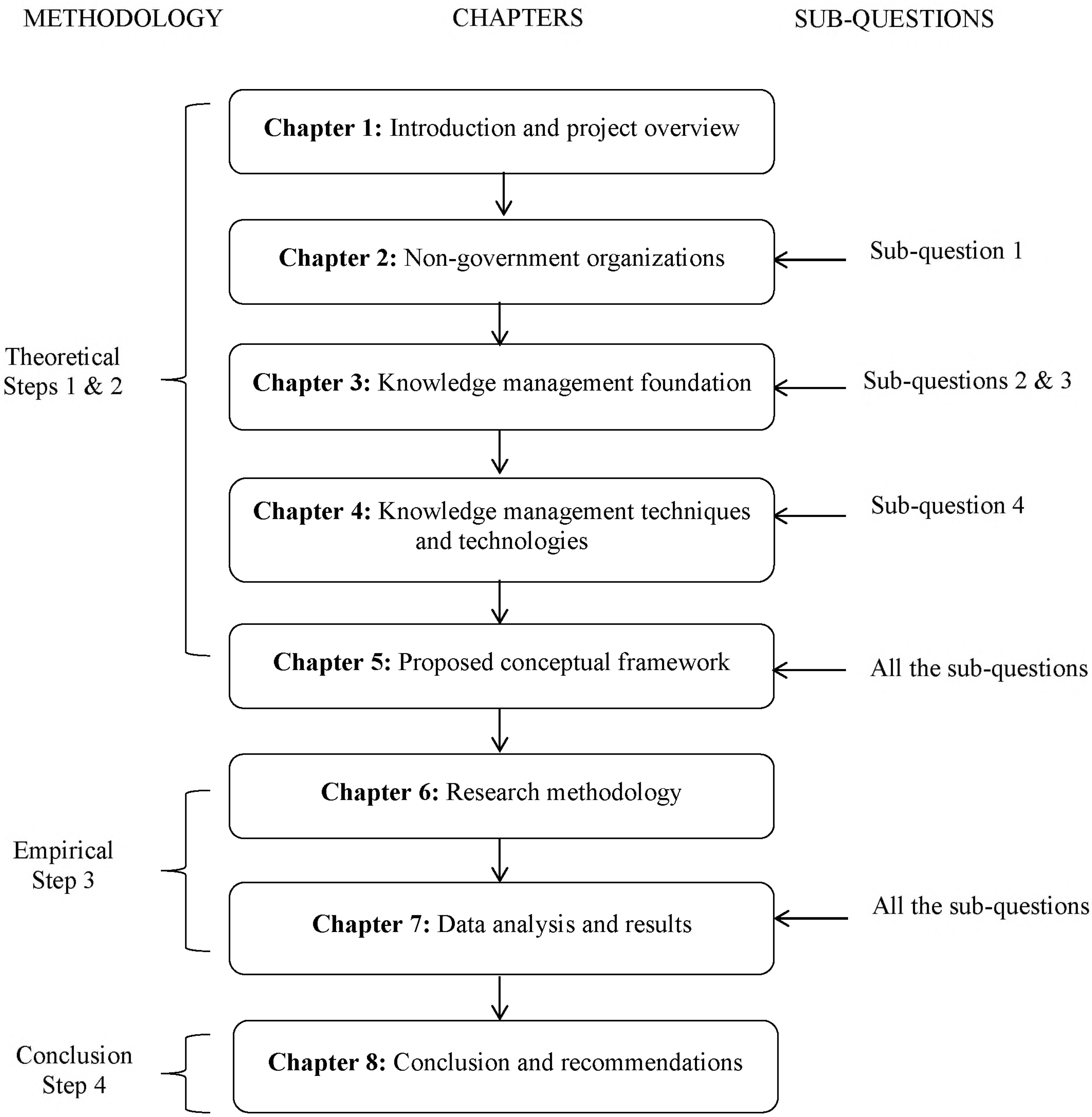

Figure 1: Graphical illustration of research layout

The following brief description provides an overview of each chapter:

- Chapter 1: Introduction and project overview. This chapter introduces the topic area by highlighting the problem area being investigated, as well as the overall research methodology to fulfil the research contribution in the dissertation. The gaps found in previous research are identified to substantiate that the work is adding to the body of knowledge in the field.
- Chapter 2: Non-government organizations. A detailed description regarding NGO's definition, classification, roles and the challenges that they face, is provided in this chapter.
- Chapter 3: Knowledge management. This chapter provides a basic understanding of KM and its relation to NGOs, as well as the feature of organizational learning to enhance organizational performance.
- Chapter 4: Knowledge management techniques and technologies. This chapter identifies various KM technologies and techniques that are most appropriate for NGOs in Grahamstown in the Makana region of the Eastern Cape Province.
- Chapter 5: Proposed conceptual framework for the adoption of knowledge management systems in non-government organizations. This chapter proposes a conceptual framework obtained from the previous chapters. The conceptual framework identifies the components required to adopt knowledge management systems in NGOs to enhance service delivery of project in Grahamstown in the Makana region of the Eastern Cape Province, South Africa.
- Chapter 6: Research methodology. This chapter describes the research approach used, including the research paradigm, methodology, design and ethical clearance procedure. A justification of why the research approach is deemed appropriate when compared to the other potential research approaches is provided.
- Chapter 7: Data results and analysis. Chapter 7 contains the findings of the five case study organizations regarding the adoption of KM to enhance service delivery.
- Chapter 8: Conclusion and recommendations. The last chapter concludes the research by discussing the overall findings in enhancing service delivery of NGOs through the adoption of KM systems; highlights the limitations of the study and suggests possible future recommendations for further research.

Chapter 2: Non-government organizations

SECTIONS	PURPOSE
Section 2.1: Introduction	A clear introduction is provided to introduce the chapter briefly.
Section 2.2: NGO definition	A clear explanation of NGOs is provided and elaborated on to create a better understanding of NGOs.
Section 2.3: NGO classification	The different groupings of NGOs are explained to further enhance the understanding of NGOs, as well as what types of NGOs were involved in this study, as stated in Section 6.7 of Chapter 6.
Section 2.4: Brief historical background of NGOs	It is important to acknowledge the background of NGOs in South Africa to better understand the roles and functions of NGOs as explained in the following section.
Section 2.5: The role of NGO's	This section explains how NGOs function in South Africa and within the Makana region of the Eastern Cape Province
Section 2.6: NGO project	A brief explanation of how NGOs manage their project is provided in this section.
Section 2.7: Service delivery challenges faced by NGOs	The service delivery challenges faced by NGOs, supported by literature, are explained in this section.
Section 2.8: Similarities and differences between NGOs and SMEs	Since some KM aspects are drawn from SMEs and are related to NGOs; this section provides a brief comparison between NGOs and SMEs.
Section 2.9: Consolidation of Chapter 2	The key points identified in this chapter are clearly highlighted in this section.
Section 2.10: Conclusion	A short summary concludes this chapter.

Chapter 2
Non-government organizations

2.1 Introduction

The aim of this chapter is to provide an in-depth understanding of NGOs in general, as well as within the context of South Africa. This chapter supports one of the main goals of this research, which is also the first research sub-question, as stated in Section 1.4.1 of Chapter 1. An explanation to summarize the essence of NGOs, the role that they play, as well as the challenges that they encounter in Grahamstown in the Makana region of the Eastern Cape Province, is therefore provided.

2.2 NGO definition

NGOs are established for a specific vision or purpose or a cause that an element of civil society feels strongly about (Lukaszczyk and Williamson, 2010). Civil society is generally acknowledged as the sector that occupies the area between the state (i.e. the government), the market (i.e. the private sector) and the family (i.e. the citizens) (Ghaus-Pasha, 2004; Charities Aid Foundation Southern Africa, 2012; Banks, Hulme and Edwards, 2015). Civil society (also known as CSO) is often referred to as the voluntary sector or third sector and in South Africa it is commonly referred to as the non-profit sector (Charities Aid Foundation Southern Africa, 2012). The main characteristics of effective civil societies are:

- Being distinct from the government and the market;
- Being formed by the people that share common interests/needs/values; and
- Being developed by an internal cause or origin by an independent process which cannot simply be controlled externally (Ghaus-Pasha, 2004).

NGOs form part of civil society and are actors therein. Other organizations included in CSOs are social movements, community-based organizations (CBOs) and faith-based organizations (FBO) etc. (Charities Aid Foundation Southern Africa, 2012).

The term "non-governmental organizations" was devised by the United Nations (UN) in the 1950s (Srinivas, 2009; Yaziji and Doh, 2009; Davies, 2014). NGOs, in general, refer to all organizations that are neither part of an official government, nor private or profit-making organizations and are typically task-oriented (Yaziji and Doh, 2009; Herrmann and Fletcher, 2012). There is no universal and uncontested definition for what constitutes NGOs (Lewis, 2009; Yaziji and Doh, 2009; Edwards, 2011b; Charities Aid Foundation Southern Africa, 2012). One of the contributing challenges in defining NGOs is that NGOs, being a diverse group of organizations, cannot easily be generalized as they come in different sizes and can be either formal or informal agencies (Lewis, 2009). In addition, NGOs comprise of different types, characteristics and purposes and play different roles in a society or societies (Lewis, 2009; Yaziji and Doh, 2009; Edwards, 2011b). For instance, even though NGOs are acknowledged to be neither run by the government, nor driven by the profit motive, some NGOs obtain high levels of government funding whilst some aim to create profit to be ploughed back into their work. Therefore, the boundaries used to classify NGO's are sometimes less defined.

All NGOs in South Africa fall under the Nonprofit Organizations Act No. 71 of 1997 (NPO Act) (Nonprofit Organizations Act, 1997). The NPO Act defines a NPO as "a trust, establishment or group of individuals that are recognized for a public purpose in which income and property of the organization are not distributable to its supporters, except as reasonable reimbursement for services provided" (Nonprofit Organizations Act, 1997). The objective of the NPO Act is to encourage and assist NPOs in their efforts to fulfil the needs of recipients (Nonprofit Organizations Act, 1997). NGOs and CBOs are jointly known as NPOs (Department of Social Development, 2015). NPOs can be registered under the Trust Property Controls Act 57 of 1988 (non-profit trust), the Companies Act 71 of 2008 (non-profit companies) or under common law (voluntary associations). Non-profit trusts and non-profit companies are usually classified as NGOs because they are better established than voluntary associations which are considered to be CBOs (Department of Social Development, 2015). According to the international classification of non-profit organizations (ICNPO), NGOs have five basic features, namely:

1. Organized: The organization must have some institutional existence which can be established through difference means;
2. Private: The organization must have an institutional identity separate from the South African government;
3. Self-governing: The organization must be equipped to perform and control its primary activities to a certain degree;
4. Non-profit distributing: Any profit generated must be put back into the organization and not distributed to its members; and

5. Voluntary/ non-compulsory: The organization must represent voluntary participation to some degree (United Nations, 2003; Statistics South Africa, 2014; Statistics South Africa, 2015).

2.3 NGO classification

Once the nature of NGOs is understood, further classification on how they can be grouped, can be made. There are various methods that are used to classify NGOs (Michael, 2004). These methods were used in Section 6.7 of Chapter 6 to highlight the types of NGOs involved in this study. Table 1 summarizes the different classifications of NGOs. A common grouping of NGOs is by means of orientation, namely: charitable, service, participatory or empowering orientation (Lawry, 2009; Jarosz, 2014). NGOs typically have mixed orientations (Jarosz, 2014). Charitable orientation involves a top-down approach to meet the needs of the beneficiaries with little participation from them. Service oriented organizations include activities designed by NGOs in which people are anticipated to take part, such as family planning or education services (Lawry, 2009; Jarosz, 2014). Participatory orientation encompasses self-help projects which involve the local people in the planning and implementation stages (Lawry, 2009; Jarosz, 2014). Lastly, empowering orientation is aimed at uplifting underprivileged people by providing a better understanding of the environment that the community lives in in order to strengthen their awareness of their power to control their lives (Lawry, 2009; Jarosz, 2014).

Similarly, NGOs can be classified in terms of different levels of operation, namely as local, national or international organizations (Lawry, 2009; Jarosz, 2014). This can also be considered as a geographically based classification method. The local level of operation is typically divided into two further levels, namely community-based and city-wide organizations. CBOs comprise representatives from the community in order to meet the public's needs (Lawry, 2009). Citywide organizations are involved in a larger span of operation than CBOs. National NGOs run their projects within a particular country while international NGOs have branches in more than one country. For example: Mvula Trust is a national NGO founded in 1993 in South Africa and focuses on water and sanitation in rural areas (Rosenkranz, 2012), whilst Save the Children Fund (SCF) is a popular international NGO that was established in 1919 by Eglantyne Jebb after the ordeal of the First World War (Lewis and Kanji, 2009).

The World Bank broadly classifies NGOs as either operational or advocacy NGOs (Malena, 1995; Herrmann and Fletcher, 2012). This type of classification is based on the NGO's primary focus and type of interaction (Jarosz, 2014). Operational NGOs design and implement projects to achieve developmental goals by delivering services through different programs (Michael, 2004; Jarosz, 2014). These NGOs can be further classified according to different levels of operation, from local to international. Operational NGOs are aligned with charity, service and participatory levels of orientation. Advocacy NGOs promote a specific cause by raising awareness and knowledge through various activities (Michael, 2004; Herrmann and Fletcher, 2012). These NGOs try to impact on policies and practices of governments by raising political issues, as well as presenting and lobbying various groups' interests (Jarosz, 2014). Likewise, another broad classification of NGOs is the distinction between public and mutual benefit organizations (Hopt and Hippel, 2010). Public benefit organizations provide services to a segment of society or to society as a whole, whereas mutual benefit NGOs provide services to their members exclusively (Hopt and Hippel, 2010).

Table 1: NGO classification

Classification	**Groups**
World Bank typology	Operational and advocacy
NGO benefit	Mutual and public benefit
Level of operation	Local (community-based and city-wide), national and international operation
Level of orientation	Charity, service, participatory and empowering orientation

The NPO sector in South Africa is divided into two simple types of organizations. An organization can either be categorized as service driven, aiming to provide social services to underprivileged communities, or as being focused on human rights, advocacy and monitoring, fulfilling the role of social "watchdog" (Yaziji and Doh, 2009; Stuart, 2013). Nevertheless, some NGOs are hybrid in that they pursue both advocacy and service attributes (Yaziji and Doh, 2009). The ICNPO, as contained in the System of National Accounts (SNA) of 2008, classifies NPOs according to their primary area of activity (United Nations, 2003).

The ICNPO system groups the non-profit organizations into 12 main activity groups and 24 subgroups. The 12 main activity groups are:

1. Culture and recreation
2. Education and research
3. Health
4. Social services
5. Environment
6. Development and housing
7. Law, advocacy and politics
8. Philanthropic intermediaries and voluntarism promotion
9. International
10. Religion
11. Business and professional association, unions
12. Not elsewhere classified (United Nations, 2003; European Commission, 2009)

During the 2010/2011 financial year, Statistics South Africa adapted the ICNPO in accordance with the South African setting for non-profit institutions (NPIs) and thereby established the South African non-profit institution classification (SANPIC) (Statistics South Africa, 2014; Statistics South Africa, 2015). The level of detail found in the South African standard industrial classification (SIC) was insufficient to enable the differentiation of important types of NPIs, however (Statistics South Africa, 2014). The SANPIC has 11 major groups and 51 subgroups and has main activities similar to ICNPO, except for the "not elsewhere classified" group not being included in the SANPIC (Statistics South Africa, 2014).

2.4 Brief historical background of NGOs

NGOs have played an essential role since the 1980's (Lewis and Kanji, 2009). NGOs have changed radically in scale and profile after the end of the Cold War and became prominent actors in development (Banks, Hulme and Edwards, 2015). Over the years NGOs have become bigger, grown in numbers, became more sophisticated and have increasingly been receiving foreign aid (Brautigam and Segarra, 2007; AbouAssi, 2012). In the 1980s and 1990s large reductions in public expenditure and public services and subsequent dissatisfaction with the failure of the "top-down" development approach resulted in an increase in the growth of NGOs (Banks, Hulme and Edwards, 2015). Since the late 1990's other global transformations have influenced the use of strategies and capabilities in NGOs (Banks, Hulme and Edwards, 2015).

NGOs have played a vital role in South Africa's long history (Charities Aid Foundation Southern Africa, 2012). NGOs were first discovered and later welcomed by the international donor community as being able to provide unique resolutions to continuing development challenges (Lewis and Kanji, 2009; Kumar, 2014). Around the 1990s NGOs gained heightened profiles which were known as the 'new policy agenda'. NGOs were identified as prominent vehicles within developmental policy (Lewis, 2001). CSOs in South Africa were active players in the struggle against the apartheid regime through advocacy for social and economic justice (Charities Aid Foundation Southern Africa, 2012). Thereafter, the purpose of CSOs has shifted to that of a more developmental and service delivery nature. NGOs continue to fill the gaps through service delivery (Charities Aid Foundation Southern Africa, 2012). It is vital to acknowledge the historical roots of NGOs to better understand the roles and functions of NGOs as explained in the following section.

2.5 The role of NGOs

NGOs in developing countries play an important role in the development of societies (Bromideh, 2011). Developing countries are categorized as having a low level of material well-being (Bromideh, 2011). South Africa has thus been classified as a developing country (Schönfeldt, Gibson and Vermeulen, 2010). Bromideh (2011) states that NGOs in developing countries often provide essential services when compared to developed countries where government agencies or institutions provide these services.

NGOs make a huge contribution, both directly and indirectly, to achieving the United Nation's millennium development goals (MDGs) (Hovland, 2003; Srinivas, 2009; Statistics South Africa, 2013 and the national development plan (NDP) of South Africa (Statistics South Africa, 2013). The MDGs align with the NDP of South Africa, provincial growth and development plans and the integrated development plans (IDPs) of municipalities (Statistics South Africa, 2013). These are long-term plans that are used to track and achieve an improved desired target (Statistics South Africa, 2013). The NDP, as specifically applicable to the Eastern Cape Province of South Africa, is referred to as the Eastern Cape development plan (ECDP) of 2030 (Eastern Cape Planning Commission, 2014). The Eastern Cape Province is the second largest province of South Africa's nine provinces and is located in the bottom left of South Africa with Bhisho as its provincial capital (Province of the Eastern Cape, 2015c).

There are two metropolitan municipalities (Buffalo City Metropolitan Municipality and Nelson Mandela Bay Metropolitan Municipality) and five district municipalities (Alfred Nzo, Amathole, Cacadu, Chris Hani and O.R. Tambo District Municipality) in the Eastern Cape Province (Eastern Cape Planning Commission, 2014; Province of the Eastern Cape, 2015b). The focus of this research is targeted on NGOs in the Makana Local Municipality area within the greater Cacadu District Municipality (Province of the Eastern Cape, 2015a; Province of the Eastern Cape, 2015b). There is a total of ten local municipalities in the Cacadu District Municipality (Province of the Eastern Cape, 2015a). The Makana Municipality comprises of the three neighbouring towns of Grahamstown, Alicedale and Riebeeck East as well as four quaint villages of Fort Brown, Salem, Seven Fountains and Sidbury (Makana Tourism, 2015).

The Human Sciences Research Council (HSRC) reported that the Eastern Cape Province is one of South Africa's poorest and most severely poverty-stricken provinces (Fobosi, 2013; National Development Agency, 2013). The province is spatially imbalanced with deep scarcities (Eastern Cape Planning Commission, 2014). Furthermore, the province has lack of adequate government services (Fobosi, 2013). The NDP and ECDP seek to address the nine challenges being faced by the Eastern Cape Province, namely:

1. High unemployment levels;
2. The standard of education for most black learners is poor;
3. Lack of infrastructure to foster economic growth;
4. Spatial population hindering development of the poor;
5. The economy being excessively and unmaintainable resource intensive'
6. Inadequate public health systems;
7. Lack of equality in and quality of public services; and
8. Widespread corruption (Eastern Cape Planning Commission, 2014).

The Eastern Cape non-governmental coalition (ECNGOC) was established in 1995 with the purpose of enhancing collaboration amongst NGOs, CBOs and FBOs through shared common values to encourage and support learning within their networks (ECNGOC, 2015). The ECNGOC (2015) believes that the developmental progress in the Eastern Cape Province is far too slow. The South African national coalition (SANGOCO), founded in 1995, is another collaboration initiative that is a membership-based organization aiming to strengthen civil society by influencing government policies and by promoting pro poor growth policies (SANGONET, 2014).

NGOs are involved in resolving the challenges faced by the economy through various activities, such as those contained in the ICNPO as identified in Section 2.3. NGOs are able to easily build links, to consolidate sectors as well as to utilize their knowledge in local contexts to strengthen their roles in social transformation, regardless of declining delivery functions (Banks, Hulme and Edwards, 2015). Banks, Hulme and Edwards (2015) highlight the aspect of originality and the experimental nature of NGOs as the key features for effectiveness. NGOs are value-based organizations that aim to provide public benefit to marginalized groups (Kilby, 2006). The value-based efforts of NGOs are pursued, rather than profit-making or the gaining of social/political benefits (Kilby, 2006). Kilby (2006) identifies four NGO values: *Weltanschauung*, temporal, terminal and organizational values. *Weltanschauung* refers to deeply held values that represent a certain philosophy or world view internal to the organization. Temporal values signify immediate concerns such as humanitarian relief and self-help. Terminal values have an end point to be achieved, such as an end to poverty, whilst organizational values determine the manner in which NGOs operate, for example, in respect of accountability and honesty (Padaki, 2000).

Table 2: Korten's schema of the four development NGO strategy/generations (Lewis and Kanji, 2009, p.15)

	Generation			
	First (relief and welfare)	*Second (community development)*	*Third (sustainable systems development)*	*Fourth (people's movements)*
Problem definition	Shortage	Local inertia	Institutional and policy constraints	Inadequate mobilizing vision
Timeframe	Immediate	Project life	10–20 years	Indefinite future
Scope	Individual or family	Neighbourhood or village	Region or nation	National or global
Main actors	NGO	NGO plus community	All relevant public and private institutions	Loosely defined networks of people and organizations
NGO role	Doer	Mobilizer	Catalyst	Activist/educator

Korten (1990) identifies four developmental NGO generations used to classify or analyse the work of NGOs, namely: relief and welfare, community development, sustainable system development and people's movements (Lewis and Kanji, 2009). Table 2 summarizes the four generations according to various areas. The first generation encompasses the immediate needs, such as food, health care or shelter of the beneficiaries addressed by the NGO's service delivery through the undertaking of emergency and relief work (Korten, 1990). Korten (1990) argues that this generation views the beneficiaries as passive and does not seek to investigate the underlying cause of the particular problem being addressed (Jakimow, 2012). The second generation comprises fulfilling community development needs by providing small-scale, self-contained initiatives to allow people to meet their own need as a result of them gaining more experience and knowledge. Sustainable development is the third generation of NGO activities (Korten, 1990; Lewis and Kanji, 2009). Lastly, the fourth generation involves closer associations with wider social movements, as well as the combining of national or global activities with local action (Korten, 1990; Lewis and Kanji, 2009). NGOs are dynamic and changing, similar to other organizations, and are involved in several roles or activities throughout their existence. Korten's (1990) model is beneficial to examine how some NGOs change over time as a result of both external and internal influences (Lewis and Kanji, 2009; Hulme, 2013). Korten (1990) states that each generation can coincide in a NGO and assumes that NGOs are reflective; thus, enabling them to progress through the strategies by realizing the limited ability in previous strategies. Jakimow (2012) highlights the lack of consideration of other factors in Korten's model, other than promoting reflective actions, which encourage or restrain the adoption of strategies. Additionally, another shortcoming in Korten's (1990) approach is the overlooking of organizational requirements for change.

In contrast, Avina's (1993) approach can be used to improve the understanding of the nature and reason for changes in NGOs. Avina's (1993, p.455) lifecycle approach identifies four phases: "start-up, expansion, consolidation and close-out". Attention is drawn to how NGOs commence their initial programs and how the increased need for funding promotes expansion alongside the pressure on NGOs to expand; consequently, resulting in the termination of programs or of the organization itself (Avina, 1993; Jakimow, 2012). The four stages provide direction in accordance with which organizations can plan and adapt structures and strategies as well as guidelines to resist external pressures for change (Lewis, 2009). However, this approach ignores factors separate from the organizations and views transformation as a condition *of* change as opposed to a condition *for* change (Jakimow, 2012). Lewis (2009) highlights that the generation concept, such as Korten's model, can be perceived to have inferences at the level of NGO strategy, whereas the life cycle concept, such as Avina's (1993) approach, is regarded at the level of certain organizational paths.

2.6 NGO project

A project is defined as a temporary endeavour, with a definite beginning and end, which is undertaken to create a unique product, service or result (Project Management Institute, 2008). The end of the project occurs either when the objectives of the project are reached or when the project is terminated because the intended objectives of the project could not be reached, were not met or when the need for the project no longer exists (Project Management Institute, 2008). Project management encompasses the application of accepted guidelines, skills, tools and techniques to meet the project requirements and objectives (Project Management Institute, 2008). NGO projects are aimed to achieve a positive effect in the community that they operate in. The benefits of NGO projects generally surpass the project's duration. However, project management is rarely recognized as a strategic priority for NGOs (Hailey and James, 2004).

2.6.1 Triple constraint

Figure 2: Triple constraint (PM4NGOs, 2011, p.8)

All projects, including service delivery projects, are carried out by means of three typical key constraints, which are collectively referred as the triple constraint, as depicted in Figure 2 (PM4NGOs, 2011). The first constraint is scope/quality and specifies what has been agreed on to be performed by the stakeholders of the project. The resource/cost constraint involves money and material used to deliver the project, product or service. Last, but not least, the time/schedule constraint influences the project's date of completion (PM4NGOs, 2011).

2.6.2 PM4NGOs and PM4DEV models

The project management body of knowledge (PMBOK©) guide is a well-known standard for managing projects across different types of sectors and organizations (Golini, Kalchschmidt and Landoni, 2015). This guideline was developed by the Project Management Institute (PMI) that is dedicated to the project management field. Nonetheless, the PMBOK has some limitations, as stated by several project management professions. The processes and procedures are universally applied to any given context. The PMI established two best-known guidelines that focus on the development sector projects, namely PMDPro (developed by PM4NGO) and PM4DEV (PM4NGOs, 2011). The guidelines are known to deal with the peculiarities faced by NGOs (Golini, Kalchschmidt and Landoni, 2015). One of the many unique characteristics of projects in the development sector that proves challenging, is the transfer of knowledge and learning to the targeted population throughout the phases of the project (PM4NGOs, 2011). A comparison between the PMBOK guide and the PM4DEV/PMDPro shows that they both use similar tools in the PMBOK guide, with the exception of logical framework and tree analysis (Golini, Kalchschmidt and Landoni, 2015). This model is similar to Avina's (1993) four phase lifecycle approach as stated in Section 2.5.

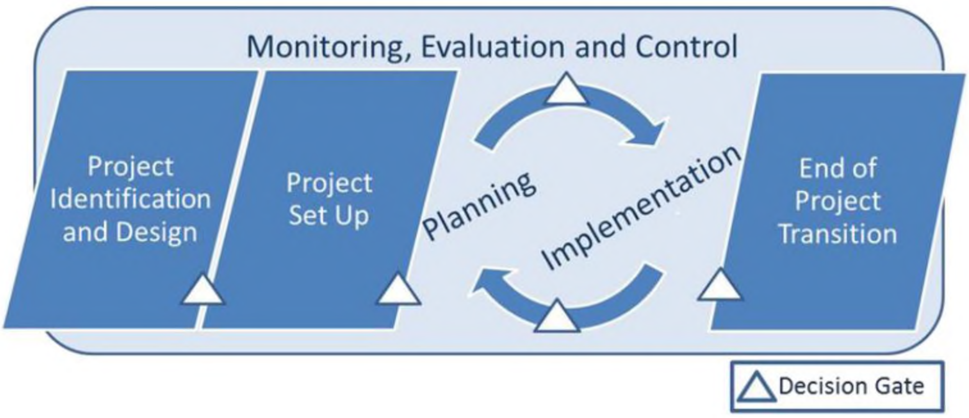

Figure 3: PMD pro project phase model (PM4NGOs, 2011, p.16)

Figure 3 depicts the six-step project phase model that is used in most organizations in the non-profit sector. The first phase is known as the project identification and design phase. This initial phase is triggered by an idea, need or opportunity which is established as a project (PM4NGOs, 2011). The project team examines the environment and design substitutes for project design. The decisions made in this phase set the strategic and operational framework that the project would consequently apply. The succeeding phase is the project set up phase during which the project is formally accepted, and its parameters are identified and communicated to key stakeholders of the project. The third phase involves implementing the project through the leading and managing of the project plan (PM4NGOs, 2011). The project's monitoring, evaluation and control phases are conducted over the entire lifespan of the project and involves continuously measuring the progress of the project and applying corrective action, when required, to align the projects performance with the projects plan (PM4NGOs, 2011). The final phase is the project transition phase which occurs at the conclusion of a NGO's project. Administrative, financial and contractual agreements will be settled at this stage (PM4NGOs, 2011).

2.7 Service delivery challenges faced by NGOs

NGOs often work in unsupported, unstable and risky environments (Lewis, 2003b; Smith and Lumba, 2008; Lewis, 2014). Society is therefore facing massive service-delivery backlogs with restricted state capability (Charities Aid Foundation Southern Africa, 2012). There are continuing debates regarding the lack of available literature on service delivery, as well as on the implementation of the roles of partners in various CSOs (Charities Aid Foundation Southern Africa, 2012). NGOs face obstacles which include their social change missions, increased pressure for accountability and transparency, the need to maximize limited resources and to gain unquestioned integrity (Lewis, 2003b; SANGONET, 2008). They are no longer perceived as being flexible organizations having participatory and democratic features (Harsh, Mbatia and Shrum, 2010) and are currently at the point of serious debates regarding their ability to meet their long-term objectives, given that short-term results and value for money are more desirable (Banks, Hulme and Edwards, 2015). Effective leaders and innovative management are essential due to the highly competitive environment of limited resources (Bromideh, 2011). Table 5 of Chapter 5 provides an overview of the four significant service delivery challenges in correspondence with the authors. The degree of challenges faced by NGOs in each country, in developing countries in particular, differ (Bromideh, 2011). Some of the contributing factors to NGOs in South Africa include:

- Leadership challenges;
- Insufficient funding;
- Lack of accountability, legitimacy and transparency; and
- High employee turnover and dependency on volunteers.

Other external factors, known as PESTEEL factors, could either positively or negatively, influence the operations and adoption of strategies by NGOs. However, this research only focuses on challenges found in literature that relate directly to NGO projects in South Africa and that are supported by literature of other NGOs outside of South Africa. It is important to briefly mention the PESTEL factors, which are:

- Political: Government's policy changes regarding funding, taxation and social welfare on services affect organizations' operations.
- Economic: Factors such as the cost of living, inflation, unemployment and GNP trends influence the extent to which services are provided by NGOs.
- Social: The socio-economic factors such as population demographics, social mobility and lifestyle may influence the macro-environment that NGOs operate in.
- Technological: Technical factors that affect operational activities include the South African government's spending on research, improvements and innovations regarding technology.
- Environmental: Environmental protection policies such as waste disposal and energy consumption influence NGO's activities.
- Legal: Legal policy changes, including occupational health and safety practices, employment and accounting regulations, should be considered by NGOs (Johnson, Scholes and Whittington, 2005; Johnson, Whittington and Scholes, 2011).

2.7.1 Leadership challenges

Leadership is one of the service delivery challenges faced by NGOs. NGO leaders are often unsupported, isolated and face unexpected challenges which hinder the performance of the services delivered (Hailey, 2006; SANGONET, 2008). The necessary leadership skills to manage human and financial resources are lacking within the non-profit sector (Hailey, 2006, Charities Aid Foundation Southern Africa, 2012; National Development Agency, 2013). This concern was termed the "leadership deficit" (Hailey, 2006). There is an increasing awareness of the role of leadership in mitigating and resolving the challenges faced by NGOs (Hailey and James, 2004), but there has only been a limited amount of research conducted regarding the role of NGO leadership. The conducted research mainly focused on leadership in the profit sector and was unrelated to the non-profit or the public sectors (Hailey and James, 2004). NGO leaders face somewhat distinct challenges compared to those of the government and private sector leaders (SANGONET, 2008).

Leadership can be defined in terms of traits, processes, skills and competencies (Gill, 2011). The concepts of "leadership" and "management" are commonly used interchangeably

(Hailey, 2006; Gill, 2011). Leaders are expected to provide a strategic direction and inspiration, to promote positive change, to support continuous learning and to cultivate a distinct organizational culture within the organization. Managers, on the other hand, are commonly known to be involved on the operational and administrative levels regarding planning, implementing and monitoring. Management deals with the day-to-day challenges whilst leadership involves the overall vision and direction of the organization (Gill, 2011). Both roles are essential parts of the same job and the activities need to be balanced and matched accordingly.

Leadership plays a crucial part in mobilizing the available resources, such as physical (e.g. computer) and intangible resources (e.g. knowledge) and in motivating the workers, both employees and volunteers (Hailey, 2006). NGO leaders form a crucial part in determining the organization's destiny. The roles of NGO leaders and their effectiveness are influenced by the environment in which they operate (Hailey, 2006). The increasingly important role of NGO's in developing countries requires that NGO leaders, who are typically under or unsupported, confront increasingly complex managerial problems (Edwards, 1999; Eade, 2000, Hailey and James, 2004). Chambers (1997) suggests that NGOs in developing countries can influence their organizational effectiveness by means of the manner in which the leaders exercise their authority, as opposed to their vision and commitment. An effective NGO leader is able to translate the organization's visions into reality by providing direction and a shared vision; can empower the workers to maximize performance to accomplish a set task/objective/project and can inspire and lead changes in the organization (Hailey, 2006). Furthermore, James, Oladipo, Isooba, Mboizi and Kusiima (2005) support the idea that leadership is not about individuals, but rather about the relationships between the individuals.

Leadership is often influenced by the degree of worker participation. James *et al.* (2005) and Hailey (2006) suggest that a participatory leadership is a prominent leadership style adopted by NGO leaders. A participatory leadership style encourages staff involvement in decision making. A more autocratic leadership approach embraced by some NGO leaders, on the other hand, is a result of the high-power dimensions common to these cultures. Awan, Qureshi and Arif (2012) describe the servant leadership type as more suitable for non-profit organizations since their study has proven that it provides a more positive and significant relationship between servant leaders and increases employee motivation; resulting in increased worker performance. The importance of good leadership has been emphasized regardless of leadership styles adopted by NGO leaders.

Donor demands are considered an influential factor on NGO leaders, partially because donors are the major source of funding. It is perceived that the funders of a NGO project shape the leaders to become implementers of their vision (James *et al.*, 2005; Hailey, 2006; Stuart, 2013). NGO leaders are commonly faced with unrealistic demands by donors, such as short-term projects, establishing quick results and speedy time frames (James *et al.*, 2005; Hailey, 2006). In addition, NGO leaders are expected to satisfy organizational demands which include the staff members' expectations such as ensuring job security, forming a clear direction and enabling their personal development (James *et al.*, 2005). Last, but not least, personal demands of the NGO leaders from family members and friends should also be met. Fulfilling various demands becomes a challenging task for NGO leaders to accomplish (James *et al.*, 2005).

2.7.2 Insufficient funding

In addition to the challenge of poor leadership, another challenge facing NGOs is the lack of funding. Funding is one of the major service delivery challenges that NGOs are facing in South Africa (Stuart, 2013) as it is the fuel that enables the organization to operate (Francis, 2015). Funding from both private and corporate donors for NGO projects in South Africa has diminished (Naidoo and Nkuna, 2009; Stuart, 2013; Swain, 2013; National Development Agency, 2013). This decline in funds is partially due to the global economic crisis. The UK Department for International Development (DfID) has announced that all development funds to South African NGOs will be withdrawn (SANGONET, 2013) and the United States of America has decreased their aid contributions to South Africa in 2014 by 18% (FundsforNGOs, 2013).

The South African government has furthermore embraced a neoliberal economic model in 1996, to wit the growth, employment and redistribution (GEAR) macroeconomic strategy (Stuart, 2013). This model advocates that NGOs should not depend on the state and dictates that the market should be unrestricted from all constraints in which NGOs are perceived to be part of the problem and not of the solution (Stuart, 2013; Lewis, 2014). It is a requirement for a NGO in South Africa to be registered in order to qualify for government funding (Stuart, 2013). The major NGO funders in South Africa are the National Development Agency, National Lottery Distribution Trust Fund (NLDTF), Independent Development Trust (IDT) and High Net Worth Individuals (HNWI) (National Development Agency, 2013).

The numbers of NGOs, both in South Africa and in other emerging economies, have increased (Swain, 2013; National Development Agency, 2013). This causes increased competition amongst NGOs to obtain funding to keep the projects operational (Stuart, 2013). To conclude: due to decreasing government involvement in NGO projects, the increasing number of NGOs and limited funds being available, the delivery of services, on time and within budget, will be affected.

2.7.3 Lack of accountability, legitimacy and transparency

Given the limited amount of funding available for NGOs, accountability, legitimacy and transparency have become key concerns. Due to the decline in resources there has been greater focus on value for money. NGOs are therefore obligated to demonstrate their good use of resources whilst managing to be effective; must have closer relations with their stakeholders (i.e. constituencies and beneficiaries) and must continually demonstrate their relevance. The three concepts of accountability, legitimacy and transparency have emerged from the non-profit sector to address these demands (National Development Agency, 2013; Guénéheux and Bottomley, 2014). The need to establish suitable levels of accountability and transparency in the midst of widespread corruption has become more of a current concern than ever before in the past (Stuart, 2013; National Development Agency, 2013).

Financial accountability, followed by the NGO's accountability to fulfil the objectives of the project, are some of the main concerns of donor supported NGO's (Kilby, 2006; Bromideh, 2011). There are four types of accountability that NGOs are obligated to honour. Firstly: a NGO may have an upward accountability structure to the donors who provided the resources and to the regulators that are responsible for the NGO's legal certification (Brown and Jagadananda, 2007). The second possible form of accountability is downwards to the beneficiaries/clients that use the services or to the members represented by the NGO. The third type of accountability is outwards to associates and peers. Lastly there is inward accountability to the staff and volunteers who are involved in the organization's activities (Brown and Jagadananda, 2007). NGOs are accountable when it is open to scrutiny and to some degree of control by its beneficiaries, members or constituents, which is part of being transparent (Guénéheux and Bottomley, 2014). Legitimacy involves assessing the right of the NGO to run the project in the society (Nwaiwu, 2013).

There are numerous ways in which a NGO can handle these concepts, such as publishing annual reports and/or electing a board to guide its mission and to assess the organization's performance. The Department of Social Development (2001) in the Nonprofit Organizations Act of 1997 provides standards for accountability and transparency as a code of good practices for South African NGOs. Some practices mentioned in the Act include having a clear mission, carefully selecting workers in the organization, having an effective strategic plan of action and having policies and systems in place that optimize the available resources (Department of Social Development, 2001).

2.7.4 Employee and volunteer challenges

The workers of NGOs are important influences on the organizations accountability, legitimacy and transparency. The workers in any social organizations play an important role in supporting the organization's objectives. The consideration given to the management of human resources is a crucial factor that influences the success or failure of NGO service delivery outcomes (National Development Agency, 2013; Nwaiwu, 2013). Organizations in general, including NGOs, are currently facing knowledge loss, due to staff turnover (Sain and Wilde, 2014; Constantin, 2015). High turnover and poor performance in NGOs have been a persistent problem, both internationally and locally (SANGONET, 2009). This is partially due to the lack of adequate subsidies by the South African government (SANGONET, 2009), as indicated in Section 2.7.2. Subsidies of social workers in the Eastern Cape Province have not increased in the past two years. High turnover rates have a negative influence on the service delivery of NGOs (SANGONET, 2009). Other factors associated with this challenge is the motivation of staff and volunteers, restructuring and job insecurity, the increase in job opportunities elsewhere, a lack of worker development opportunities, organizational culture and a lack of alignment of values (Bromideh, 2011). More specifically, one of the important issues addressed by Bromideh (2011, p.199) is the "decision-making processes". The expectation of the staff in NGOs to have an equal contribution in the decision-making process, often causes tension between staff and senior managers (Bromideh, 2011).

Okorley and Nkrumah (2012) believe that NGOs in Africa frequently depend on voluntary staff to run the tasks of the NGO. It is therefore challenging for NGOs to control the quality of staff being enrolled (Lekorwe and Mpabanga, 2007). Individuals assigned certain tasks are sometimes not sufficiently trained to effectively execute their responsibilities (Lekorwe and Mpabanga, 2007). A lack of well-trained personnel restricts both the extent to which NGOs are capable to manage operational activities, as well as the level of performance regarding the various stages of the projects and programs. On the other hand, the experienced volunteers are typically not provided with sufficient support in respect of the activities of NGOs. This is partially due to the limited time available to offer their services and, to some extent, also because their active engagement is prohibited by law (Lekorwe, 1999).

2.8 Similarities and differences between NGOs and SMEs

Small and medium-sized enterprises (SMEs) are non-subsidiary, independent firms that contribute considerably to the economy (OECD, 2005; The Banking Association South Africa, 2015b). SMEs are typically categorized into five groups, in accordance with the standard industrial classification and sub-sector classification (The Banking Association South Africa, 2015a). A “small business” is defined in Section 1 of the National Small Business Act of 1996, as amended by the National Small Business Amendment Acts of 2003 and 2004, as “a separate corporate entity, which includes co-operative enterprises and NGOs, managed by one or more owners, including its branches” (National Small Business Amendment Act, 2004). The National Small Business Act also categorizes SMEs into five groups, in accordance with the standard industrial classification and sub-sector classification, such as size of class, total employees, total turnover and total gross asset value (The Banking Association South Africa, 2015a). SMEs share some similarities with NGOs. Both SMEs and NGOs have limited skills, restricted resources and, often, poor ICT infrastructure (Barba-Sánchez, Martínez-Ruiz and Jiménez-Zarco, 2007; Haselkorn and Walton, 2009). Given the aforementioned similarities and acknowledging that SME’s are part of the private sector whilst NGOs form part of the public sector, the study will focus on some KM practices and KM tools used by SMEs as mentioned in Section 3.6.2 of Chapter 3 and Section 4.5 of Chapter 4.

2.9 Consolidation of Chapter 2

The key points highlighted in this chapter are:

- NGOs play an important role in South Africa (Lukaszczyk and Williamson, 2010; Bromideh, 2011; Besler and Sezerel, 2011).
- There are various methods that are used to feature and classify NGOs (United Nations, 2003; Michael, 2004; Statistics South Africa, 2014; Statistics South Africa, 2015).
- The Eastern Cape Province remains spatially imbalanced with deep scarcities (Eastern Cape Planning Commission, 2014).

- NGOs typically face several challenges that often result in NGOs failing to provide an adequate level of service delivery (Barnard, 2012; Hayman and Lewis, 2014).

2.10 Conclusion

NGO's are valuable organizations delivering various services to improve the community that they operate in. There are various definitions, characteristics, classifications and activities that can describe NGOs. The operations of NGOs form part of a larger long-term plan of South Africa, as stated in the NDP and MDGs (Srinivas, 2009; Statistics South Africa, 2013). Literature identifies several factors that influence the services provided by NGOs, such as poor leadership, insufficient funding, lack of accountability/legitimacy/transparency, high employee turnover and dependency on volunteers. Due to these factors NGOs are experiencing service-delivery backlogs with restricted state capability (Charities Aid Foundation Southern Africa, 2012). NGOs have therefore started to use innovative techniques to manage their processes due to the unstable and risky environment (Smith and Lumba, 2008; Bromideh, 2011; Lewis, 2014). The use of knowledge management procedures and principles to improve service delivery of NGOs would thus provide a solution to the problems faced by NGOs.

Chapter 3: Knowledge management

SECTIONS	PURPOSE
Section 3.1: Introduction	A clear introduction is provided to introduce the chapter briefly.
Section 3.2: Knowledge	A brief background of the principle of knowledge and its relationship to knowledge management is provided.
Section 3.3: Classification of knowledge	Further descriptions of the different categorizations of knowledge in NGOs are identified to further add to the reader's understanding.
Section 3.4: Knowledge management	An explanation of knowledge management systems in NGOs is presented in this section.
Section 3.5: Organisational learning in NGOs	A description of organizational learning, its relationship to knowledge management and organizational performance, as well as the factors that influence it, are presented in this section. This section helps to answer one of the research sub-questions.
Section 3.6: Knowledge management practices and principles	The practices and principles of knowledge management in NGOs and SMEs assist in addressing one of the research sub-questions.
Section 3.7: Knowledge management model	Several knowledge management models are described, and its concepts are linked to the key points raised in the research.
Section 3.8: Consolidation of Chapter 3	The key points identified in this chapter are clearly highlighted in this section.
Section 3.9: Conclusion	A short summary concludes this chapter.

Chapter 3
Knowledge management

3.1 Introduction

The objective of this chapter is to provide the reader with a basic understanding of the concepts of knowledge, KM and, more specifically, how KM can be used within NGOs. The various factors influencing the adoption of KM and organizational learning in NGOs are identified to better understand how it can potentially influence service delivery of NGOs. Furthermore, this chapter addresses two of the primary goals of this research as indicated in the second and third research sub-questions in Section 1.4.1 of Chapter 1.

3.2 Knowledge

Knowledge is represented as a component in the data-information-knowledge-wisdom hierarchy (also known as the DIKW hierarchy or model) where data is converted into information that is analysed to create knowledge, as illustrated in Figure 4.

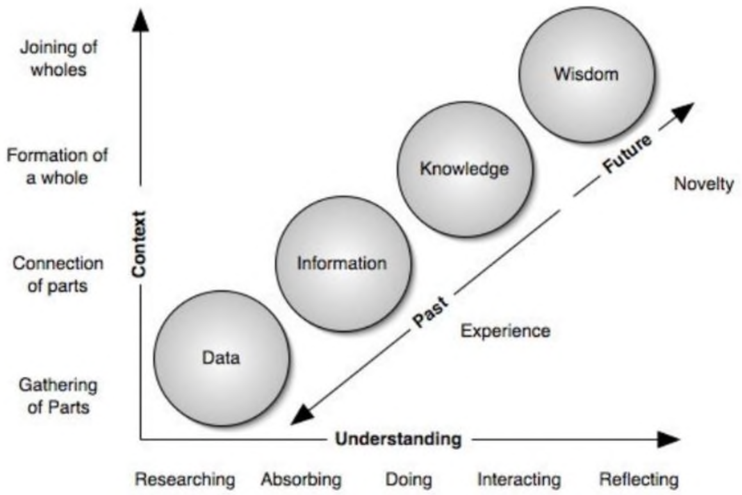

Figure 4: Linear view of DIKW model (Clark, 2010)

3.2.1 Knowledge hierarchy

Data is the basic level of the model that includes signs and symbols that have no meaning (Jennex, 2009). It depicts unstructured and unprocessed facts (Alavi and Leidner, 2001). Data is regarded as products of observation and can be acquired through numerous mediums (Frické, 2009). Information is data that has been processed and given meaning. Structure is given to the data to create information and to analyse the relationships across the data.

Questions such as "who", "what", "where", "when" or "how many" can be answered by information (Frické, 2009).

Knowledge is inferred from information and forms instructions by being processed (Frické, 2009). Knowledge answers the how question and can assist to make important business decisions by providing an increased level of understanding (Frické, 2009). It is created and used in the minds of knowers (Sain and Wilde, 2014). In addition, knowledge is regarded as contextualized information which can be acquired and enhanced through learning (Jennex, 2008b). Wisdom (also known as intelligence) is the top layer of the hierarchy, but is seldom used in literature as it is not considered as essential in addressing a particular problem (Frické, 2009). This layer uses knowledge in a framework or principle that can be used in different situations. Wisdom answers the "why" question (Frické, 2009). Figure 4 depicts that knowledge is gained through increased understanding and context (experiences) to become wisdom. A greater context results in greater diversity of experiences, which links the past to the future. A greater understanding of the subject matter enables an individual to convert past experiences (context) into new knowledge (Clark, 2010).

3.2.2 Revised knowledge pyramid

Jennex (2009) argues that the DIKW pyramid is a misleading representation of the concepts for information system research purposes, which inevitably leads to confusion. Frické (2009) argues that the DIKW hierarchy is methodologically undesirable because there must be a purpose to collecting data, rather than merely hoping to create information. Knowledge cannot be achieved by simple filters or algorithms. A more complex process, which is "social, goal-driven, contextual and culturally-bound", is needed (Weinberger, 2010). Data is not collected and recorded in a vacuum; our understanding of the world, through our wisdom and knowledge determines the type of data and information collected to support our knowledge and wisdom. Therefore, the hierarchy should flow downwards from the top of the pyramid (Jennex, 2009; Weinberger, 2010).

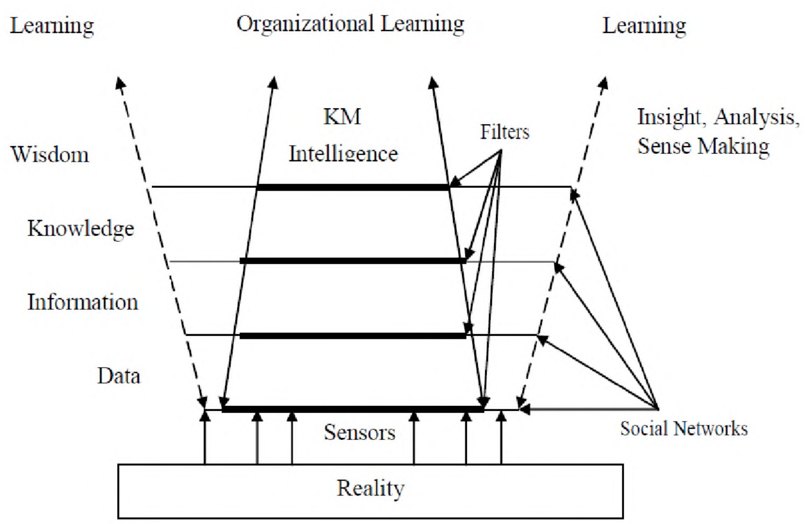

Figure 5: Revised knowledge pyramid (Jennex, 2009, p.3)

A revised knowledge pyramid was constructed by Jennex (2009), as illustrated in Figure 5, in an attempt to place the knowledge hierarchy in the context of the real world. Therefore, humans are constantly collecting and processing data into information, knowledge and wisdom (Jennex, 2009). However, this process is limited to the ability of the human or mechanical sensors (such as light or radio detector) to identify, understand and capture data. Social networks are used in this model and refer to any formal or informal, direct or indirect methods used to transfer the concepts to different users, such as classrooms, word of mouth or via e-mail (Jennex, 2009). The result leads to learning. Learning, with regards to this model, promotes a change in behaviour or expectations in the individual or group that is involved in learning. The solid vertical arrows represent the application of KM. Essentially, KM does not capture all knowledge or wisdom; it rather targets specific knowledge and wisdom which are needed to perform specific tasks (Jennex, 2009). Jennex (2009) believes that KM is inclined not to use wisdom, but is starting to apply intelligence concepts to particular actionable knowledge required to make a distinct decision in a particular context. The learning process generally involves a bottom up process, whereas organizational learning and KM generally take a top down process to determine which action or decision to take and to identify what intelligence, knowledge from information and data are needed in support thereof (Jennex, 2009).

3.3 Classification of knowledge

Researchers have identified numerous dichotomous and polytonomous models describing the different views of knowledge (Rathi, Given and Forcier, 2014). As the number of items increases, it becomes more difficult for people to recall what they have and where to find it (Pellini and Jones, 2011). Therefore, the different views of knowledge assist in understanding the types of knowledge used in an organization. KM involves providing the right people with the right information. In addition, KM filters knowledge to authentic and contextually related knowledge which combine information and data from diversely different areas (Malafsky and Newman, 2009).

The most well-known knowledge type is the dichotomous model of tacit and explicit knowledge (Rathi, Given and Forcier, 2014). Tacit knowledge is referred to the know-how and was originally defined by Polanyi (1966). This type of knowledge refers to the intuition and experiences that reside in the minds of the practitioners and can be difficult to communicate (Polanyi, 1966; Rathi, Given and Forcier, 2014). Dinur (2011) further classifies tacit knowledge into nine types: skill, cause-effect, cognitive, composite, cultural, unlearning, taboo, human and emotional. On the other hand, explicit knowledge is sometimes referred to as know-what and is formalized and codified. Explicit knowledge can easily be identified, stored and retrieved (Wellman, 2009). Zack (1999) further classifies explicit knowledge as declarative (know-what), procedural (know-how) and causal knowledge (know-why). Tacit and explicit knowledge are equally important and complementary, since tacit and explicit knowledge interact in the knowledge creation process as illustrated in Figure 6 (Nonaka, 1994).

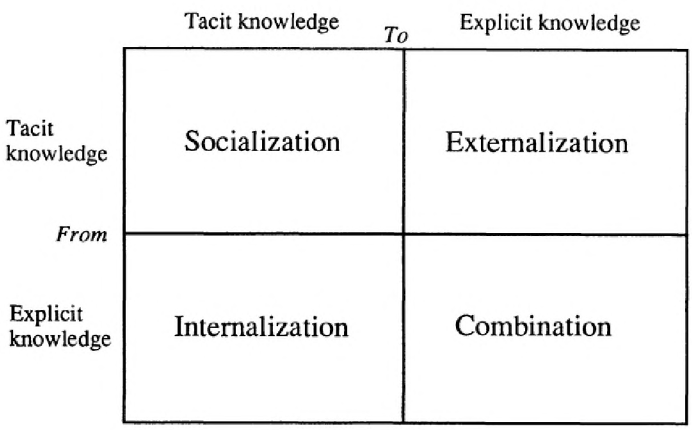

Figure 6: Adapted model of organizational knowledge creation (Nonaka, 1994, p.19)

Nonaka's model (1994) comprises of four knowledge conversion processes: socialization, externalization, combination and internalization. These processes are commonly referred to as the SECI model (LaChapelle, 2008). Socialization refers to the transferral of tacit knowledge regarding experiences between individuals through social interactions.

Externalization refers to the process of tacit knowledge being expressed into explicit knowledge. In this step tacit knowledge is translated into documents and procedures (Nonaka, 1994). Combination refers to the reconfiguration of explicit knowledge by sorting, adding and categorizing processes. Lastly, internalization converts explicit knowledge into tacit knowledge where the knowledge is applied in practical situations (Nonaka, 1994). The "knowledge spiral", typically located as a clockwise spiral in the middle of the diagram, signifies knowledge creation and sharing that becomes embedded into the culture of an organization (Nonaka, 1994).

Awad and Ghaziri (2004) divide knowledge into four broad categories which are: procedural knowledge, declarative knowledge, semantic knowledge or episodic knowledge. Procedural knowledge denotes how to perform a task of a repetitive nature through specific procedures (Awad and Ghaziri, 2004). Declarative knowledge is often stored as short-term memory and can be recalled easily as it is simple and basic information. Thirdly, semantic knowledge is often stored in long-term memory and is well-organized and "chunked" (Awad and Ghaziri, 2004). Knowledge chunking is used to assist in optimizing memory capacity, as well as to process information quickly. It consists of groups of ideas which are kept in long-term memory and are remembered collectively as an entity (Awad and Ghaziri, 2004). It includes facts, relationships and concepts. Semantic knowledge is somewhat more difficult to capture as it consists of our deepest levels of understanding (O'Toole, 2010). Lastly, episodic knowledge is based on experimental information (episodes) that usually represents chunked and is also kept in long-term memory (Awad and Ghaziri, 2004). Episodic knowledge concerns the knowledge regarding the world and tends to contain autobiographical memory about a person's experiences (O'Toole, 2010).

Blackler's (1995) taxonomy of knowledge contains five types of knowledge which are: embrained knowledge, embodied knowledge, encultured knowledge, embedded knowledge or encoded knowledge. According to Thompson and Walsham (2004, p.736), Blackler's taxonomy distinctively succeeds in categorizing knowledge beyond the simple "objective/subjective" dichotomy expressed in literature, but differentiates between types of objective and subjective phenomena. Embrained knowledge is dependent on conceptual skills and cognitive abilities. Embodied knowledge is action-orientated and, to some degree, explicit (Thompson and Walsham, 2004; Dinur, 2011). Encultured knowledge involves the process of achieving shared understanding through collective knowledge and is relatively explicit (Dinur, 2011). Embedded knowledge represents tacit knowledge which is involved in general procedures and, lastly, encoded knowledge is inscribed information such as books and codes of best practices (Blackler, 1995; Thompson and Walsham, 2004; Dinur, 2011).

Lundvall and Johnson's (1994) taxonomy of knowledge proposes that knowledge is divided into know-what, know-why, know-how and know-who. Know-what are primarily facts; know-why denotes knowledge about causality which mitigates trial and error; know-how refers to the capabilities required to accomplish something and, lastly, know-who enables communication and collaboration between individuals through social skills (Lundvall and Johnson, 1994). Grant (2002) analyses knowledge assets and differentiates between different dimensions such as tacit versus articulable, not teachable versus teachable, complex versus simple and others. De Long and Fahey (2000) divide knowledge into human, social and structured knowledge. Human knowledge is what is known by individuals; social knowledge exists between individuals and structured knowledge is typically explicit and embedded in an organization's systems and routines (De Long and Fahey, 2000). It is important to note that there are other knowledge classifications found in literature, the purpose of this section, however, is to provide an overview of some of the classifications by various authors as summarized in Table 3.

Table 3: Knowledge classifications

Author	Types of knowledge
Nonaka (1994)	Tacit and explicit knowledge
Awad and Ghaziri (2004)	Procedural, declarative, semantic or episodic knowledge
Blackler (1995)	Embrained, embodied, encultured, embedded or encoded knowledge
Lundvall and Johnson (1994)	Know-what, know-why, know-how and know-who
De Long and Fahey (2000)	Human, social and structured knowledge

Figure 7: Organizational knowledge generation process (Given, Forcier and Rathi, 2013 cited in Rathi, Given and Forcier, 2014, p.4)

A study of small to medium sized NGOs by Given, Forcier and Rathi (2013) put forward a general classification of knowledge types symbolic of the cyclical process of KM. The findings propose three distinct classes of organizational knowledge for NGOs, namely procedural knowledge, expert knowledge or community-generated knowledge, as depicted in Figure 7 (Given, Forcier and Rathi, 2013). Community-generated knowledge is sourced from the stories that emerge from the community. This knowledge forms the NGOs mission and goals, which, as a result, generate procedural and expert knowledge. Procedural knowledge concerns the policies, procedures and administration of the organizations where expert knowledge is the proficiency and experience of the community in which the organization functions and that is used to provide a product or service (Rathi, Given and Forcier, 2014). In the second phase of the research a futher 12 knowledge types were generated for NGOs, namely:

1. Knowledge of the community;
2. Knowledge of trends and current events;
3. Knowledge of policies and legislation;
4. Knowledge of resources;
5. Knowledge of external environments;
6. Knowledge of benchmarks and best practices;
7. Knowledge of management and organizational practices;
8. Knowledge of artifacts and archived materials;
9. Knowledge of sources of funding;
10. Knowledge of tools and technologies;
11. Derivative knowledge; and
12. Experiential knowledge (Rathi, Given and Forcier, 2014).

A further high-level process, as shown in Figure 8, incorporates the 12 categories of knowledge needs common to NGOs. People, technologies and operational processes were found to be fundamental elements in answering the knowledge needs of NGOs (Rathi, Given and Forcier, 2014). The elippses in Figure 8 indicate that additional knowledge categorization can be included; therefore it is non-exhaustive. A spiral, in the center of the model, represents the relationship between the elements, as compared to the knowledge creation model by Nonaka (1994) in Figure 6, to successfully achieve the organization's goals.

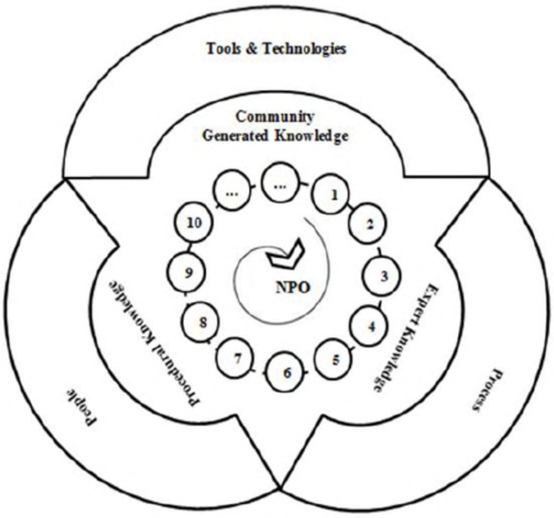

Figure 8: Emergent model for knowledge needs of NPOs (Rathi, Given and Forcier, 2014, p.9)

3.4 Knowledge management

Knowledge and KM are concepts that have been discussed at length by analysts, academics and more (Kumar and Gupta, 2012). Knowledge, as explained in Section 3.3, comes in different forms. It is estimated that between 70% and 80% of knowledge in an organization is tacit knowledge (Kumar and Gupta, 2012). Knowledge in an organization consists of capability, experience and information used by individuals and workgroups to accomplish tasks (De Vasconcelos, Seixas, Lemos and Kimble, 2005). The appropriate use of organizational knowledge is an important source that benefits the organization (Martínez-León and Martínez-García, 2011). It furthermore supports improvement and renewal of strategic assets (Martínez-León and Martínez-García, 2011) and promotes flexibility to enable innovative environmental changes; ensuring survival (Grant, 1996; Martínez-León and Martínez-García, 2011). Knowledge needs to be properly managed to be useful to the organization, however (Martínez-León and Martínez-García, 2011). Kumar and Gupta (2012) advise that a structured approach is needed to manage knowledge. Organizational knowledge is one of the main assets of organizations, thus, the need for KM systems (Kumar and Gupta, 2012). KM systems simply refer to a system that supports KM, as further clarified in Section 3.4.4.

KM is an emergent discipline that draws from various established principles, such as sociology, management, information systems, economics and more (Schroeder and Pauleen, 2007; Renshaw and Krishnaswamy, 2009; Kebede, 2010). There is no universally accepted definition of KM or standard KM framework, however (Dalkir, 2005; Marin-Garcia and Zarate-Martinez, 2007; Sutton, 2007). KM is defined by Jennex (2009, p.4) as "the practice of selectively applying knowledge from previous experiences of decision making to current and future decision-making activities with the express purpose of improving the organization's effectiveness". On the other hand, Satyadas, Harigopal and Cassaigne (2001) define KM as "a discipline intended to offer process, technology and strategy in order to increase organizational learning". KM is considered an important concept regarding an organization's success (Kebede, 2010; Kumar and Gupta, 2012). In addition, KM aids in decision-making capabilities by processing vital and often overwhelming amounts of data and by attaining high-quality decisions (Kumar and Gupta, 2012). Due to an increasingly competitive environment, NGOs are investigating new management tools to increase organizational performance (Bronzetti, Mazzotta, Puntillo, Silvestri and Veltri, 2011). Efficiency and effectiveness are essential in the management of NGOs (Bronzetti *et al.*, 2011). Knowledge assets assist in the organizations' responses to the fast-changing environment that NGOs exist in (Lewis, 2003a; Smith and Lumba, 2008; Lewis, 2014). Intellectual capital is a term frequently used as a substitute for knowledge asset or intangible asset (Stewart, 1991). Effective adoption of KM promotes organizational learning by making learning a routine activity and by creating a culture of the continuous assessment of actions taken (Kumar and Gupta, 2012). Cultural change and innovation are stimulated by the encouragement of the free flow of ideas (Kumar and Gupta, 2012). KM must be incorporated in an organization's strategic vision in order for it to succeed (Omona, Van Der Weide and Lubega, 2010). The KM concept has become challenging for some organizations to adopt, however (Hardia, 2013).

3.4.1 Knowledge management perspectives

There are a number of views on KM, but all the perspectives share the same core components, namely: people, processes and technology (Omona, Van Der Weide and Lubega, 2010; Edwards, 2011a; Uden, Herrera, Pérez and Rodríguez, 2012). Edwards (2011a) states that KM involves processes, thereby referring to KM processes. This includes, most importantly, the business processes of the organization.

Nonaka's (1994) perspective regarding organizational knowledge creation in the model, as explained in Section 3.3, provides a structure that describes both the process of knowledge creation and sharing in KM. Nonaka's (1994) model is viewed as a process-orientated epistemology. Choenni, Bakker, Blok and de Laat (2005) categorize KM into two viewpoints, namely: a cognitive approach and a community-based approach. The cognitive approach represents knowledge processes involving capturing, analysing and sharing of knowledge by individuals through the use of ICT (Choenni, Bakker, Blok and de Laat, 2005). The community approach encompasses social interaction, communication and collaboration as the primary KM principles. This view is similar to the difference between explicit and tacit knowledge, as described in Section 3.3.

In contrast thereto, Hansen, Nohria and Tierney (1999) categorize KM as two perspectives, namely: the codification approach and personalization approach. The codification approach (people-to-document) involves the use of computers to attain, store, distribute and utilize knowledge (Hansen, Nohria and Tierney, 1999). This approach is an artefact orientated strategy that provides existing stored knowledge to the organization. Secondly, the personalization (people-to-people) approach focuses on dialogue between individuals, which is more difficult to codify. Furthermore, Wiig (1993) divides KM into three perspectives, namely: the business, management and hands-on perspectives. The business perspective focuses on investing and exploiting knowledge through the use of strategies, services, products and more (Wiig, 1993). The management perspective involves driving knowledge-related practices and activities in order to achieve the desired organizational objectives (Omona, Van Der Weide and Lubega, 2010). Lastly, the hands-on perspective focuses on using knowledge to conduct explicit knowledge-related tasks (Omona, Van Der Weide and Lubega, 2010).

3.4.2 Knowledge management processes

KM is defined as processes or activities. King (2009) considers KM processes to be relatively people-intensive and less technology-intensive than what is popularly understood. Models representing KM processes such as the KM process framework by Bukowitz and Williams (1999), the KM matrix by Gamble and Blackwell (2001) and the KM process model by Botha, Kourie and Snyman (2008) aid in representing an overview of the processes involved in KM. On the other hand, there are various other models representing KM cycles that assist to explain KM processes (Dalkir, 2005; King, 2009). Understanding the various stages involved is an important consideration in KM systems. However, a more practical perspective in the form of a framework is essential to manage knowledge-related work regarding the identification of the different activities and the functions involved in organizations (Dalkir, 2005). A knowledge development cycle by Lettieri, Borga and Savoldelli (2004), as depicted in Figure 9, illustrates the knowledge flows in NGOs (Lettieri, Borga and Savoldelli, 2004). The model consists of five processes within four cycles and shows how knowledge is created and used in a NGO in order to achieve the greatest benefit in the organization and the community. The four cycles are: individual, group, organization and community levels (Lettieri, Borga and Savoldelli, 2004). Adopting KM processes in isolation, however, cannot attain beneficial and long-term results (Lettieri, Borga and Savoldelli, 2004).

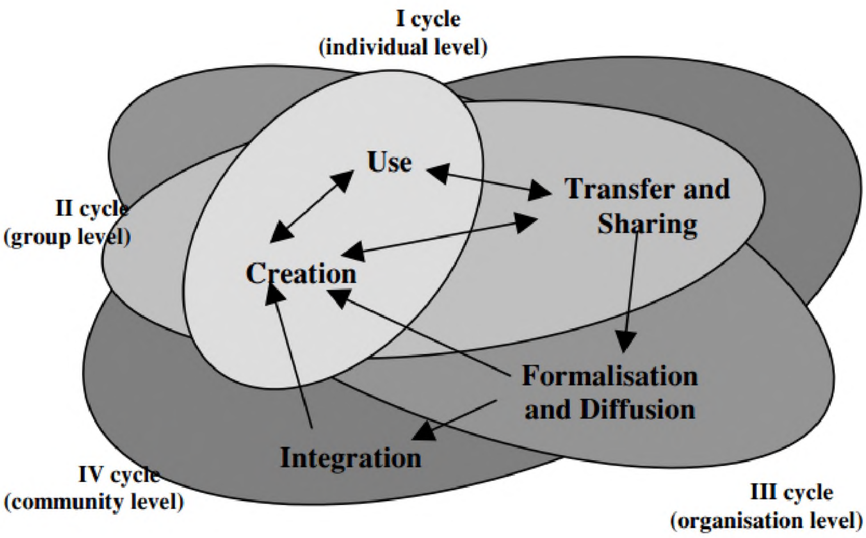

Figure 9: Knowledge development cycles within non-profit community (Lettieri, Borga and Savoldelli, 2004, p.18)

3.4.3 Knowledge assets

As mentioned in Section 3.4, knowledge assets form an important part of KM systems. Knowledge assets are comprised of intangible resources that are owned by an organization (Hall, 1992). This mostly consists of the employee's skills and know-how, as well as intellectual property rights (Hall, 1992). Knowledge assets can be referred to as knowledge resources and intellectual capital (Tomblin and Maheshwari, 2004). Organizational learning supports the relationship between knowledge assets and repeats and improves the organization's value (Lei, Hitt and Bettis, 1996; Pemberton and Stonehouse, 2000). Several knowledge sources and experiences can be used to take informed action. It is important for NGOs to understand the various knowledge assets in order to manage them (Roeder and Simard, 2013). Organizations should be able to assess the value and quantity of knowledge and the manners in which they could either increase or decrease. Roeder and Simard (2013) identify five activities involved in managing knowledge assets, namely: acquisition, organization, mapping, preservation and repositories. Knowledge assets can be categorized into various sections (Bontis, 1998; LaChapelle, 2008; Mariussen and Virkkala, 2013).

Collected knowledge must be systematically structured in order to be useful to NGOs. The stock of knowledge determines a NGO's short-term ability to fulfil the organization's mission (Roeder and Simard, 2013). A NGO's stock of knowledge can be increased by the creation of new knowledge or by the external acquisition of existing knowledge (Roeder and Simard, 2013). It is important to organize a NGO's knowledge assets in a systematic structure, as opposed to an unstructured collection approach, since the latter would be of little use to a NGO.

3.4.4 Knowledge management systems

KM systems is a tool for KM (Yuena, Yangeng and Qun, 2012). Maier (2004) and King (2009) describe KM systems as applications of the organization's information and communication structures, which are typically computer-based, to support various KM processes in order to improve the organization's performance. It can be effective in managing the knowledge of people to provide innovative and creative mechanisms to maximize the intellectual potential of organization to improve the speed and quality of decision-making (Yuena *et al.*, 2012). Information and communication systems and KM systems are typically not different, but KM systems involve databases, which include "lessons learned" repositories and directories. King (2009) clarifies that the significant difference between the organization's information and communication system, in comparison to the organization's KM system, is that KM system is generally less computerized; hence, human involvement is needed. For example: when a new knowledge repository, as illustrated in the knowledge creation cycle in Section 3.4.2, is created, people are required to be involved in similar design choices and in its operational phases. This is necessary because each submitted knowledge unit is unique and needs to be evaluated with regards to its significance and importance (King, 2009).

The main goal of KM systems is to use previous knowledge to influence present actions; consequently, resulting in increased levels of organizational effectiveness (Stein and Zwass, 1995; Lewin and Minton, 1998). KM systems are defined as systems that are designed and developed to provide decision makers with the knowledge required to make good decisions and to perform their tasks in an organization (Gallupe, 2001). An effective KM system involves individuals within the organization building on the knowledge of the organization (Hwang, 2003). Knowledge is used by individuals to perform routines and actions. Therefore, a strategy to improve organizational learning opportunities for the individuals within the organization is essential (Hwang, 2003).

3.4.5 Knowledge management and non-government organizations

As identified in Section 1.2 of Chapter 1 and explained in Section 2.5 of Chapter 2, NGOs contribute positively and play an important role in the development of societies (Bromideh, 2011). The Eastern Cape Province is under-resourced and one of the poorest provinces in South Africa. NGOs in this province are thus faced with various service delivery challenges, as discussed in Section 2.7 of Chapter 2. As mentioned in Section 3.4, KM is an important concept in NGOs. Likewise, it is evident that KM can support NGOs in attaining enhanced performance (Lettieri, Borga and Savoldelli, 2004).

Knowledge in organizations mostly comprises of tacit knowledge, as explained in Sections 3.3 and 3.4 (Kumar and Gupta, 2012). If such knowledge is not properly shared or stored by means of the various possible KM techniques and technologies, it would inevitably be lost when an individual leave the NGO. Due to the high employee turnover rate of some NGOs, as highlighted in Section 1.3 of Chapter 1, as well as the reliance on volunteers, these organizations are constantly facing knowledge loss (Sain and Wilde, 2014; Constantin, 2015). As identified in Section 1.3 of Chapter 1 there have been limited efforts by both academics and practitioners in exploring this, considering the importance of KM in NGOs (Lettieri, Borga and Savoldelli, 2004). Furthermore, inadequate efforts have been made to understand, design and implement KM systems in NGOs (Lettieri, Borga and Savoldelli, 2004). In contrast, there has been considerable attention paid to KM in profit-making organizations (Lettieri, Borga and Savoldelli, 2004; Renshaw and Krishnaswamy, 2009; Huck, Al and Rathi, 2011; Given, Forcier and Rathi, 2013; Rathi, Given and Forcier, 2014). In addition, fewer efforts have been devoted to researching this field (Lettieri, Borga and Savoldelli, 2004). This leads to some NGOs incorrectly adopting KM practices and principles which were intended for profit-making organizations (Soakell-Ho and Myers, 2011). Some NGOs remain uncertain regarding the possible contributions that KM can make to their organizations' performances (Smith and Lumba, 2008; Soakell-Ho and Myers, 2011). Such organizations run the risk of losing their competitive edges in the absence of systems for NGOs to facilitate the management of knowledge, (Hurley and Green, 2005).

3.5 Organizational learning in NGOs

Some specialists and NGO personnel believe that the significance of learning in NGOs is more essential today than ever before (Marsick and Watkins, 2003; Prugsamatz, 2010). Organizational learning is particularly important in today's environment where workers might commonly change jobs (Marsick and Watkins, 2003; Sain and Wilde, 2014) or reserve what they know as they may feel that it is detrimental to their own success if they share valuable knowledge (Marsick and Watkins, 2003). In addition, as identified in Section 2.7 of Chapter 2, there is a need for NGOs to be able to learn and to adapt more effectively to address the numerous challenges that they face (Prugsamatz, 2010). NGO leaders therefore need to think more strategically, to transform the organizations' vision into reality and to develop a foundation enabling the adoption and implementation of certain strategies (Bryson, 1995). One of the benefits of adopting learning systems into NGOs is the development and improvement of services provided by the NGOs by practicing the lessons learnt in the organization in order to improve performance (Prugsamatz, 2010).

3.5.1 Learning

Sanchez (2005) regards learning as the process that leads to a change in knowledge in an individual's beliefs regarding instrumental interactions in the organization and in the world. Jackson (1993) highlights that there are two fundamentally conflicting theories of learning, namely: behaviourist and cognitive approaches. The behaviourist approach, also known as the stimulus response approach, is built on the notion that learning occurs in response to altering stimuli in a competitive environment (Pemberton and Stonehouse, 2000). In contrast, the cognitive approach indicates that the learning process is complex, derived from experience, grounded on reasoning, action and analysis (Kolb, Rubin and Osland, 1991; Pemberton and Stonehouse, 2000). Hilgard and Bower (1967) argue that the cognitive approach is most effective. In addition, Kolb, Rubin and Osland (1991) promote the cognitive method of learning. Learning in an organizational setting can be both individual and organizational, but individual learning is more prominent (Kamoche, 1997).

3.5.2 Organizational learning

Stonehouse and Permberton (1999) consider learning within an "organizational context" as comprising of both individual and organizational learning reinforced by KM within the organization. Organizational learning occurs when the context changes conditionally or as a result of a degree of shared beliefs by individuals who mutually act on those beliefs in an organization (Sanchez, 2005). Thus, organizational learning fosters new knowledge and understandings from shared experiences of people in the organization; influencing the organization's capabilities by potentially influencing behaviours (Huber, 1991; Slater and Narver, 1995; Britton, 2005). There are several ways of defining and conceptualizing the concept of organizational learning (Martínez-León and Martínez-García, 2011). Most researchers and academics place organizational learning onto three levels, namely: individual, team and organizational levels (Marsick and Watkins, 2003; Prugsamatz, 2010). Individuals choose a strategy or action based on their cognitive and emotional consideration of the meaning of the trigger (Marsick and Watkins, 2003). Once the strategy is implemented it either shows the expected results or it does not. If it does not work, the process is repeated. Individuals have perceptual theory that is formed by their mental and routine work practices theory (Sohaib, Ihsaan, Yousaf and Majeed, 2013). Team learning occurs when individuals collectively learn as a team (Senge, 1997). This level starts with dialogue within the team freely providing suggestions based on judgments whilst assumptions are withheld (Sohaib, Ihsaan, Yousaf and Majeed, 2013). Organizational learning occurs in many organizations as it assists managers to achieve the desired goals of the organization (Rasheed, 2014). Rasheed (2014) considers this level as the more important level of learning. The organization learns by responding to environmental changes which, as a result, cause the organization to adapt to ensure its survival (Sohaib, Ihsaan, Yousaf and Majeed, 2013; Rasheed, 2014). As identified in Section 1.3 of Chapter 1, one of the concerns highlighted was the current occurrence of a rapidly changing environment (Sain and Wilde, 2014).

There are a number of organizational learning theories, such as single, double and triple-loop learning, in terms of Argyris and Schon (1996) and Senge's (1992) concepts of adaptive and generative learning. Figure 10 provides a holistic representation of the three organizational loops. Single-loop focuses on the organization's actions and does not consider the causal assumptions or patterns of behaviour (Eilertsen and London, 2005). It thus involves the correction of errors by a feedback loop (Pemberton and Stonehouse, 2000). Single-loop is comparable to Senge's adaptive learning concept that involves continual change in response to altering an organizational environment in order for the organization to survive (Pemberton and Stonehouse, 2000). Double-loop learning considers why a specific approach or solution to an organizational problem is most appropriate. Insight into the underlying problem by asking "why" and "so what" questions in double-loop learning, aids in understanding and creating new knowledge (Eilertsen and London, 2005). Double-looping therefore goes beyond an immediate explanation of the organization's problems by establishing principles that impact on future organizational behaviour; leading to new avenues of performance in the organization (Argyris and Schon, 1978). This type is suitable for complex and unanticipated issues (Eilertsen and London, 2005). Senge's generative learning concept encompasses creating new skills or establishing new opportunities in the organization by recognizing and forming opportunities by using existing skills (Senge, 1992). Triple-loop learning involves both single and double-loop learning (Eilertsen and London, 2005). However, considering the ever-changing organizational environments, an emphasis by Stonehouse and Pemberton (1999) on "learning about learning" is stressed. The concept of learning about learning establishes an organizational context; encourages new knowledge being created and exploits existing knowledge assets (Pemberton and Stonehouse, 2000).

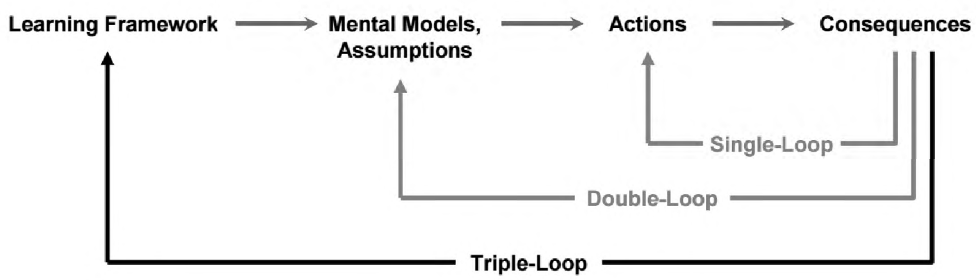

Figure 10: Learning loops (Eilertsen and London, 2005, p.3)

Falconer's (2006) study analyses several other learning models and identifies four similar concepts that they share, as summarized in Figure 11. He demonstrates that learning is created from experiences in the individual's specific context. The effectiveness of this model is based on the movement of information and knowledge around the cycle, encouraging individuals in the organization to engage and to change as a result. As highlighted in Section 3.4, a large proportion of information and knowledge is tacit knowledge, as explained in Section 3.3 (Haldin-Herrgard, 2000). Therefore, one of the challenges that organizations face is the moving of tacit information and knowledge through the learning cycle (Falconer, 2006).

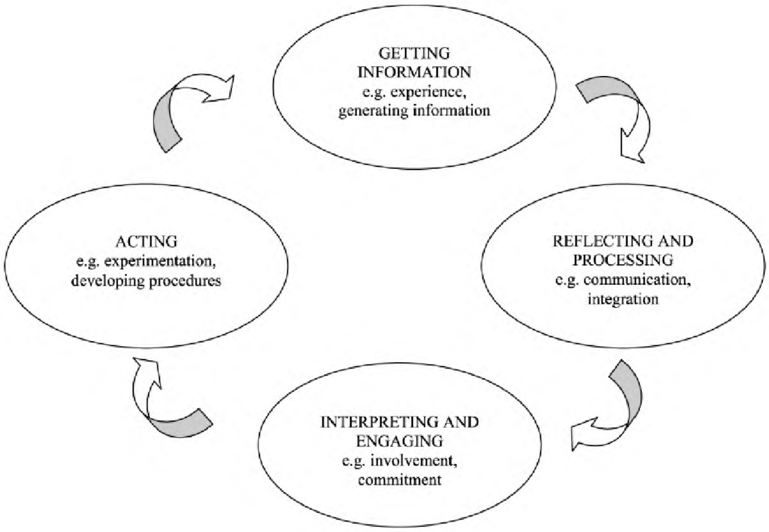

Figure 11: Cyclic construct model of organizational learning (Falconer, 2006, p.145)

Wang and Ahmed (2003) distinguish the importance of KM in organizational learning and, more specifically, focus on the knowledge that is stored in individuals in the form of abilities, experience and personal competence. KM processes support organizational learning by producing knowledge and managing it effectively and efficiently (Wiig, 1997). According to Kingsbury (2013), NGOs face a crucial challenge in their ability to transform into learning organizations. It is argued that NGOs' effectiveness and survival hinge on the organizations' capability to learn and adapt (Revans, 1993; Bloch and Borges, 2002; Hailey and James, 2002; Britton, 2005). According to Revans (1993) an organization's rate of learning in a turbulent environment should be greater than or equal to the rate of external environmental change to ensure survival. Failure to learn at a suitable pace in an NGO results in the organization being destined for insignificance (Fowler, 1997). Therefore, the concern regarding NGOs' usefulness as agents of social change is dependent on the NGOs' ability to learn, adapt and improve constantly (Fowler, 1997).

3.5.3 Organizational learning and knowledge management

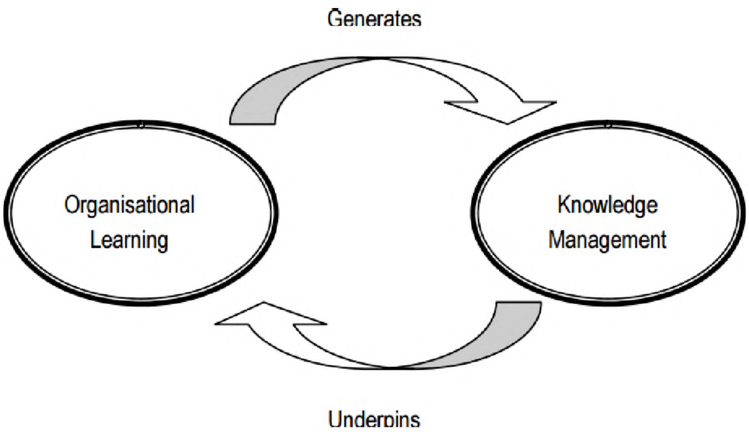

Figure 12: Links between organizational learning and knowledge management (Britton, 2005, p.8)

There are numerous ways to theorize the relationship between organizational learning and KM (King, 2009). Figure 12 depicts the relationship between organizational learning and KM in a simple manner. Several studies support the notion that there is a positive relationship between organizational learning and KM (Ho, 2008; Liao and Wu, 2009; Buheji, Al-Hasan, Thomas and Melle, 2014). KM affects organizational performance through organizational learning. This is elaborated on in Section 3.5.4 (Ho, 2008; Liao and Wu, 2009). Organizational learning and KM are similar and commonly interchangeable concepts that are widely accepted by a range of organizations (King, 2009). According to Zheng, Yang and McLean (2010) KM acts as a facilitator in the relationships between organizational culture, structure and effectiveness, as well as adopted strategy. Pemberton and Stonehouse (2000) consider organizational learning as being mainly concerned with the continuous generation of new knowledge to add to the existing knowledge asset stock, whereas KM systems are mostly concerned with KM processes that produce enhanced performance throughout the organization (Pemberton and Stonehouse, 2000). A common feature found in both organizational learning and KM is the concept of sharing ideas in order to produce new knowledge. The improved knowledge contributes to organizational structures and cultures and is supported by effective KM systems (Pemberton and Stonehouse, 2000). Figure 13 illustrates the role and relationship between organizational learning and KM.

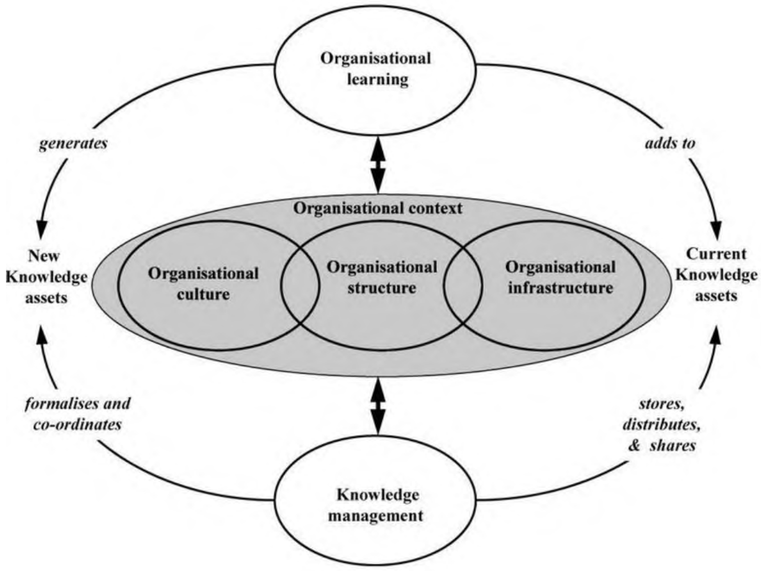

Figure 13: The organizational learning and knowledge management environment (Pemberton and Stonehouse, 2000, p.186)

3.5.4 Organizational learning on performance

Organizations strive to improve their efficiency and effectiveness by implementing KM and organizational learning (Hovland, 2003; King, 2009). Improving efficiency is typical of the profit sector where the metric measurements to measure performance are production and profit levels (Hovland, 2003). In contrast thereto the development sector, that NGOs are part of, works towards efficiency and the creation of social values and other goals, such as achieving the millennium development goals (MDGs) and the national development plan (NDP) (Hovland, 2003). The degree of success is often measured by the impact of the NGO's targeted goals, such as reducing poverty or the change of policy (Hovland, 2003). French, Bell and Zawacki (2000) highlight that, in order to adopt and sustain organizational learning, there should be a means to measure the learning that takes places in the organizations.

Various studies have proven that organizational learning has a strong positive relationship with organizational performance (Dunphy and Griffths, 1998; Baker and Sinkula, 1999; Ho, 2011; Jiménez-Jiménez and Sanz-Valle, 2011; Hussein, Mohamad, Noordin and Ishak, 2014). Jiménez-Jiménez and Sanz-Valle (2011) prove that organizational learning, innovation and performance are positively related to one another. Innovation assists the organization to adjust to changing environmental factors (Hailey and James, 2002; Jiménez-Jiménez and

Sanz-Valle, 2011). Darroch and McNaugton (2003) state that organizational learning processes established in an organization, similar to the KM process as identified in Section 3.4.2, result in better performance. Baker and Sinkula (1999) are in agreement and state that there is a direct and positive relationship between organizational learning and organizational performance. Bontis, Crossan and Hulland (2002) also support the notion by providing evidence that organizational learning and performance have a positive relationship and further state that the three types of learning stocks are: individual, group and organization. Furthermore, an improvement in performance occurs when organizations learn as a result of the trading of helpful knowledge (Hussein, Mohamad, Noordin and Ishak, 2014).

KM principles and practices will only enhance performance when knowledge is managed and utilized by individuals in the organization (Syed-Ikhsan and Rowland, 2004). Nonetheless, suitable strategies should be established between KM and the organization's strategy (Lang, 2001) when establishing an effective KM system. Understanding the relationship between KM and organizational performance aids in the adoption of KM into organizational strategy (Carlucci and Schiuma, 2006). Therefore, since KM is considered to enhance organizational performance, organizations should include the NGOs' endeavours to adopt KM practices as one of the new elements to enhance the organizations' developmental improvement (Safa, Shakir and Boon, 2006).

3.5.5 Factors influencing organizational learning in NGOs

Organizational learning has been studied in various academic disciplines in order to create greater understanding of this concept (Martínez-León and Martínez-García, 2011). The factors that influence the development of organizational learning are still not clearly defined, despite the fact that earlier researchers have studied it (Martínez-León and Martínez-García, 2011). Therefore, a complete model that depicts the internal and external influences that facilitate organizational learning is not currently available (Martínez-León and Martínez-García, 2011). The extent to which NGOs promote learning is influenced by a number of barriers (Hailey and James, 2002). Fiol and Lyles (1985) recognize four contextual factors that affect the likelihood that learning will occur in an organization. These factors include: organizational structure, corporate culture, strategy and environment. The following sub-sections explain several contributing factors that may influence organizational learning, hence KM systems, in NGOs.

3.5.5.1 Organizational structure

Robbin and DeCenzo (2005) consider organizational structure as an important concept in supporting the objectives and fulfilling the strategies of the organization. Organizational structure is a contributing factor that influences organizational learning (Fiol and Lyles, 1985; Martínez-León and Martínez-García, 2011). Organizational design is thus considered to be one of the most significant elements in the adoption of KM processes (Claver-Cortés, Zaragoza-Sáez and Pertusa-Ortega, 2007; Mahmoudsalehi, Moradkhannejad and Safari, 2012). Several studies argue that organizational structure determines organizational learning (Fiol and Lyles, 1985; Martínez-León and Martínez-García, 2011) whilst other researchers believe that organizational structure is an outcome of organizational learning (Martínez-León and Martínez-García, 2011). Dalton, Todor, Spendolini, Fielding and Porter (1980) define organizational structure as the physical environment in which the employees of the organization behave. Organizational structure is also considered to be the result of the manners in which work can be divided into different tasks (Mintzberg, 1979).

The aforementioned manners in which information and knowledge are utilized in an organization are influenced by the organization's structure (Martínez-León and Martínez-García, 2011). Furthermore, the manner in which an organization is structured determines the degree to which knowledge is circulated within and between its processes (Miller, 1987; Claver-Cortés, Zaragoza-Sáez and Pertusa-Ortega, 2007; Martínez-León and Martínez-García, 2011). Knowledge circulation in an organization is an important concept in organizational learning, as discussed in Section 3.5.2. Organizational structure facilitates an organization to adopt organizational learning practices in order to enhance the organization's performance (Martínez-León and Martínez-García, 2011). According to Mahmoudsalehi, Moradkhannejad and Safari (2012) organizational structure involves an enduring arrangement of tasks and activities. Likewise, Ghani, Jayabalan and Sugumar (2002) define organizational structure as the formal and administrative allocation of work roles to regulate and assimilate the tasks performed. Molomo and Somolekae (1999) argue that one of the key weaknesses of NGOs in Africa is the lack of appropriate organizational structures that influence the manner in which NGOs manage their core business. The adoption of a new organizational structure or organizational culture may be met with resistance in the organization (Goh, 2003). Such resistance to change can be decreased by reducing the perception of change of the stakeholders (Walczak, 2005).

Organizational structure is typically categorized into three features, namely integration, centralization and formalization (Mahmoudsalehi, Moradkhannejad and Safari, 2012).

Formalization refers to the extent to which jobs in the organization are standardized and the level to which the workers' behaviour is directed by rules and procedures (Mahmoudsalehi, Moradkhannejad and Safari, 2012). Centralization is a better researched area and encompasses the degree to which decision-making authority is concentrated at higher levels of the organization (Mahmoudsalehi, Moradkhannejad and Safari, 2012). In general, if the organization's structure is similar to a less centralized organic organizational structure and has less horizontal specialization and is less formalized and more instructed and independent, it will result in enhanced organizational learning (Martínez-León and Martínez-García, 2011). A similar study conducted by Mahmoudsalehi, Moradkhannejad and Safari (2012) agrees with the findings that a less centralized, less formalized organizational structure with more integration enhances the level of KM (Mahmoudsalehi, Moradkhannejad and Safari, 2012). A decentralized structure often supports KM success (Mahmoudsalehi, Moradkhannejad and Safari, 2012). Furthermore, a highly centralized organizational structure constrains interactions amongst members in the organization by limiting individual growth and creativity in solving problems (Mahmoudsalehi, Moradkhannejad and Safari, 2012).

3.5.5.2 Organization cultural practices

Organizational structure is an important element of learning in an organization. Likewise, organizational culture is viewed as an important factor in organizational learning. Several researches illustrate that organizational culture influences organizational learning (Sørensen, 2002; Cunningham, Cunningham and Fatelnig, 2003; Pillania, 2006; Al-Alawi, Al-Marzooqi and Mohammed, 2007; Chang and Lee, 2007; Joseph and Dai, 2009). Learning requires cultural support (Dalkir, 2011). In order to support organizational learning, the organization needs to create an encouraging learning climate and culture (Marsick and Watkins, 2003; Prugsamatz, 2010).

The culture of an organization is represented by artefacts, language, values, symbols, ethical codes, history and more (Prugsamatz, 2010). Moreover, organizational culture is referred to by Jaeger and Kanungo (1990) as a system of shared meaning in which the individuals with similar culture have a common approach of viewing procedures and entities. Therefore, such members are likely to understand and evaluate situations and management practices in a consistent manner (Jaeger and Kanungo, 1990). According to Schein (1996), occupational cultures that are present in an organization can support and encourage organizational learning. Culture supports learning by providing incentives for learning behaviour and by measuring and sharing the results of learning (Milway and Saxton, 2011). De Long and

Fahey (2000) describe several ways in which organizational culture can influence the behaviour of members in respect of knowledge formation, sharing and practice. Firstly, the assumptions made regarding knowledge and the worth thereof, is formed by culture. Secondly, the relationship between individual and organizational knowledge is defined by culture. Culture also determines who is likely to have control over specific knowledge (De Long and Fahey, 2000). Likewise, culture creates the context in which social interaction that decides how knowledge is used, occurs (De Long and Fahey, 2000). Furthermore, similar to organizational structure, culture shapes the process by which knowledge is created (De Long and Fahey, 2000). Chang and Lee (2007) investigated the relationship between an organization's culture and the influence thereof on the organization's learning and concluded that a positive relationship exists between them. Pillania (2006) addressed the impact of an organization's culture on KM and found that cultural mind-sets and misconceptions regarding knowledge-sharing in organizations restricted the organizations regarding the effective adoption of learning practices intended to improve the organization's performance. There are various ways of classifying an organization's culture (Lewis, 2003a; Duke and Edet, 2012). Each of the organizational types matches roughly with the overall organizational style (Duke and Edet, 2012).

An organization's culture greatly influences the manner in which individuals in the organization collect and share information (Prugsamatz, 2010). The recommended type of culture is based on openness, innovation and experimentation (Prugsamatz, 2010). Furthermore, trial and errors are encouraged and are considered part of the learning processes of both the organization and the individuals (Prugsamatz, 2010). The climate and culture are established by the leaders and key individuals of the organization who learn from their experiences, thus influencing others to learn (Marsick and Watkins, 2003).

3.5.5.3 Leadership

Organizational culture and leadership are interlinked and an essential part of the life of an organization (Block, 2003). Both organizational culture and leadership are factors that influence organizational learning (Cunningham, Cunningham and Fatelnig, 2003). Leadership is a well-studied area with an advanced body of both theoretical and conceptual work (Amitay, Popper and Lipshitz, 2005; Jogulu, 2011). Leadership is important within organizational learning, because learning is more likely to be introduced by higher management than any other group (Cunningham, Cunningham and Fatelnig, 2003). Many leaders are increasingly confronted with challenges due to the growing complexity and ever-changing nature of the organization (Riaz and Haider, 2010). The challenges that NGO leaders are facing in respect of service delivery have been addressed in Section 2.6.1 of Chapter 2.

What organizations currently achieve through the process of organizational learning is, due to constant environmental pressures, no longer sufficient and changes are required (Nafei, Khanfar and Kaifi, 2012). Leadership must adapt the organizational culture to commence with the required changes in organizational processes (Lakomski, 2001). It is critical for good leadership to manage the human resources of an organization to achieve organizational success (Munir, Rahman, Malik and Ma'amor, 2012). Furthermore, leadership is a significant concept in KM, since KM cannot exist without people (Alavi and Leidner, 2001; Stankosky, 2005; Omona, Van Der Weide and Lubega, 2010). Leadership roles in KM nourish the culture and climate for KM by forming executive support and by advocating KM (Stankosky, 2005; Omona, Van Der Weide and Lubega, 2010). Such roles include overcoming the resistance to change to create acceptance of KM in NGOs and ensuring the free flow of communication, both across the organization and between different levels of management (Omona, Van Der Weide and Lubega, 2010).

A quantitative study conducted by Nafei, Khanfar and Kaifi (2012) shows that leadership styles have a positive, direct and significant effect on organizational learning. Likewise, another study conducted by Waddell (2012) illustrates that senior leaders have a significant influence on organizational learning. This influence, particularly as a result of senior leaders' personal attitudes, was identified by the participants in this study (Waddell, 2012). Other aspects, such as relationships, communication and organizational culture with and of leaders in the organization, can promote or hinder the willingness to participate in organizational learning (Waddell, 2012). Furthermore, Kotter and Heskett (1992) highlight that leadership is a key initiator of successful organizational change. Some of the discussions, regarding the role that leadership plays, indicate the building of an environment of openness and psychological safety to enable the occurrence of organizational learning (Edmondson, 1996; Jogulu, 2011). Instilling learning into an organization incudes factors such as leadership behaviours and a culture that facilitates learning to utilize knowledge in the organization (Popper and Lipshitz, 2000). The quality of leadership in higher management is commonly considered to play a part in encouraging learning and sharing knowledge by means of an appropriate style of leadership, dependant on the current situation, to achieve the organization's goals (Zumitzavan, 2014).

The adopted leadership style is a contributing factor to organizational learning by establishing commitment to a shared vision by the members of an organization (King, 2002). Leadership is one of the most important concepts that are required to embrace organizational learning (Daft, 2000). Over the years several researches have acknowledged that the majority of leadership skills are learned naturally through experiences in the work place (Brown and Posner, 2001). It is the opinion of several researchers that different leadership styles may influence the extent to which employees are encouraged (Bass, 1985; Carroll and Edmondson, 2002; Zumitzavan, 2014). Recent literature focuses on two main leadership styles, namely transactional and transformational leadership (Riaz and Haider, 2010). NGO leaders following a transformational leadership style have a more positive relationship with organizational learning than those following a transactional leadership style (Chang and Lee, 2007). A study by Shiva and Suar (2012), conducted on 312 NGOs in India, further verifies that a transformational leadership style does not directly enhance NGO effectiveness, unless it fosters an organizational culture that supplements the NGO's effectiveness. It is nonetheless commonly accepted that leaders need to recognize and promote organizational learning regardless of the adopted leadership style (Zumitzavan, 2014).

3.5.6 Organizational learning issues for NGOs

Organizational learning, as described in Section 3.5, is an important concept in KM. It is furthermore an essential concept in NGOs as learning enables organizations to consider past action to influence future endeavours and is necessary due to the challenges that NGOs face, as highlighted in Section 1.2 of Chapter 1 (Britton, 2005). It is often difficult to apply learning to NGO projects, however (Britton, 2005; Kingsbury, 2013). This is due to several contributing factors influencing organizational learning and, consequently, KM, as described in Section 3.5.5.

As highlighted in Section 3.4.5, the lack of retained knowledge results in NGOs not being able to learn from past successes and failures (Horton and Roche, 2010; Kingsbury, 2013; Norwood-Young, 2014). Britton (2005) recognizes the concern amongst NGOs that publicized NGO projects have not reached their anticipated goals. Due to NGOs being constantly required to prove their relevance, as explained in Section 2.7,3 of Chapter 2, they are reluctant to publicize or share their lessons learnt (Britton, 2005). This is partially due to the concern regarding the possible consequences from donors, funders and others if the project has not reached its goals (Britton, 2005). It is a common tendency to safeguard an individual's positive image, which poses a challenge in sustaining and generating organizational learning (Argyris and Schon, 1996). Furthermore, Argyris and Schon (1996) highlight that one of the main challenges in encouraging organizational learning is to lessen the effect of defensive actions which guide people's behaviour. These claims have recently been empirically proven (Amitay, Popper and Lipshitz, 2005).

There are several barriers to the adoption of KM initiatives that hinder the potential benefits from such efforts, however (BenMoussa, 2009). An international Earnest and Young KM survey identified that a lack of ownership and organizational culture were two of the highest scored barriers to knowledge management success, with 65% and 80% respectively (Stankosky, 2005). Other results, such as top management commitment, individual versus team emphasis and staff turnover, scored 46%, 45% and 30% respectfully. The aforementioned survey also indicated that non-standard processes (53%) and organizational structure (54%) are barriers to knowledge management success within organizations (Stankosky, 2005). Organizational structures and culture should support social interaction within the organization to attain tacit and explicit knowledge.

3.6 Knowledge management practices and principles in organizations

It is not sufficient to hold individuals in the organization accountable for endorsing and participating in active learning, the organization must provide sufficient support to promote and encourage organizational learning (Marsick and Watkins, 2003; Prugsamatz, 2010). This can be accomplished by considering the various factors that influence organizational learning in an organization, as stated in Section 3.5. As identified in the problem statement in Section 1.3 of Chapter 1, workers rarely work in one organization for many years, subsequently resulting in a high staff turnover (Sain and Wilde, 2014). Since the 1960s organizations have been facing knowledge loss and this problem is still being faced at present (Sain and Wilde, 2014). Organizations therefore risk facing the consequence of knowledge loss when workers leave the organization. KM is considered an important concept in managing projects (Srikantaiah, Koenig and Al-Hawamdeh, 2010). Organizations are inclined to compete for the organization's project to survive. Intangible assets are important for organizations as they are considered the driving force for a project's success (Srikantaiah, Koenig and Al-Hawamdeh, 2010).

3.6.1 Knowledge management in NGOs

KM prominently establishes its domain in business, resulting in theories and early developments focusing on large international profit-making organizations (Prusak, 2001; Hovland, 2003). KM and learning needs within the development sector are somewhat distinct when compared to the corporate sector (Hovland, 2003). For instance: NGO goals are typically working towards the millennium development goals by measuring their level of impact on the eradication of poverty or policy changes (Hovland, 2003). Hence, ineffective KM practices amongst NGOs are possibly attributed to incorrectly adopting KM strategies that were used by profit-making organizations (Smith and Lumba, 2008; Soakell-Ho and Myers, 2011). KM and learning research have thus specifically been conducted in different types of development organizations (Hovland, 2003).

Although not much research has focused on KM in the non-profit sector, discussions regarding KM in NPOs have gradually been increasing in recent times (Lettieri, Borga and Savoldelli, 2004; Larson, Levy and Schmitz, 2005; Matzkin, 2008). Furthermore, Bloch and Borges (2002) express their concern regarding the lack of research regarding organizational learning in NGOs. Hume and Hume (2008) claim that small NGOs can still gain from KM to enhance service delivery, even with limited resources. It is further argued that small NGOs should exploit their strengths, for examples: NGOs that lack in technology competences may look for alternative solutions that could be non-technical, such as reducing employee turnover to retain implicit knowledge (Matzkin, 2008). The possible supporting KM techniques and technologies for the adoption of KM are explained in Chapter 4.

NGOs, in general, are considered to be highly knowledge-intensive, to comprise of a heterogeneous mix of organizational structures and to have high turnover rates due to a large number of volunteers in the organization (Lettieri, Borga and Savoldelli, 2004). Not all NGO's have embraced KM principles as uncertainty regarding the contribution that KM makes to increase effectiveness remains (Smith and Lumba, 2008; Soakell-Ho and Myers, 2011). External environmental pressures have made NGO operations more complex (Smith and Lumba, 2008), thus forcing NGOs to adopt new techniques to survive (Mitlin, Hickey and Bebbington, 2007). One of the ways to manage NGO operations is to adopt KM practices and principles to mitigate the situation (Smith and Lumba, 2008). A study conducted by Milway and Saxton (2011), reported that 98% of the 116 NPOs participating in the survey reported that, although they gather a large quantity of information, a third did not reflect on the information and knowledge gathered in an effective manner. 97% of survey respondents believed that their leaders value KM and organizational learning in order to achieve their organization's mission (Milway and Saxton, 2011). However, the means to go about doing this, poses a struggle (Milway and Saxton, 2011). Furthermore, the three prominent challenges highlighted by these leaders are: that there are no clearly defined learning goals established, that there is a lack of sufficient incentives for individuals or teams in the organization to play a part in organizational learning and, lastly, that there is uncertainty regarding the most appropriate processes for the capturing and sharing of learning (Milway and Saxton, 2011).

Irrespective of the organization's size, NGOs and profit-making organizations have similar operational needs, for example: ICT and human resources (Huck, Al and Rathi, 2011). KM plays an important role in the operational functions of both NGOs and profit-making organizations (Helmig, Jegers and Lapsley, 2004; Lettieri, Borga and Savoldelli, 2004; Kong and Prior, 2008). Operational functions include: competing for sponsors, promoting effective and efficient operations and enhancing their public images. The aforementioned are part of both profit-making organizations and NPOs, the latter including NGOs (Helmig, Jegers and Lapsley, 2004; Lettieri, Borga and Savoldelli, 2004; Kong and Prior, 2008). There has been some attempts to adopt and apply KM principles and practices that have been developed for profit-making organizations in small NGOs (Lemieux and Dalkir, 2006) by using KM techniques and technologies, as described in Chapter 4.

3.6.2 Knowledge management in SMEs

Many service providing organizations are practicing KM known as customer relationship management (CRM) (Walczak, 2005). Egbu, Hari and Renukappa (2005) establish that SMEs typically generate tacit knowledge because of various reasons, such as NGOs. The management of knowledge assets in small organizations provides them a sustainable competitive advantage and with new tools for survival and development (Omerzel and Antoncic, 2008). Small firms have not fully exploited the potential of KM, which is evident considering the lack of literature contributions regarding this topic (Evangelista, Esposito, Lauro and Rafffa, 2010). The adoption of KM systems in SMEs has several key KM practices that differentiate them from larger companies (Desouza and Awazu, 2006). SMEs have a lack of explicit knowledge repositories since each individual act as his/her own knowledge repository (Desouza and Awazu, 2006). The knowledge possessed by workers in

SMEs is considered to be deep and broad. Such common knowledge can assist the organization to resolve issues of knowledge transfer, sense-making and application, which are part of the organizational learning cycle, as explained in Section 3.5.2. The nature of SMEs and their considered mechanisms are seen as capable to avoid the pitfalls of knowledge losses due to the close social ties between the workers in SMEs that prevent the employees from leaving. If employees were to leave the SME there would be adequate knowledge resources that can be utilized to cover the void (Desouza and Awazu, 2006). Furthermore, SMEs typically use foreign sources of knowledge since they are resource constrained, as addressed in Section 2.8 of Chapter 2. SMEs are considered to manage knowledge in an appropriate way (Desouza and Awazu, 2006). The use of technology has never played a key role in their KM systems as it is mostly restricted to performing tasks (such as cash registers) and for informative purposes (such as storing employee contact details in databases) (Desouza and Awazu, 2006). Sparrow (2001) identifies four key elements that are strongly evident in small organization projects regarding SMEs, which can be related to NGOs:

- The gratitude of understanding that is personal and shared;
- Knowledge bases and knowledge systems;
- Integrated and contextualized action is required for knowledge projects in SMEs; and
- Knowledge and organizational learning processes in SMEs.

3.7 Knowledge management model

Heisig's (2009) study identifies that there are 160 KM frameworks in total. There is no standard framework that can be used universally to conduct KM (Downes, 2014). The models include contributing factors that influence KM. According to Metaxiotis, Ergazakis and Psarras (2005) a framework is described as a general summarized representation of the main elements, notions and ideologies that explain a certain domain. Similarly, Davenport and Holsapple (2006) describe a framework as a cognitive structure that is used to structure a concept concerning a certain domain of interest. A KM framework therefore explains the KM domain that can be used to build or adopt KM programs by identifying key knowledge elements and relationships in an organization (Metaxiotis, Ergazakis and Psarras, 2005; Stankosky, 2005; Davenport and Holsapple, 2006).

KM frameworks can be grouped into three categories: prescriptive, descriptive and a hybrid of prescriptive and descriptive (Rubenstein-Montano, Liebowitz, Buchwalter, McGaw, Newman and Rebeck, 2001; Marin-Garcia and Zarate-Martinez, 2007). Prescriptive frameworks involve the provision of a direction for the types of knowledge management procedures in conducting KM (Rubenstein-Montano *et al.*, 2001), whereas descriptive frameworks help describe the nature of KM phenomena (Rubenstein-Montano *et al.*, 2001).

The following sub-sections aim to synthesize established theories related to KM systems to some of the insights gained from the study in order to create a context-aware framework, as illustrated in Chapter 5 (Jennex, 2008a).

3.7.1 Four pillars of knowledge management

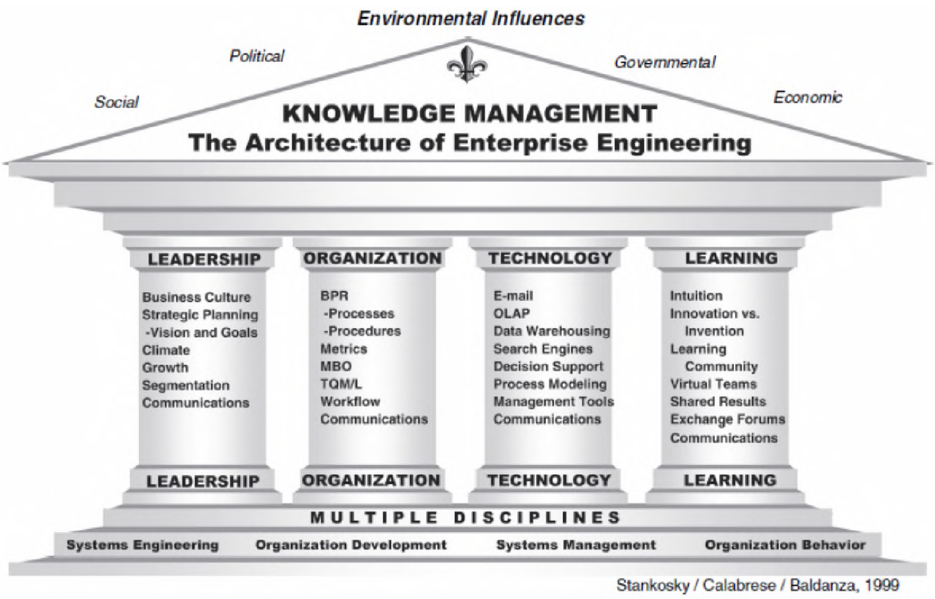

Figure 14: Four pillars of knowledge management (Stankosky, 2005, p.6)

The framework depicted in Figure 14 by Stankosky (2005) has been revised from Wiig's (1993) framework. Stankosky (2005) represents four pillars in the model for organizational functions, each containing sub-elements that support KM, namely: leadership, organization, technology and learning. Stankosky's framework is a hybrid framework that represents both KM elements and describes various tools within each pillar as sub-elements that may be used (Rubenstein-Montano *et al.*, 2001; Stankosky, 2005). All four elements were statistically authenticated as contributing to KM (Calabrese, 2000).

Leadership has been highlighted as a service delivery challenge in Section 2.6.1 of Chapter 2 and has been identified in Section 3.5.5.3 as one of the factors that influences organizational learning and KM, which is in line with the views of Stankosky (2005). An organization's pillar encompasses the functioning aspect of knowledge assets, as described in Section 3.4 (Stankosky, 2005). This includes the processes used in NGOs to deliver their services

(Section 3.4.2), as well as the organizational structures that are used in NGOs (Section 3.5.5.1), as factors that influence organizational learning (Section 3.5.5.1). KM practices should subsequently improve organizational performance and thus enhance services delivered by NGOs. Technology is the next pillar which aims to promote efficient and effective storage of tacit and explicit knowledge in order to support communication and knowledge sharing within NGOs (Stankosky, 2005). The use of ICT supports KM strategies and activities. Dalkir (2005) states that a wide range of tools are needed throughout the KM process to support knowledge management adoption. Chapter 4 further illustrates the possible tools for NGOs to adopt in their KM practices. Last, but not least, Stankosky's (2005) learning pillar encompasses how the organization collaborates and shares knowledge. Organizational learning is an important element in KM for NGOs, as explained in Section 3.5.

3.7.2 Leavitt's systems model

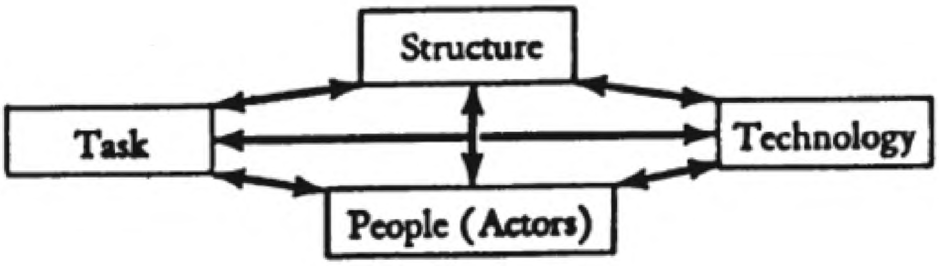

Figure 15: Leavitt's diamond organization model (Leavitt, 1965 cited in Jennex, 2008a, p.15)

Leavitt's diamond model, as illustrated in Figure 15, provides a balanced view of the difficulties that affect the KM framework (Jennex, 2008a). This model has been popularly adopted and mentioned as a foundation for representing the changes in organizations (Jennex, 2008a). Leavitt's diamond presents four sets of organizational variables, namely: structure, task, people and technology. These four variables are considered to be highly inter-reliant; therefore, a change in one of the variables influences the others (Jennex, 2008a). Organizational structure has been found to influence organizational learning, thus KM, as explained in Section 3.5.5.1. People that work in an organization have been identified as facing several challenges, as explained in Section 2.7 of Chapter 2, in order to perform their tasks. Technologies are viewed as tools, as further explained in Chapter 4, that aid an organization to accomplish its work. Jennex (2008a) states that, with regard to KM, it is not solely about managing the organization's knowledge-work processes or people that perform the processes, since the technology and organizational structure are also influenced. It is therefore important to understand all these variables to gain the value of adopting KM efforts in an organization (Jennex, 2008a).

3.7.3 Knowledge practices framework for knowledge management systems

Class of Problem

		New / Unique	Previously Solved
Problem Process	Problem Recognition	Encouraging Serendipity (1)	Mentoring & Training (4)
	Problem Solving	Knowledge Creation (2)	Knowledge Acquisition (3)

Figure 16: Knowledge practices framework for knowledge management systems (Gray and Chan, 1999 cited in Gallupe, 2000, p.11)

The knowledge practices framework for KM systems, as depicted in Figure 16, focuses on the manner in which KM systems support KM practices in organizations (Gallupe, 2000). This framework identifies the type and method that can aid this practice. Two dimensions are depicted to examine KM practices (Gallupe, 2000). The first dimension is the process to be supported and can be either problem recognition or problem solving. The second dimension shows the class of problem that is being solved and can be either new/unique or previously solved. The two dimensions form four types of KM practices that may be supported by KM systems (Gallupe, 2000). The "problems" are defined as "desired states" (Gallupe, 2000, p.10). Therefore, problems can be opportunities or threats that an organization would like to change. For instance, the service delivery challenges, as depicted in Section 2.7 of Chapter 2, may be classified as potential problems in a NGO.

The first type of practice involves identifying new problems by encouraging creativity and creating new knowledge by means of various KM techniques, such as brainstorming, talk rooms and others, some of which are identified and described in Chapter 4. Once such problems have been identified, they can be solved (Gallupe, 2000). The next type of practice involves solving new problems by building and storing knowledge associated with these problems (Gallupe, 2000). The knowledge gained from solving the problems should be stored for future reference (Gallupe, 2000). The third type of KM practice involves using knowledge to resolve previously solved problems. Once knowledge has been retained the problems that have been solved should be transferred to other members in the organization (Gallupe, 2000). The last type of practice involves using previously solved problems to support problem recognition (Gallupe, 2000). This can be achieved by mentorship and training KM techniques, as explained in Section 4.3 of Chapter 4.

3.8 Consolidation of Chapter 3

The key points highlighted in this chapter are:

- KM plays an important role in NGOs.
- There is no universally accepted definition of KM or standard KM framework (Dalkir, 2005; Marin-Garcia and Zarate-Martinez, 2007; Sutton, 2007).
- Organizational learning and KM are similar concepts (Pemberton and Stonehouse, 2000; King, 2009) and there are numerous ways to theorize the relationship between them (King, 2009).
- Various studies have proven that organizational learning has a strong positive relationship with organizational performance, thus improving the organization's service delivery (Dunphy and Griffths, 1998; Baker and Sinkula, 1999; Ho, 2011; Jiménez-Jiménez and Sanz-Valle, 2011; Hussein, Mohamad, Noordin and Ishak, 2014).
- There are several factors that influence organizational learning (Fiol and Lyles, 1985; Martínez-León and Martínez-García, 2011) and its development is still not clearly defined, despite the fact that earlier researchers have studied it (Martínez-León and Martínez-García, 2011).
- There are several concerns in adopting organizational learning and KM, as illustrated in Section 3.5.6.
- KM frameworks explain the KM domain that can be used to build or adopt KM programs by identifying key knowledge elements and relationships in an organization (Metaxiotis, Ergazakis and Psarras, 2005; Stankosky, 2005; Davenport and Holsapple, 2006).

- Comparisons were made between theories related to knowledge management systems and some of the insights gained from the study in order to create a context-aware framework, as depicted in Chapter 5.

3.9 Conclusions

Researchers have identified numerous ways of describing the different views of knowledge (Rathi, Given and Forcier, 2014). Likewise, there are a number of perspectives on KM, but all the perspectives share the same core components, namely: people, processes and technology (Omona, Van Der Weide and Lubega, 2010; Edwards, 2011a; Uden, Herrera, Pérez and Rodríguez, 2012). The use of organizational knowledge is an important source that benefits the organization (Martínez-León and Martínez-García, 2011). There are numerous ways to theorize the relationship between organizational learning and KM (King, 2009). Three factors that play a contributing role in influencing organizational learning are organizational structure, organizational culture and leadership. NGOs face several challenges in adopting KM and organizational learning, which consequently correlate to the challenges in their service delivery, as identified in Section 2.7 of Chapter 2. Therefore, NGOs can gain advantages from the adoption of KM by understanding the various KM perspectives/models and the factors that influence organizational learning.

Chapter 4: Knowledge management techniques and technologies

SECTIONS	PURPOSE
Section 4.1: Introduction	A clear introduction is provided to introduce the chapter briefly.
Section 4.2: Knowledge management tools	A clear definition of KM tools is provided and its importance in NGOs is explained in this section.
Section 4.3: Knowledge management techniques	An explanation of KM techniques and the various techniques that can be used in NGOs are explained in this section.
Section 4.4: Knowledge management technologies	An explanation of KM techniques and the various techniques that can be used in NGOs are explained in this section.
Section 4.5: Knowledge management tools in SMEs	The KM tools adopted in SMEs are briefly explained in this section.
Section 4.6: Consolidation of Chapter 4	The key points identified in this chapter are clearly highlighted in this section.
Section 4.7: Conclusion	A short summary concludes this chapter.

Chapter 4
Knowledge management techniques and technologies

4.1 Introduction

The objective of this chapter is to identify some of the literature presented KM techniques and technologies that could be used by NGOs. Hence, this chapter will empirically identify the most appropriate KM techniques and technologies that can be used by NGOs in Grahamstown in the Makana region of the Eastern Cape Province. This chapter aims to support the forth research sub-question, as stated in Section 1.4.1 of Chapter 1.

4.2 Knowledge management tools

The tools used in the adoption of KM focus on individual assimilation, understanding and learning of information that is gained from the conversion of data and information into knowledge (Ghani, 2009). Since knowledge continually builds on previous knowledge, KM tools that make earlier knowledge accessible assist in knowledge creation (Rollett, 2012). The term "tools" in KM is used very loosely in organizations (Kurul, Hutchinson and Ruikar, 2003; Robinson, Carrillo, Anumba and Patel, 2010). A typical misconception regarding KM "tools" is that they refer to information technology (IT) tools only (Kurul, Hutchinson and Ruikar, 2003). There are numerous KM tools available for use by organizations (Morrissey, 2005). These tools are broadly classified as KM techniques and technologies (Morrissey, 2005). KM techniques and technologies are both equally essential to support KM processes (Robinson, Carrillo, Anumba and Patel, 2010). There is a need for assistance regarding the selection of the most appropriate technologies and techniques to be adopted by an organization (Kurul, Hutchinson and Ruikar, 2003). KM techniques are not considered dependent on ICT, even though the techniques adopted provide support in certain instances (Kurul, Hutchinson and Ruikar, 2003).

4.3 Knowledge management techniques

There are several significant factors that influence KM techniques adopted in organizations (Anumba, Egbu and Carrillo, 2005; Robinson, Carrillo, Anumba and Patel, 2010). KM techniques are generally inexpensive tools as there is no need for complex infrastructures.

However, some techniques adopted by organizations require more resources than others. Due to the simplistic nature of the techniques, they are easy to adopt and to sustain (Robinson, Carrillo, Anumba and Patel, 2010). KM techniques focus on retaining, as well as increasing, tacit knowledge, since they are key assets of organizations (NGOs included) in general (Morrissey, 2005; Robinson, Carrillo, Anumba and Patel, 2010). As highlighted in Sections 3.4 and 3.5.2 of Chapter 3, tacit knowledge is an important source of knowledge for NGOs and the leverage thereof poses a challenge.

Some KM techniques are more effective in capturing tacit knowledge because they involve human interaction where contextualized knowledge is transferred (Morrissey, 2005). The use of KM techniques in various organizations is not a new concept (Anumba, Egbu and Carrillo, 2005; Srikantaiah, Koenig and Al-Hawamdeh, 2010). Hence, organizations have used one or more KM techniques to retain knowledge by converting tacit into explicit knowledge (Srikantaiah, Koenig and Al-Hawamdeh, 2010). Such techniques have been used under the discipline of management approaches, such as organizational learning (Anumba, Egbu and Carrillo, 2005; Robinson, Carrillo, Anumba and Patel, 2010). Some of the techniques are described in the following sub-sections. Furthermore, some KM techniques also capture explicit knowledge (Morrissey, 2005; Srikantaiah, Koenig and Al-Hawamdeh, 2010). Organizations are able to and should capture valuable knowledge in projects by means of the adoption of several KM techniques, because staff involved in the organization's project may leave and a knowledge-sharing culture in the organization must be developed (Srikantaiah, Koenig and Al-Hawamdeh, 2010).

4.3.1 Brainstorming

The first KM technique identified is brainstorming. Brainstorming is referred to as one of the most common free association techniques (Handzic, 2004). It is referred to as a process involving a group of individuals that come together in order to address a problem and freely recommend solutions (Anumba, Egbu and Carrillo, 2005). This technique can be used to discover ideas without being constrained or criticized (Handzic, 2004; Anumba, Egbu and Carrillo, 2005). Awad and Ghaziri (2004) believe the key aim of this process is to explore creative resolutions to the problems being faced. Furthermore, brainstorming allows individuals and groups to capture their ideas (Handzic, 2004). This enables individuals to build on both their own ideas and on the thoughts of group members (Handzic, 2004). It is only when the brainstorming session is completed that the ideas raised will be evaluated

(Awad and Ghaziri, 2004; Anumba, Egbu and Carrillo, 2005). Sessions can be conducted verbally, electronically or manually (Handzic, 2004).

Brainstorming aids in creating new knowledge from existing knowledge, as well as in problem solving (Anumba, Egbu and Carrillo, 2005). It is appropriate when several options, which may not seem obvious, need to be generated (Young, 2010). It can be organized fairly quickly and involves minimal effort to set up (Jacobson, 2009; Young, 2010). Jacobson (2009) highlights that some of the advantages of brainstorming techniques include human interaction that typically promotes cohesiveness within the group, improvement in team compromise and the completion of tasks (Jacobson, 2009). The disadvantages of brainstorming include the need for a knowledgeable facilitator (Jacobson, 2009). Even if a brainstorming session is conducted with an experienced facilitator, drawbacks, such as peer pressure or the control of a few participants, can result in prejudiced outcomes (Jacobson, 2009).

4.3.2 Training

Wills (1998) defines training as the transfer of clear and quantifiable knowledge or skills. Training assists in improving the employees' skills and increases their knowledge (Anumba, Egbu and Carrillo, 2005) and is distinctly different from education. The latter typically provides more theoretical and conceptual models (Buckley and Caple, 2007). Training is often immediately observable in the short term, unlike education and development (Buckley and Caple, 2007). Training contributes to learning and development in the organization (Buckley and Caple, 2007). KM seeks to create an environment that promotes shared knowledge (Burden, Maclntosh and Srikantaiah, 2000). Therefore, initial or continuation training is considered to be a technique that supports the goals of KM (Burden, Maclntosh and Srikantaiah, 2000). KM training is provided by various organizations worldwide (Koenig and Srikantaiah, 2004). Training has a formal format and can be internal, within the organization, or external, outside of the organization, conducted by professional organizations (Anumba, Egbu and Carrillo, 2005). There are many potential advantages of training, both to individuals and organizations, by means of planned and successfully conducted training programs (Buckley and Caple, 2007).

4.3.3 After action reviews

After action review, also known as AAR, is a common technique used by organizations to evaluate and capture lessons learned after the completion of a project (Atwood, 2009; Young, 2010). This technique can also be adopted during the progress of a project, after any identifiable milestone, in order to learn continuously (Phillips and Gully, 2013; North and Kumta, 2014). It is a simple reflective technique that holds no hidden agenda (Ahmed, Lim and Loh, 2007). A short-focused meeting is held with the participants of the project or event to discuss the goal, actual results, reasons for possible discrepancies and lessons learned (Atwood, 2009). This technique allows team members to assess and analyse the project (Young, 2010) to enable organizations to build on these experiences (Atwood, 2009). Generally, four simple questions are discussed in the meeting, lasting twenty minutes or less, namely:

- What were the objectives of the project?
- What actually occurred?
- Why were there dissimilarities?
- What did we learn? (Ahmed, Lim and Loh, 2007; Phillips and Gully, 2013)

Phillips and Gully (2013) regard an after-action review as one of the best ways to encourage continuous learning. After action reviews maximize learning by providing a platform for the project team to openly and honestly talk about the project; not to assign credit or to complain (Ahmed, Lim and Loh, 2007; Young, 2010; Phillips and Gully, 2013). Learning is based on past project successes and failures in order to improve future project endeavours by sustaining strengths and improving weaknesses (Phillips and Gully, 2013; North and Kumta, 2014). Team members can recognize and utilize the strengths and weaknesses to improve future performances by focusing on the anticipated results and by describing specific observations (North and Kumta, 2014). Trust and team integrity are positive outcomes of the review. However, it may be challenging to inspire staff members to complete project summaries and such summaries may be limited by the information recorded (Morrissey, 2005).

4.3.4 Storytelling

Storytelling is another technique used to facilitate the exchange of knowledge between individuals of an organization (Morrissey, 2005). Reamy (2002) highlights that stories are used as an essential method that humans use to structure the world. The human brain tends to automatically consolidate information into stories (Reamy, 2002). A story is known as a narrative that is used to convey a thought, moral or virtue (Poulton, 2005). Furthermore, stories are constructed by recalling past knowledge of events that have occurred in order to serve as a knowledge transfer mechanism (Poulton, 2005; Escalfoni, Braganholo and Borges, 2011). Storytelling is considered an important form of knowledge and KM plays an important role in the utilization of storytelling in NGOs (Reamy, 2002). The popularity and value of storytelling have resulted in organizations adopting it as a KM tool (Escalfoni, Braganholo and Borges, 2011). Storytelling develops trust and commitment as a result of the sharing of personal stories that express skills and obligations and that create openness (Sole and Wilson, 2002). Tacit knowledge is also shared in a more manageable way. Stories allow for an efficient exchange of contextualized knowledge that can be used to solve complex problems. Individuals generally enjoy reading or hearing stories as it is an attractive way of contributing to the organization's memory without increasing the workload (Escalfoni, Braganholo and Borges, 2011). Storytelling is recognized as a powerful tool in organizational learning (Randall and Martin, 2003).

Effective storytelling is considered a skill in which not everyone is able to effectively communicate. Furthermore, storytelling in isolation does not provide the majority of knowledge to the knowledge base of a NGO (Morrissey, 2005), even though the building of collective stories can provide a rich source of details as it contains a combination of different viewpoints (Escalfoni, Braganholo and Borges, 2011). A challenge arises regarding the understanding of diverse perspectives since people with various areas of expertise may use their own terms and languages which may impede another individual's understanding (Escalfoni, Braganholo and Borges, 2011). There is also only a limited amount of discussion available regarding the implementation of a maintainable storytelling technique, especially in smaller NGOs (Dixon, 2014).

Storytelling in NGOs has been focused on the reasons why organizations have to tell stories (Dixon, 2014). A survey conducted in NPOs in Washington DC in 2013 found that 96% of respondents reported that storytelling is considered a significant part of their organization's communications (Dixon, 2014). Furthermore, Dixon (2014) highlights that there is a common understanding regarding the need for stories as a manner of engagement between potential supporters and funders. Storytelling has prominently been used as a fundraising initiative in NGOs.

4.3.5 Mentorship programs

Mentoring is becoming an increasingly popular technique and is considered an effective way to facilitate knowledge creation and sharing (Bryant, 2005; Karkoulian, Halawi and McCarthy, 2008; Young, 2010). Researchers have claimed that mentoring, socializing and storytelling have been considered as appropriate methods for sharing complex tacit knowledge (Swap, Leonard, Shields and Abrams, 2001; Bryant, 2005). Mentorship programs facilitate the interaction and knowledge sharing of experienced employees with less experienced employees (Morrissey, 2005; Young, 2010). Likewise, mentorship is regarded as a relationship between mentor and the protégé, with both parties having something to gain (Inzer and Crawford, 2005).

New employees and volunteers often rely on experienced employees, with similar organizational functions and levels, for mentoring (Bryant, 2005). However, the organizational structure of most organizations has caused a decrease in the number of senior staff members in the organizations. This is due to the practices of downsizing and delayering (Bryant, 2005), which hinder the mentoring technique. Mentoring can be either formal or informal (Inzer and Crawford, 2005). Informal mentoring is a more natural and unstructured relationship, normally based on personal and professional admiration, whereas formal mentoring is more structured in that the organization establishes programs and processes to support this technique (Inzer and Crawford, 2005). Karkoulian, Halawi and McCarthy (2008) conclude in their study that informal mentoring is highly and positively correlated with KM. On the other hand, there is little evidence that formal mentoring result in knowledge sharing and it is seldom utilized within the organization (Karkoulian, Halawi and McCarthy, 2008). Several other researchers argue that informal mentoring is better than formal mentoring (Chao, Walz and Gardner, 1991; Noe, 1988). However, the adoption of mentorship programs is dependent upon the mentor/mentee relationships and some may be more successful than others (Morrissey, 2005). Furthermore, the willingness to share is influenced by an individual's gender and age (Bencsik, Juhász and Machova, 2014).

This technique is considered the least sophisticated, most inexpensive and easiest KM technique to adopt (Morrissey, 2005). A study conducted by Bencsik, Juhász and Machova (2014) state that 93.8% of the respondents viewed a mentorship program as a very positive technique. A large amount of research on mentoring exists, but considerably less attention has been paid to the use of mentoring in KM (Bryant, 2005; Karkoulian, Halawi and

McCarthy, 2008). The current mentoring literature focuses primarily on job satisfaction, psychosocial and career-related benefits (Bryant, 2005).

4.3.6 Communities of practice

Communities of practice (CoP) provide a setting where members who share mutual interests learn from each other without enforcement by management (Mohamed, Stankosky and Murray, 2004; Morrissey, 2005; Young, 2010). This technique is usually used for sharing and developing common skills and knowledge (Young, 2010). Such a technique plays a significant role in supporting learning and innovation in an organization (Swan, Scarbrough and Robertson, 2002). CoPs have recently been acknowledged as social structures that contribute to explicit and implicit sharing and creation of knowledge while supporting organizational learning (Pandey and Dutta, 2013). Individual and collective learning are encouraged through the adoption of CoPs (Pandey and Dutta, 2013). CoPs are typically informal and membership lasts for unconstrained periods of time (Mohamed, Stankosky and Murray, 2004). The size of CoPs can vary from two or three people to thousands of members (Morrissey, 2005). Stewart (1996) argues that CoPs are typically small groups. These communities could have different purposes (Young, 2010). CoPs can, depending on their objectives, exist within a section or department, across departments or between multiple organizations (Young, 2010). CoPs have played an essential role in the context of KM, particularly in respect of the sharing of knowledge across departments and the supporting of knowledge flow across organizations (Young, 2010).

CoPs are viewed as structures that establish communities in order to share and resolve issues and challenges in organizations (Lesser and Prusak, 1999; Morrissey, 2005). Pandey and Dutta (2013) conclude in their research that organizational culture plays an important role in linking CoPs and organizational learning. Furthermore, successful communities typically require strong leadership, as well as involved membership in order to maintain continued interest in the community since the participation level usually declines over time (Morrissey, 2005). CoPs have been applied with varying degrees of success (Morrissey, 2005). The SANGOCO and the ECNGOC associations, as identified in Section 2.5 of Chapter 2, have assisted in producing a climate which has enabled some of the more progressive groups to work together.

4.3.7 Adoption of knowledge management techniques in NGOs

Various KM techniques, as described above, can be used in NGOs. A planned method is not usually followed to adopt the most suitable KM techniques (Anumba, Egbu and Carrillo, 2005). Several factors, such as the company's traditional practices, ease of implementation and low cost with arrangement and preserving KM techniques, influence the KM techniques adopted in NGOs (Anumba, Egbu and Carrillo, 2005). Organizational preference, which develops over time and without a comprehensive investigation of the possible alternative techniques used in KM systems, is also an influence in the adoption of KM techniques (Anumba, Egbu and Carrillo, 2005).

4.4 Knowledge management technologies

KM technologies depend on ICT infrastructure whereas whilst KM techniques do not (Robinson, Carrillo, Anumba and Patel, 2010). Knowledge bases, case-based reasoning and knowledge mapping tools are examples of KM technologies capable of capturing knowledge. KM technologies can comprise of both hardware and software technologies (Robinson, Carrillo, Anumba and Patel, 2010). Despite the fact that there is an ongoing debate regarding the importance of KM technologies, many organizations consider such technologies as essential enablers (Robinson, Carrillo, Anumba and Patel, 2010). KM technologies consume one third of an organization's time, effort and money (Robinson, Carrillo, Anumba and Patel, 2010).

KM tools are key contributors in KM practices, but technology does not define KM (Downes, 2014). As mentioned in Section 3.7.1 of Chapter 3, technology is one of the pillars of KM. Furthermore, Gumbley (1998) highlights that although technologies aid in fostering an environment for learning, they are not key success factors in the creation of a prosperous KM environment in organizations. Therefore, KM relies on technology to a certain extent, but the use of technology is not the sole means of adopting KM systems (Lindvall, Rus and Sinha, 2003). Mathi (2004) considers technology as an important aspect to successfully support KM. Technology enables the use of knowledge to enhance the organization's efficiency and effectiveness (Lang, 2001). Selamat and Choudrie (2004) also advise that technology can positively contribute to the establishment of an environment that encourages communication of tacit knowledge. The latter is achieved by facilitating the processes in KM, using knowledge that demonstrates the value of externalizing tacit knowledge that has an influence on the organization's culture. The effective utilization of tacit knowledge has been highlighted as one of the problems in organizations in Section 3.5.2 of Chapter 2.

The use of technology enables crucial communication, collaboration and content management in order to improve the capturing, application and distribution of knowledge in the organization (Dalkir, 2005). KM processes, as identified in Section 3.3 of Chapter 3, are achieved more successfully when supported by technology suitable to the user's needs within a standard knowledge structure (Alavi and Leidner, 2001; Vitari, Moro, Ravarini and Bourdon, 2007).

4.4.1 Storage tools

Knowledge storage tools are also referred to as content databases (Morrissey, 2005). There are several tools that can be used for various types of knowledge (Ghani, 2009). Storage tools such as database management systems (DBMS), data warehousing and system tools can be used to capture and examine explicit knowledge (Ghani, 2009). An advantage of knowledge tools is that explicit knowledge can be stored in multiple formats (Morrissey, 2005). Additionally, such tools are flexible to use and can be integrated with other tools. These tools are costly and require training, however (Morrissey, 2005).

4.4.2 Communication and collaboration systems

Storage tools are used for retaining explicit knowledge, as discussed previously, whereas tacit knowledge is often used for communication and collaboration (Ghani, 2009). Communication tools can be used to aid the organization's KM issues (Morrissey, 2005).

Some of these technologies include video conferencing, face-to-face facilitation, e-mail, instant messaging and more (Ghani, 2009). These tools can be classified as either asynchronous or synchronous tools (Morrissey, 2005). Asynchronous tools are tools that allow communication between two or more users sequentially, such as e-mail and wikis (Morrissey, 2005). Synchronous tools are based on real-time interaction between users. Collaboration tools enable employees to interact virtually in an electronic workplace (Morrissey, 2005). These tools thus facilitate distance learning and workflow. Most communication and collaboration tools are flexible and easy to use (Morrissey, 2005). The rate at which employees adopt communication tools is generally high, due to the social interaction feature. There are only a few search options for communication technologies, however. Collaboration tools are also reasonably expensive (Morrissey, 2005).

4.4.3 Adoption of knowledge management technologies in NGOs

A variety of KM technologies, as described above, can be used by NGOs. The adoption thereof, however, is complicated (Anumba, Egbu and Carrillo, 2005). As assessment of the KM needs, the variety of technologies and their cost and abilities should be completed before selecting the appropriate KM technologies.

"The state of ICTs in the South African NGO sector" survey in 2009 concluded that NGOs have embraced the use of ICT in their organizations, nonetheless such ICT investments have been used for administrative purposes and not in projects undertaken to achieve their goals and objectives (World Wide Worx and SANGONET, 2009). Soakell-Ho and Myers (2011) identify that the role of technology in the successful adoption of KM practices has generally been perceived as essential and positive. The unwillingness to use technology in NGOs indicates that there is a deficiency of technological skills and a lack of appreciation for its use to increase organizational performance (Hackler and Saxton, 2007). Kipley, Lewis and Helm (2008) and Hackler and Saxton (2007) emphasize the importance of NGOs' utilizing their resources to the maximum to prevent the organization from falling behind others. The utilization of NGO resources affects the donors' views of the organization (Zorn, Flanagin and Shoham, 2011).

4.5 Knowledge management tools in SMEs

SMEs frequently overlook simple solutions that can increase productivity in an organization. It is evident that SMEs battle to adequately employ KM technologies and tools (Choochote, 2013). KM technologies are rarely considered in SMEs and are limited to operational activities, rather than being regarded as a method to manage knowledge (e.g. cash registers and employee information databases) (Desouza and Awazu, 2006). A people centred approach is commonly used in SMEs as knowledge is processed via individuals using several KM techniques (e.g. face-to-face meetings and mentorship approaches) (Desouza and Awazu, 2006). Knowledge generated is thus instantly put into practice instead of being technologically stored in artefacts (Desouza and Awazu, 2006).

4.6 Consolidation of Chapter 4

The key points highlighted in this chapter are:

- Tools are broadly classified as either KM techniques or technologies (Morrissey, 2005) and both are equally essential to support KM systems (Robinson, Carrillo, Anumba and Patel, 2010).
- There are various KM techniques and technologies that can be adopted by a NGO.
- A planned method is not usually followed when adopting the most suitable KM techniques, because various factors can be considered prior to the final selection thereof (Anumba, Egbu and Carrillo, 2005).
- Adoption of KM technologies is a complicated process (Anumba, Egbu and Carrillo, 2005).
- SMEs generally adopt KM techniques rather than technologies (Desouza and Awazu, 2006; Choochote, 2013).

4.7 Conclusions

The management of knowledge in projects is gaining greater importance as it assists effective project development to stay within budget and to adhere to time constraints and ensures the quality required by the project recipients (Srikantaiah, Koenig and Al-Hawamdeh, 2010). NGOs provide their services through projects, as highlighted in Sections 2.3 and 2.6 of Chapter 2. However, there are important concerns regarding the service delivery challenges faced by NGOs, as described in Section 2.7 of Chapter 2, as well as regarding the significance of KM systems in NGOs, as highlighted in Chapter 3. KM systems are therefore important concepts in mitigating the challenges faced by NGOs through the use of KM tools, such as KM techniques and technologies (Morrissey, 2005). Valuable knowledge regarding projects is captured by the adoption of several KM techniques (Srikantaiah, Koenig and Al-Hawamdeh, 2010), such as brainstorming, training, after-action review, storytelling, mentorship programs and CoPs, to name a few. Likewise, KM technologies are significant contributors to KM practices (Gumbley, 1998; Mathi, 2004), such as communication, collaboration and storage technologies.

Chapter 5: Proposed conceptual framework for the adoption of knowledge management systems in non-government organizations

SECTIONS	PURPOSE
Section 5.1: Introduction	A clear introduction is provided to introduce the chapter briefly.
Section 5.2: Non-government organizations (Chapter 2)	The key theoretical elements of chapter 2 are highlighted in this section to aid in answering the first research sub-question, as indicated in Section 1.4.1 of Chapter 1.
Section 5.3: Knowledge management (Chapter 3)	The key theoretical elements of Chapter 3 are highlighted in this section to aid in answering the second and third research sub-questions, as indicated in Section 1.4.1 of Chapter 1.
Section 5.4: Knowledge management techniques and technologies (Chapter 4)	The key theoretical elements of Chapter 4 are highlighted in this section to aid in answering the last research sub-question, as indicated in Section 1.4.1 of Chapter 1.
Section 5.5: Proposed conceptual framework	A graphical representation of all the previous sections in this chapter is presented in this section.
Section 5.6: Conclusion	A short summary concludes this chapter.

Chapter 5
Proposed conceptual framework for the adoption of knowledge management systems in non-government organizations

5.1 Introduction

The purpose of this chapter is to provide a proposed conceptual framework based on the literature review of Chapters 2, 3 and 4. The conceptual framework identifies the components required to adopt KM systems in NGOs to enhance service delivery of projects in Grahamstown in the Makana region of the Eastern Cape Province, South Africa. Hence, this theoretical framework aids NGOs in enhancing service delivery by means of the adoption of KM systems.

5.2 Non-government organizations (Chapter 2)

As stated previously, Chapter 2 supports one of the main goals of this research, namely the first research sub-question, as stated in Section 1.4.1 of Chapter 1. Various aspects of NGOs are described in this chapter, such as NGO classifications, history, role and service delivery challenges. The characteristics of NGOs raised in the literature are as follows:

- NGOs have five basic features, namely: organized, private, self-governing, non-profit distributing and voluntary/non-compulsory (United Nations, 2003; Statistics South Africa, 2014; Statistics South Africa, 2015).
- NGOs make a huge contribution, both directly and indirectly, to achieving the United Nation's millennium development goals (MDGs) (Hovland, 2003; Srinivas, 2009; Statistics South Africa, 2013) and the national development plan (NDP) of South Africa (Statistics South Africa, 2013).
- NGOs face several internal challenges such as leadership issues, insufficient funding, lack of accountability, legitimacy and transparency, high employee turnover and dependency on volunteers, as highlighted in Table 4.

- External challenges, such as political, economic, social, technological, environmental and legal issues, also affect NGOs' operations and the adoption of strategies (Johnson, Scholes and Whittington, 2005; Johnson, Whittington and Scholes, 2011).

Table 4: Service delivery challenges faced by NGOs

	Service delivery challenges in NGOs			
Authors	Leadership challenges	Insufficient funding	Lack of accountability, legitimacy and transparency	Employee and volunteer challenges
Charities Aid Foundation Southern Africa (2012)		x	x	x
Stuart (2013)	x	x	x	
Eade (2000)	x			
Hailey and James (2004)	x			
Edwards (1999)	x			
Kilby (2006)		x	x	
Hailey (2006)	x			
SANGONET (2008)	x			
National Development Agency (2013)	x	x	x	x
Naidoo and Nkuna (2009)		x		
Swain (2013)		x		
FundsforNGOs (2013)		x		
SANGONET (2013)		x		
Guénéheux and Bottomley (2014)			x	

	Service delivery challenges in NGOs			
Authors	Leadership challenges	Insufficient funding	Lack of accountability, legitimacy and transparency	Employee and volunteer challenges
SANGONET (2009)				x
Sain and Wilde (2014)				x
Olczak (2012)				x
Michael (2004)				x
Harsh, Mbatia and Shrum (2010)				x
Lekorwe and Mpabanga (2007)				x
Lekorwe (1999)				
Bromideh (2011)		x	x	x
Riaz and Haider (2010)	x			

5.3 Knowledge management (Chapter 3)

As indicated in the previous section, NGOs face several service delivery challenges which impede their performances. KM practices and principles can overcome some of the challenges. Chapter 3 supports the second and third research sub-questions, as stated in Section 1.4.1 of Chapter 1. This chapter discusses various factors influencing the adoption of KM and organizational learning in NGOs to better understand how it can potentially influence service delivery of NGOs. In order to enhance service delivery by the adoption of KM systems the following characteristics, which include some features generic to all organizations and some specific to NGOs, need to be reflected on:

- NGOs have various knowledge types which are broadly classified into procedural knowledge, expert knowledge or community-generated knowledge (Rathi, Given and

Forcier, 2014) and tacit and explicit knowledge (Nonaka, 1994; Rathi, Given and Forcier, 2014).

- Organizational learning and KM are similar concepts (Pemberton and Stonehouse, 2000; King, 2009) and there are numerous ways to theorize the relationship between them (King, 2009).
- Appropriate use of organizational knowledge is an important source that benefits the organization through the improvement and renewal of strategic assets (Martínez-León and Martínez-García, 2011) and it promotes flexibility regarding environmental changes, ensuring innovation and survival (Grant, 1996; Martínez-León and Martínez-García, 2011).
- People, processes and technology form the core components of KM (Omona, Van Der Weide and Lubega, 2010; Edwards, 2011a; Uden, Herrera, Pérez and Rodríguez, 2012).
- KM is defined as either processes or activities (King, 2009).
- Knowledge assets form an important part of KM systems (Hall, 1992) since it is important for collected knowledge to be systematically structured to be useful to NGOs (Roeder and Simard, 2013).
- NGO leaders need to think more strategically to transform the organization's vision into reality, to develop a foundation to adopt and to implement certain strategies (Bryson, 1995).
- Several studies support the notion that there is a positive relationship between organizational learning and KM (Britton, 2005; Ho, 2008; Liao and Wu, 2009; Buheji, Al-Hasan, Thomas and Melle, 2014), as depicted in Table 5.
- Various studies have proven that organizational learning has a strong positive relationship with organizational performance (Dunphy and Griffths, 1998; Baker and Sinkula, 1999; Ho, 2011; Jiménez-Jiménez and Sanz-Valle, 2011; Hussein, Mohamad, Noordin and Ishak, 2014), as depicted in Table 6.
- The factors influencing organizational learning are organizational structure, organizational cultural practices and leadership, as illustrated in Table 7.
- A less centralized, less formalized organizational structure with more integration enhances the level of KM (Mahmoudsalehi, Moradkhannejad and Safari, 2012).
- In order to support organizational learning, the organization needs to create a climate and culture that encourage learning (Marsick and Watkins, 2003; Prugsamatz, 2010).

- Leadership roles in KM nourish the culture and climate for KM systems by forming executive support that advocates KM systems (Stankosky, 2005; Omona, Van Der Weide and Lubega, 2010) and by overcoming resistance to change to create acceptance of KM systems in NGOs (Omona, Van Der Weide and Lubega, 2010).

The KM issues raised in this chapter include:

- There is no universally accepted definition of KM or standard KM framework (Dalkir, 2005; Marin-Garcia and Zarate-Martinez, 2007; Sutton, 2007).
- Due to most knowledge in organizations mainly comprising of tacit knowledge (Kumar and Gupta, 2012), as explained in Sections 3.3 and 3.4 of Chapter 3, and the high employee turnover rate of some NGOs, as well as the reliance on volunteers, such organizations are constantly facing knowledge loss (Sain and Wilde, 2014; Constantin, 2015), as highlighted in Section 1.3 of Chapter 1.
- Some NGOs incorrectly adopt KM practices and principles which were intended for profit-making organizations (Soakell-Ho and Myers, 2011), as there have been limited efforts by both academics and practitioners in exploring KM in NGOs, as identified in Section 1.3 of Chapter 1 (Lettieri, Borga and Savoldelli, 2004).
- Some NGOs remain unaware and/or uncertain regarding the possible contribution that KM systems can make to their organization's performance (Smith and Lumba, 2008; Soakell-Ho and Myers, 2011).

The organizational learning issues highlighted in this chapter include:

- The factors that influence organizational learning are still not clearly defined despite the fact that earlier researchers have studied it (Martínez-León and Martínez-García, 2011).
- The extent to which NGOs promote learning is influenced by a number of barriers (Hailey and James, 2002), which include resistance to publicize a negative image (Argyris and Schon, 1996; Britton, 2005) that has been proven (Amitay, Popper and Lipshitz, 2005).
- It is often difficult to apply learning to NGO projects (Britton, 2005; Kingsbury, 2013) as there is a common tendency to safeguard an individual's positive image; thus posing a challenge regarding the sustenance and generation of organizational learning (Argyris and Schon, 1996).

Table 5: Relationship between KM and organizational learning

	Relationship between KM and organizational learning
Authors	Discussion
Ho (2008)	There is a statistical significance between KM and organizational learning.
Liao and Wu (2009)	The study provides support for the role of organizational learning as a mediator between organizational performance and KM.
Buheji, Al-Hasan, Thomas and Melle (2014)	The empirical test on government organizations in the study proves that there is a positive correlation between KM and organizational learning. Thus, there is synergy between them.

Table 6: Organizational learning on performance

	Organizational learning on performance
Authors	Discussion
Jiménez-Jiménez and Sanz-Valle (2011)	Findings of the study provide supporting evidence (resulting from previous research) that there is a positive relationship between organizational learning, innovation and performance.
Darroch and McNaugton (2003)	The researcher highlights that organizational learning processes influence organizational learning.
Baker and Sinkula (1999)	The findings establish a synergistic effect of learning orientation on organizational performance.
Bontis, Crossan and Hulland (2002)	This research supports the notion that there is a positive relationship between the stocks of learning and performance at all levels of the organization. 480 respondents from 32 organizations were involved in the study. 4 hypotheses were tested in the study.
Ho (2011)	The findings prove that there is a statistical significance between organizational learning and performance.

	Organizational learning on performance
Authors	Discussion
Hussein, Mohamad, Noordin and Ishak (2014)	This study focuses on Malaysian public institutions of higher education. The findings conclude that organizational learning influences the performance of organizations and thus contributes to the organizations success.
Liao and Wu (2009)	This research presents that organizational learning is a coordinating mechanism. Empirical evidence proves that KM affects organizational performance through organizational learning.

Table 7: Factors influencing organizational learning

	Factors influencing organizational learning		
Authors	Organizational structure	Organizational culture	Leadership
Marsick and Watkins (2003)		x	
Prugsamatz (2010)		x	
Schein (1996)		x	
Pillania (2006)		x	
Chang and Lee (2007)		x	x
Al-Alawi, Al-Marzooqi and Mohammed (2007)		x	
Martínez-León and Martínez-García (2011)	x		
Claver-Cortés, Zaragoza-Sáez and Pertusa-Ortega (2007)	x		
Mahmoudsalehi, Moradkhannejad and Safari (2012)	x	x	x
Fiol and Lyles (1985)	x	x	
Dalkir (2011)		x	
Miller (1987)	x		
Milway and Saxton (2011)		x	x
De Long and Fahey (2000)		x	

	Factors influencing organizational learning		
Authors	Organizational structure	Organizational culture	Leadership
Cunningham, Cunningham and Fatelnig (2003)		x	x
Jogulu (2011)			x
Nafei, Khanfar and Kaifi (2012)			x
Waddell (2012)		x	x
Daft (2000)			x
King (2002)			x
Bass (1985)			x
Zumitzavan (2014)			x
Sørensen (2002)		x	
Popper and Lipshitz (2000)			x

5.4 Knowledge management techniques and technologies (Chapter 4)

Chapter 4 aims to support the forth research sub-question, as stated in Section 1.4.1 of Chapter 1. Therefore, in order to enhance service delivery by means of the adoption of KM systems, the following KM techniques and technology points need to be considered:

- There are numerous KM tools, comprising of techniques and technologies, that are available to organizations (Morrissey, 2005) and both are equally essential to support KM systems (Robinson, Carrillo, Anumba and Patel, 2010).
- The key features between KM techniques and technologies are summarized in Table 8.
- KM techniques are inexpensive methods, used by most organizations, as there is no need for complex infrastructures (Robinson, Carrillo, Anumba and Patel, 2010). Some techniques adopted by organizations do require more resources than others, however (Robinson, Carrillo, Anumba and Patel, 2010).
- Some KM techniques that could be adopted in NGOs are: brainstorming, training, after action reviews, storytelling, mentorship programs and CoPs.
- Several factors (such as a company's traditional practices, ease of implementation and the cost of the arrangement and preservation of KM techniques) influence its adoption (Anumba, Egbu and Carrillo, 2005).

- KM technologies aid in fostering an environment for learning (Gumbley, 1998) and it is an important tool to successfully support KM systems (Mathi, 2004).
- KM technolgies, such as storage tools, communication and collaboration systems, should to be considered.
- Adoption of KM technologies is complicated (Anumba, Egbu and Carrillo, 2005) and reasonably costly (Morrissey, 2005). The KM needs, the awareness of possible technologies and the cost and abilities thereof should be assessed before selecting the appropriate KM technologies (Anumba, Egbu and Carrillo, 2005).

Table 8: Features between KM techniques and technologies

	Features between KM techniques and technologies
Authors	Features
Kurul, Hutchinson and Ruikar (2003)	KM techniques are not considered dependent on ICT, even though the adopted techniques provide support in certain instances.
Robinson, Carrillo, Anumba and Patel (2010)	KM techniques are inexpensive options for most organizations as there is no need for complex infrastructures, whereas KM technologies are more likely to be expensive in some cases.
Selamat and Choudrie (2004) **Morrissey (2005)** **Robinson, Carrillo, Anumba and Patel (2010)**	Both KM techniques and communication or collaboration technologies encourage retaining and increasing tacit knowledge. KM technologies that are used for storage also help to capture and examine explicit knowledge.

5.5 Proposed conceptual framework

The previous literature review chapters discuss the various research sub-questions in order to understand the main research question, as stated in Section 1.4 of Chapter 1. Therefore, a consolidated theoretical framework, formed by the sub-research questions to enhance service delivery through the adoption of KM systems in NGOs, is illustrated in Figure 17. This framework highlights two aspects of NGOs, namely "challenges detracting from service delivery performance" and "strategies for enhancing service delivery". The red arrow that depicts NGOs moving backwards represents the potential "challenges detracting from service delivery performance". Such challenges (listed below) are categorised into potential internal organizational service delivery challenges, direct KM challenges and organizational learning challenges. The green arrow that depicts NGOs moving forwards represents the possible "strategies for enhancing service delivery". Such strategies (listed below) are categorized into promoting KM system and organizational learning.

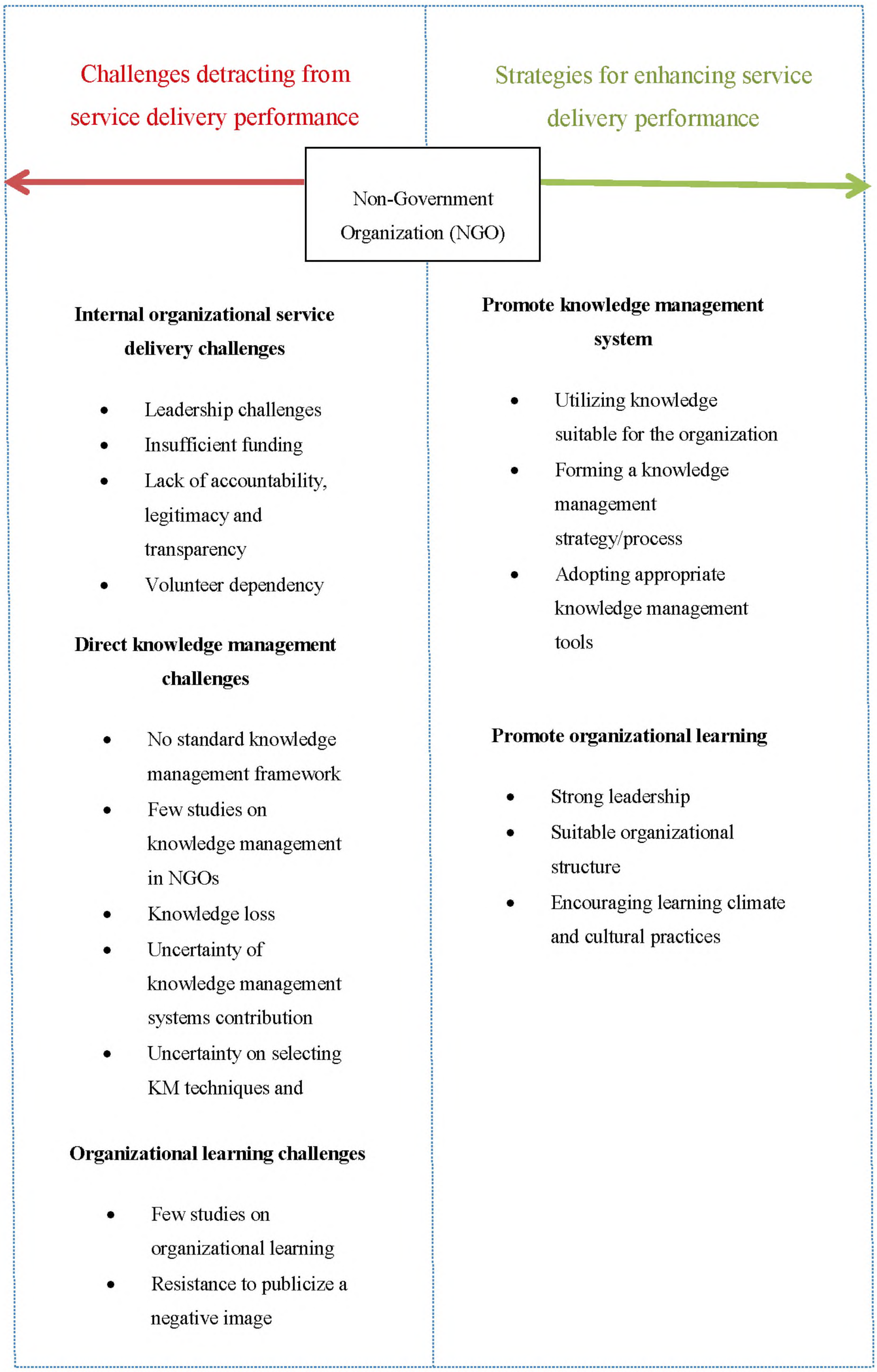

Figure 17: Proposed conceptual framework

5.6 Conclusion

Several organizational KM systems and organizational learning issues, as well as characteristics and suggestions, have been proposed in this chapter and have been summarized in the forms of tables and a figure. NGOs can, based on these theoretical findings, successfully adopt KM systems to enhance service delivery of NGO projects. The following chapter (Chapter 6) discusses the methods in which data was collected and how the findings were analysed.

Chapter 6: Research methodology

SECTIONS	PURPOSE
Section 6.1: Introduction	A clear introduction is provided to introduce the chapter briefly.
Section 6.2: Research paradigm	This section explains the world view of the researcher which includes the ontological and epistemological perspectives.
Section 6.3: Research method	The approach used to empirically conduct the research is explained in this section.
Section 6.4: Data collection	The different types of data collection methods used in this research are contained in this section.
Section 6.5: Data collection procedure	The overview processes used to collect data are clearly explained in this section.
Section 6.6: Case study selection	This section explains how the NGO cases were selected.
Section 6.7: Case study protocol	A detailed explanation of the processes used within each NGO case, as explained in section 6.5, is provided in this section.
Section 6.8: Questionnaire schedule	This section introduces the questionnaire questions used in the research.
Section 6.9: Participants	An overview of the participants in each NGO case is illustrated in this section.
Section 6.10: Data analysis	The data analysis technique chosen and the process of how the data is analysed, is explained in this section.
Section 6.11: Criteria for interpreting data	The key elements and techniques used to ensure that the research is credible and trustworthy are highlighted in this section.
Section 6.10: Conclusion	A short summary concludes this chapter.

Chapter 6
Research methodology

6.1 Introduction

The objective of this chapter is to provide the reader with an understanding of the research approach used. The research forms part of the field of study of information systems (IS) and thus resorts under social science. Greenfield and Ribbins (2005) have stated that the aim of social science is to comprehend social reality since various people form a central part in the manner in which their actions are shaped by their views within that reality.

6.2 Research paradigm

A research paradigm or philosophy is regarded as a world view or a way of understanding the complexity of the real world (Patton, 1990). The original term for paradigm in Greek is *paradeigma* which means "model" or "pattern". Thomas Kuhn was credited for popularizing the term (Salazar, Crosby and DiClemente, 2015). Terre Blanche and Durrheim (1999) categorize research paradigms as follows: ontology, epistemology and methodology, as discussed in Sections 6.2.1, 6.2.2 and 6.3 respectively. Thus, the ontological and epistemological perspectives inform the appropriate research paradigm used in the study, as discussed in the following sub-sections.

6.2.1 Ontology

Examining ontological distinctions is an essential aspect of the process of research as it allows the researcher to understand the perceptions of human nature and its influence on the approach adopted to discover social reality (David and Sutton, 2004). Ontology is a study that seeks to analyse the basic types and relationships of existence (Gruber, 1993). Researchers may adopt different ways of interpreting social reality, in other words, different ontological perspectives. On the one hand reality can be perceived to be separate from the individual who is involved in the observation (Weber, 2004). Such researchers believe that the subject (i.e. the researcher) and the object (i.e. the particular phenomena that is being empirically observed in reality) are separate entities that are independent from each other (Weber, 2004). This view is a positivist ontological perspective.

On the other hand, reality and the researcher who observes it believe that they are not separate (Weber, 2004). The argument of Husserl's notion of life-world is often used in support of this view (Carr, 1970). This notion states that the perception about the world is rooted in the experiences gained throughout our lives. Hence, this study bases its views on the latter in that the researcher has an interpretivist ontological perspective. Two characteristics regarding the life-world were identified as being both subjective and objective (Weber, 2004). Subjective characteristics are the perceptions concerning the meaning of some world, whereas objective characteristics reflect on the notion that there is constant negotiation about this meaning through interactions, amongst others (Weber, 2004). Both distinct views aid in improving our shared understanding of the world (Weber, 2004).

6.2.2 Epistemology

Epistemology is part of the branch of philosophy that studies the nature and claim of knowledge (Kanbur and Shaffer, 2007). Storberg-Walker (2006) describes ontology as being what is real and epistemology as how we know what is real, with both influencing the choice of which paradigm to use. In other words, epistemology can be referred to as *how we know* (Tennis, 2008). There are various epistemological approaches that can be chosen, differing in their classification according to the numerous authors'/researchers' perspectives. The standard classification of the different epistemology paradigms in the philosophy of social science can be grouped in three approaches, namely: positivist/empiricism, interpretive/hermeneutics and critical/theory hermeneutics (Terre Blanche and Durrheim, 1999; Myers and Klein, 2011). The type of epistemology makes claims with regards to what kind of knowledge is produced in the research, how the knowledge is gathered, as well as how it is presented (Tennis, 2008).

Positivist researchers, founded on empiricism, attempt to build knowledge of a reality that is viewed as existing beyond the human mind (Weber, 2004). They consider that the human experience of the world is an objective and independent reality in which this reality offers the basis for human knowledge (Weber, 2004). Since reality is viewed as quantifiable and objective it is reasoned that reality is the same for all, thus science allows us to identify and view a similar shared reality (Darlaston-Jones, 2007). A positivist research paradigm, in IS research, is used when there are variables in the research that can be measured quantifiably and in which a hypothesis can be generated and tested regarding the phenomenon of interest as a result of which a conclusion can be reached (Orlikowski and Baroudi, 1991).

A positivist research approach is not suitable considering that this study involves an in-depth understanding of the adoption of KM in selected NGOs in Grahamstown in the Makana region of the Eastern Cape Province in South Africa. Furthermore, there are no variables that need to be controlled and thus quantifiable measurements and hypothesis testing are not required.

Interpretivists identify that the knowledge that is built reflects their specific goals, experiences, history, culture and more. Hence, knowledge is formed by the social construction of the world and by making sense of the world, considering that these activities, as well as the specific goals intended for the study, happen in their life-worlds (Weber, 2004). A person's lived-experience is identified as influencing the knowledge of the world (Orlikowski and Baroudi, 1991; Weber, 2004). Orlikowski and Boroudi (1991) claim that an interpretivist approach is a more valuable approach in IS when studying organizations than a positivist paradigm. This study aims to assess the factors that influence the adoption of KM in NGOs in order to enhance their service delivery. Therefore, an interpretivist research paradigm is considered most suitable in this investigation.

6.3 Research method

Research methodology encompasses how a researcher discovers what they believe is known (Bhattacharyya, 2006). Therefore, research methodology involves a scientific and systematic approach to solving the research problem by the use of research methods (Bhattacharyya, 2006). The methods of investigation, otherwise known as techniques, used in research are part of a practice that comprise of the knowledge required to have a trustworthy result according to the epistemology selected (Tennis, 2008). In other words a methodology is the instrument used to generate knowledge (Tennis, 2008). Tennis (2008) identifies that there is a possibility for conflict between the methods used or with regards to the acceptable result of the research with the sources of evidence or regarding the reality of what knowledge means. Positivists generally use surveys, field and laboratory experiments as the research methods by means of which large amounts of empirical data must be analyzed statistically to detect causal regularities (Weber, 2004). However, this study, as discussed in Section 6.2.2, is based on an interpretivist paradigm which can use ethno-methodological, phenomenographic, ethnographic and case studies as the means of research method (Weber, 2004). A case study method was selected as the instrument to generate new knowledge by evaluating the possible methodology techniques that can be used.

6.3.1 Case study method

Orlikowski and Baroudi (1991) state that a case study method is one of the primary and most common designs used in IS research. There are numerous ways of defining case study research (Benbasat, Goldstein and Mead, 1987). A case study method involves an in-depth study in which the researcher seeks to gain an increase in understanding regarding the phenomena being studied within a real-life context (Yin, 1994; Jackson, 2008). The dynamics of the research strategy focuses on understanding the phenomena within a single setting (Eisenhardt, 1989). Some of the key concepts in case studies identified by Remenyi (2012) are that the study is set within a real context over which the researcher has no control and the boundaries of the research are not clearly defined and addresses a contemporary phenomenon which has been an ongoing occurrence. Cavaye (1996) highlights that case study research is often associated with describing the phenomenon of interest, developing theory and testing theory. Theory development often occurs where it is used to provide substantiation to hypothesis generation, as well as to the examination of the research area in which existing knowledge is limited (Cavaye, 1996).

A natural setting is required to clearly understand the problem in this research. There are no subjects or events that must be controlled or manipulated in this case study research. Most KM research has been limited to the profit-making sector and only minimal analysis has been applied to the non-profit sector (Renshaw and Krishnaswamy, 2009; Rathi, Given and Forcier, 2014). The non-profit sector has not experienced greater maturity in their knowledge making strategies and remains in its infant state (Renshaw and Krishnaswamy, 2009). Benbasat, Goldstein and Mead (1987) point out there are three reasons why case study research is a worthwhile strategy. Firstly, the researcher is able to conduct the study in its natural setting and can create theories from practice. Secondly, it allows the researcher to answer how and why questions (Benbasat, Goldstein and Mead, 1987; Yin, 2009). Thirdly, it is a viable way to conduct research in an area that few previous studies have been carried out (Benbasat, Goldstein and Mead, 1987). For these reasons a case study method is more suitable for this study.

Case study research can be divided into three types of case studies: explanatory, exploratory and descriptive, respectively (Yin, 1993). Explanatory case studies are used in causal investigations whereas exploratory case studies are commonly known as a prelude to social research. Lastly, descriptive case studies use a descriptive theory that is formed at the beginning of the research (Yin, 1993). A descriptive case study type is regarded as most appropriate for this research.

6.3.2 Quantitative and qualitative case study

Case study research can use either quantitative or qualitative methods to analyse the phenomenon (Yin, 1994). There has been a long ongoing debate amongst researchers regarding the value of qualitative and quantitative inquiry (Patton, 1990). Quantitative research uses hypothesis-based measures for generalizations whereas qualitative research uses a naturalistic approach (Patton, 1990). The goal of the research is to gain a rich source of data regarding the research problems, as well as to capture the related complexity (Benbasat, Goldstein and Mead, 1987). Therefore, a qualitative research paradigm, which is in line with the ontological and epistemological views of interpretivist paradigm of this research, as indicated in Section 6.2.2, is used in the study

Qualitative research is an increasingly popular research technique due to the dissatisfaction arising from quantitative research techniques (Benbasat, Goldstein and Mead, 1987). Some reasons for discontentment with quantitative research include the large sample sizes required, the complexity of multivariate research methods and the distribution limitations (Benbasat, Goldstein and Mead, 1987). Nonetheless, according to Lincoln and Guba (1985), qualitative research that acknowledges the researcher's subjectivity entails some degree of biasness as a result of the inquirer's perspectives, interests and motivations throughout the study. It is essential to acknowledge the potential shortcomings in order to minimize the potential effects during the course of the study. Patton (2001, p.14) advocates the notion of the researcher's involvement in research, thus "the researcher is the instrument". Trustworthiness of qualitative research is often questioned by positivists (Shenton, 2004), as addressed in Section 6.11.

6.3.3 Single and multiple-case studies

Case study research can be either single- or multiply-case studies (Benbasat, Goldstein and Mead, 1987; Yin, 1994; Darke, Shanks and Broadbent, 1998). A single-case study is more suitable for critical cases that have to meet a certain criterion (Yin, 1994). On the other hand, multiple-case studies provide a representative sample as well as the possibility of generalizing the findings (Benbasat, Goldstein and Mead, 1987; Patton, 1990). Darke, Shanks and Broadbent (1998) identify that the focus of the research questions, as explained in

Section 1.4 of Chapter 1, is a key indicator of the number of cases selected for the research. Multiple-case study methods provide a more rigorous and complete approach due to the triangulation of evidence (Eisenhardt, 1989; Yin, 1994). Multiple-case study design is intended for research description, theory building or theory testing (Yin, 1994).

Yin (2003) recommends that a multiple-case study method is used to establish a chain of evidence, thus achieving validity, as further explained in Section 6.4. Eisenhardt (1989) suggests that the use of four to ten cases is desirable for theory generation. Therefore, a multiple-case study design was selected for the purpose of this research and was conducted at five NGOs in Grahamstown in the Makana region of the Eastern Cape Province. This was done to enable cross-case analysis (as seen in Section 7.3 of Chapter 7) and comparison, since the phenomenon was investigated in various settings (Yin, 1994).

6.4 Data collection

In order to understand the research questions, as identified in Section 1.4 of Chapter 1, various data collection methods can be used to retrieve information regarding the phenomenon of interest. Yin (1994) identifies several sources of data collection methods to use in a case study approach, including (but not limited to) documentation, archival records, interviews, questionnaires, direct observation and physical artefacts. A questionnaire and focus group discussion were used in this study. Three key principles of data collection on the sources of evidence, as recommended by Rowley (2002), were observed in this research, as illustrated in Table 9.

Table 9: Data collection sources of evidence

Key principles	**Description**	**How it was used in the research**
Triangulation	Use of evidence from different sources to validate the findings.	Literature review (Chapters 1 to 6), questionnaires, focus group and data analysis technique.
Case study database	Strengthens repeatability and transparency of the findings.	Case reports, documents and interview transcripts.
Chain of evidence	A link between data collection, research questions	Alignment is made between all the chapters.

	and suggestions should be transparent.	

6.4.1 Questionnaire

One of the sources of evidence in this research is questionnaires. Questionnaires are considered as one of the most widely used means of collecting data (Rowley, 2014). Many researchers in the social science field associate research with questionnaires (Rowley, 2014). Questionnaires can be classified into two types of questions, namely: open-ended and closed questions (Johnson and Christensen, 2010; Rowley, 2014). Questionnaires that predominantly include open-ended questions are called qualitative questionnaires, whilst questionnaires that mostly include closed questions are called quantitative questionnaires (Johnson and Christensen, 2010). Open-ended questions are used when the researcher wants to know the views of the respondents regarding the questions posed and closed questions focus on a particular response by participants to standardized items (Johnson and Christensen, 2010). Questionnaires can also be classified as a third type, known as mixed questionnaires, combining both qualitative and quantitative questionnaires (Johnson and Christensen, 2010).

In spite of the popularity of questionnaires, the use of this method does have some limitations (Gorrell, Ford, Madden, Holdridge and Eaglestone, 2011; Rowley, 2014) and it is important that the researcher should acknowledge and overcome these limitations. Research questionnaires can be distributed to potential respondents via e-mail, online, post or face-to-face (Rowley, 2014). It is critical that the correct questions are asked to attain the research's objectives (Rowley, 2014). Several techniques will therefore be used to design the questionnaire in order to make its completion by the respondent as easy as possible. This is accomplished by understanding the potential respondents and by following the advice and guidelines on the phraseology of questions (Rowley, 2014).

Qualitative questionnaires, using open-ended questions, were used on the five selected NGOs in Grahamstown in the Makana region of the Eastern Cape Province in respect of this study. The questionnaires were categorized into four sections which relate to the four sub-questions, as identified in Section 1.5 of Chapter 1. English was used as the medium of communication with the participants in the questionnaire and focus group.

6.4.2 Focus group

A focus group is a research technique that involves group interaction regarding the subject of the research in order to collect data (Morgan, 1997). This type of methodology uses an interviewing technique as it is not a decision making or problem-solving session (Robinson, 1999). The objective of focus groups is to obtain accurate data on specific issues related to the research within a social context where participants consider their own opinions in relation to others (Robinson, 1999). It is not required that a mutual agreement or disagreement be reached. Rather, the participants of the focus group reflect on the questions posed by the interviewer, respond thereto and consider other participants' views (Robinson, 1999). Focus groups are considered a highly efficient method for qualitative data collection as the quantity and variety of data is obtained from several participants at a given time (Robinson, 1999). Group discussions, in general have, been a popular method for years (Kitzinger, 1994). Furthermore, the unique component of focus groups is the use of the interaction between the participants as part of the research data (Robinson, 1999).

According to Remenyi (2011), academic research should have a small focus group with between six to eight participants. Furthermore, the optimal duration of a focus group should be between 60 and 90 minutes. The success of this method depends on the quality of responses, rather than on the quantity. Similar to questionnaires, focus groups have several shortfalls (Robinson, 1999) which were acknowledged and overcome by the researcher/interviewer. With regards to this study, a focus group method was used to further validate the findings obtained from the responses to the questionnaire by the participants.

6.5 Data collection procedure

6.5.1 Pilot study

The data collection phase of this research started with a pilot study. A pilot study (also known as pre-test) involves a process of conducting a preliminary study that allows the researcher to identify possible problems in the research (Varkevisser, Pathmanathan and Brownlee, 2003). A better understanding is gained regarding the procedures of data collection before the commencing of the fieldwork (Varkevisser, Pathmanathan and Brownlee, 2003). Yin (2003) recommends that a pilot study be conducted as a preparation for data collection as it helps to refine the data collection plans in respect of the content and the protocol followed. The pilot study followed three stages to ensure a rigorous research process. The first stage involved formulating and refining the questions with the researcher's supervisor. The next stage involved further refining the respondent's questions with other researchers and academics. Lastly, the questions were tested on selected organizations. Carrying out a pilot study includes gaining feedback from respondents about several features, such as the layout of the instrument, the clarity and adequacy of the questions, the instructions given to the respondent and the time required for completing the instrument (Taylor, Sinha and Ghoshal, 2008). Potential problems that affect the validity and quality of the research can be identified by the pilot study (Blessing and Chakrabarti, 2009). Changes can be made as a result of the feedback gained from the pilot study in order to ensure that the research is conducted efficiently and effectively (Blessing and Chakrabarti, 2009).

A pilot study typically comprises of only one or two cases (Blessing and Chakrabarti, 2009). Blessing and Chakrabarti (2009) suggest that the cases selected should be closely related to the proposed study. Therefore, the pilot study involved two NPOs, comprising of a NGO and CBO from the social services sector, as the two participants. Feedback regarding the participants' experiences of the pilot study was requested (Blessing and Chakrabarti, 2009). Varkevisser, Pathmanathan and Brownlee (2003) recommend that a pilot study should be conducted at least one to two weeks before commencing with the fieldwork to allow for adequate time to make revisions.

6.5.2 Case study design

There are several approaches on how to conduct case study research. Glaser and Strauss (1967) as well as Eisenhardt's (1989) approaches focus on an inductive theory developing approach. An inductive approach is a theory-building process that begins with observations of specific occurrences in order to form theories and generalizations regarding the study (Wilson, 2010).

Yin's (1994) approach uses a developed theory, which is tested later, at the start of the study. This type of approach is known as a deductive approach (Wilson, 2010). This research follows a deductive approach since a proposed theoretical framework was developed before beginning observations, as evident in Chapter 5.

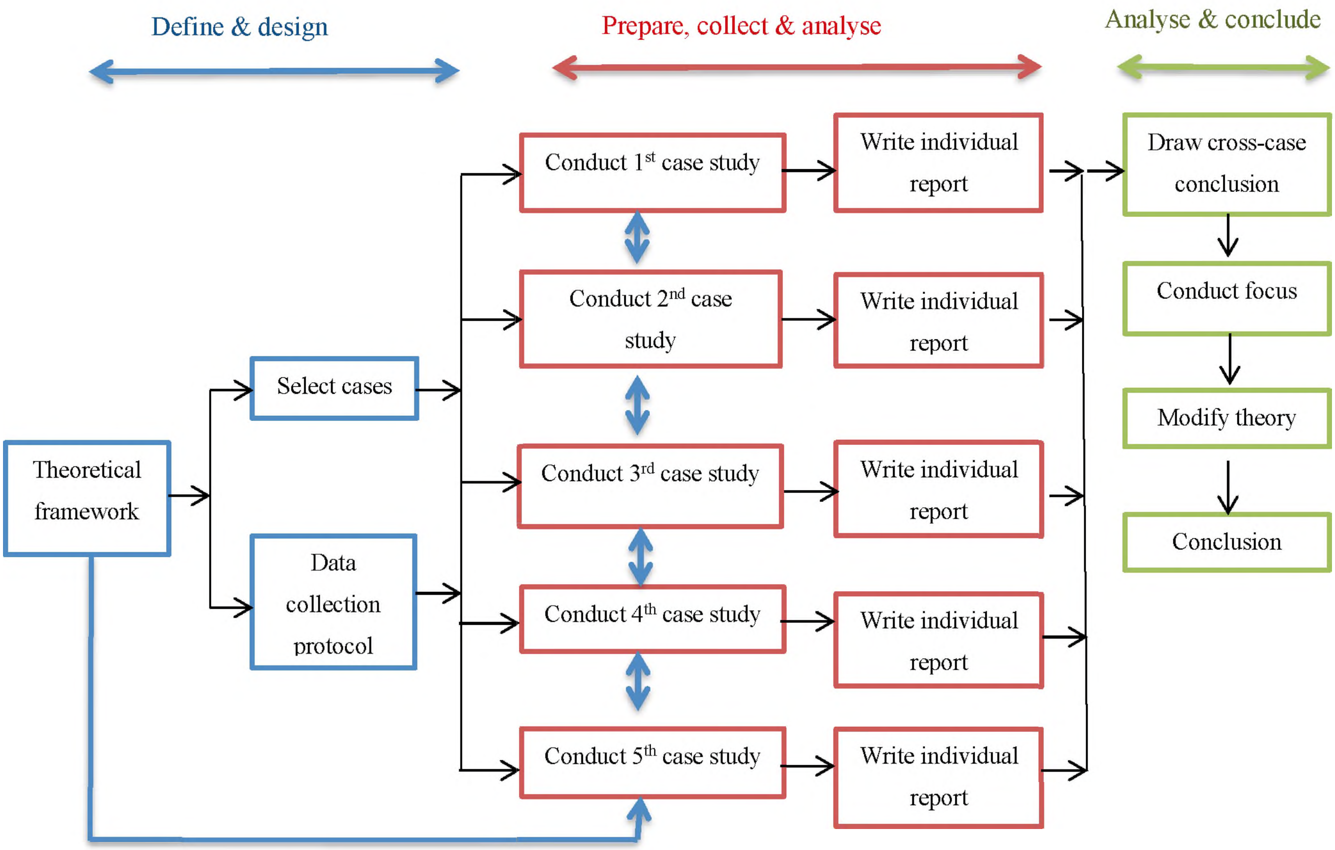

Figure 18: Case study method (adapted from Yin, Bateman and Moore, 1983 cited in Yin, 1994, p.49)

Yin (1994) suggests a multiple-case study method as depicted in Figure 18. The first step indicated is to develop a theory (as described in Chapter 5), to select the cases (as identified in Section 6.6) and to define and design the data collection protocol (as highlighted in Section 6.7). The following step involves preparing, collecting and analysing each individual case and compiling individual case reports (Yin, 1994), as described in Section 7.2 of Chapter 7. Data will, at this stage, be collected by means of a questionnaire, as described in Section 6.4.1. The questionnaire responses were then transcribed and reviewed by the participants from the NGOs in order to ensure validity, as stated in Section 6.11. The pilot case study involved one case study up to this stage in order to identify any inadequacies in the initial design and to make adjustments, if necessary. The final step is to analyse and draw cross-case conclusions (as described in Section 7.3 of Chapter 7), to conduct a focus group discussion (as described in Section 7.4 of Chapter 7), to compare cases to theory to modify the theory (as analysed in Section 7.5 of Chapter 7), to develop suggestions and to write a cross-case report (as analysed in Section 7.8 of Chapter 7) (Yin, 1994). The data analysis technique used is further discussed in Section 6.10.

6.6 Case study selection

6.6.1 Unit of analysis

The unit of analysis should be determined prior to searching for sites, as the study will be focused either on individuals, the organization or an event (Benbasat, Goldstein and Mead, 1987; Remenyi, 2012). The researcher should also identify what is generalized in the research (Benbasat, Goldstein and Mead, 1987). This research therefore focused on the organizational entity and created a theoretical generalization from the findings of the five selected NGO cases. The unit of analysis was the organization as a whole in order to assess the adoption of KM to enhance service delivery in the five NGO cases.

6.6.2 Suitability profile

Remenyi (2012) recommends a suitability profile containing proposed requirements to select cases in a case study method. Eisenhardt (1989) suggests that the use of between four and ten cases is a desirable range to generate theory by means of a case study method. Therefore, five NGO cases were selected from the Makana region of the Eastern Cape Province of South Africa. The case study should be relevant to the research question, significant and accessible to the researcher (Remenyi, 2012). The following requirements, as suggested by Remenyi (2012), were used to select the organizations:

1. An appropriate industry sector: The NGOs selected have a local level of operation, are operationally classified and are part of the social services sector, according to the ICNPO and SANPIC classification standards (as identified in Section 2.3 of Chapter 2). The social services sector contains the highest number of registered NPOs in South Africa (39.9%) and in the Eastern Cape Province (41.9%) in the year 2014/2015 (Department of Social Development, 2015). The social services sector also has the highest number of non-compliant NPOs when compared to other sectors in South Africa in 2014/2015 (Department of Social Development, 2015). 6 707 NPOs in the Eastern Cape have been classified as non-compliant and 5 069 NPOs were deemed complaint with the regulatory requirements of the NPO Act and the provisions of its constitution in 2014/2015 (Department of Social Development, 2015). NGOs in the social services sector include emergency and relief, income support/maintenance, services to children and more (Department of Social Development, 2015).

2. The correct size in terms of turnover, assets market share or other measure: NGOs with a similar range of number of employees/volunteers will be selected.
3. One where adequate access can be achieved: Selected NGOs must agree to take part in the research voluntarily and must provide written consent.
4. One where they will allow their story to be told in an academic dissertation: Selected NGOs and participants must voluntarily agree that findings may be included in the research dissertation and must provide written consent.

In order to better understand the adoption of KM systems to enhance service delivery of NGO projects, a suitability sampling technique was used to select the five NGOs in the Makana region of the Eastern Cape Province. The following section provides further detail regarding the case study protocol followed in respect of each of the five NGOs that participated in the research.

6.7 Case study protocol

Case study procedure, as stated in Section 6.5.2, is part of the case study design that helps to guide the data collection, contributes to a more rigorous research and ensures external validity (Rowley, 2002). The questionnaire-based interviews (Remenyi, 2011) will follow the protocol from Remenyi, as adapted (2011, pp.4-39).

1. Possible participating NGOs should be identified and approached by using a gatekeeper. The gatekeeper in this research was the Department of Social Development.
2. Contact should be established with the NGO at the highest level possible in order to obtain permission to conduct the research and to use the employee's responses. Therefore, an invitation letter to conduct the research at the particular NGO should be provided to the NGO manager.
3. Once written consent from the NGO manager has been received, the researcher should invite participants in the NGO and arrange a convenient time and location to conduct the questionnaire.
4. The researcher should explain the goals of the research, why it is important, the types of questions that will be asked and how long the session will take, prior to conducting the questionnaire.
5. The research participants' information and letters of consent should be provided to comply with the requirements of the university's ethical standards. These documents

include rules and research information that should be clarified by the researcher and abided with by both the researcher and the participants.

6. A transcript should be completed and provided to the participants to ensure that their views were adequately represented as soon as possible after the questionnaire interview. The participants are invited to mention any omissions or misinterpretations by the researcher and the changes should be noted. A letter of thanks for participating in the questionnaire should be sent promptly.
7. After the completion of each questionnaire the researcher should record the impressions of the participants and the setting into field notes.
8. Data analysis procedures ensuring that the data collected follow anonymity and confidentiality provisions in order to protect the identities of the organizations and participants involved in the research, will then be followed.

As highlighted in Section 6.4.2, the focus group discussion was conducted. The focus group interview protocol used in the research was adapted from Remenyi (2011, pp.66-68) and involved four steps:

1. Beginning the focus group: The researcher should welcome each participant and introduce participants to each other. The researcher should explain the goals and importance of the research. A welcoming statement should be distributed to each participant and read out.
2. Explaining the procedure: The focus group facilitator (researcher) should reiterate the research questions. The participants should be asked to state their names before speaking to ensure the correctness of the subsequent transcriptions of the voice recordings. The research participants' information and letters of consent should be provided. These documents will include rules and research information that should be clarified by the researcher and abided with by both the researcher and the participant.
3. Commence the discussions: The facilitator should start the discussion with the first research question. The researcher should engage in a limited capacity to keep the conversation going. Time limits to discuss each research question should be adhered to. Notes regarding the main points and disagreements discussed should be constantly taken by the researcher.
4. Debriefing and closing: At the end of the discussions the facilitator should describe the main points and disagreements of each research question. Participants must then

be invited to mention any omissions or misinterpretations. A transcript should be made and provided to the focus group participants to ensure that their views were adequately represented as soon as possible after the focus group discussion. A letter of thanks for participating in the focus group should also be sent promptly.

5. Data analysis procedures ensuring that the data collected follows anonymity and confidentiality provisions in order to protect the identities of the organizations and participants involved in the research will then be followed.

6.8 Questionnaire schedule

The questions posed in the interview-based questionnaire, as shown in Appendix A, were sectioned into the four research sub-questions as seen in Section 1.4 of Chapter 1. The questions posed links to the literature review of the research topic, as depicted earlier in Figure 1 of Chapter 1.

6.9 Participants

The participants, including NGO managers and staff members or volunteer workers that are involved in the organization's services, in both the questionnaire-based interview and the focus group, voluntarily participated in the research. Ethical clearance procedures were followed to ensure that there was anonymity and privacy. A total of ten participants from the respective NGO cases took part in the questionnaires and five participants from various NGOs took part in the focus group discussion. As there is no numeric guideline of how many participants should be used, the theory of data saturation was used (Remenyi, 2011). The subsequent section explains how data analysis was conducted.

6.10 Data analysis

Data collection and analysis, as discussed previously, may be subjective and influenced by the researcher's interpretation. The researcher's characteristics and background are contributing factors that impact on the results (Darke, Shanks and Broadbent, 1998; Rowley, 2002). Data analysis is the process of making sense of the data (Merriam, 2009). David and Sutton (2011) identify that the most important elements in qualitative analysis are the manner in which to integrate analysis with the data collection process and the incorporation of the goals of the research. Qualitative data collection is the gathering of large quantities of data that is mainly in the form of textual material (David and Sutton, 2011). Hence, data analysis processes attempt to reduce this volume by means of selection and organization (David and

Sutton, 2011). Likewise, Grbich (2007) suggests that data analysis in qualitative study is about *shaping*. Thus, the various qualitative analytical approaches are used to focus on how cultural, social, as well as political events and individuals' or groups' understandings form what is said and written.

6.10.1 Approach to data analysis

The possible analytical approaches that can be used include: thematic analysis, content analysis, conversation analysis, discourse analysis and narrative analysis (Grbich, 2007). These analytical approaches are relatively similar but have distinct features (Grbich, 2007). Thematic analysis was selected to analyse the data. Braun and Clarke (2006) explain thematic analysis as a method to identify, examine and report patterns/themes from the data. Thematic analysis differs from other analytic methods as it seeks to describe patterns across qualitative data. Thematic analysis is considered a flexible approach as it can be used across various epistemologies and research questions. Thematic analysis is also viewed as a relatively easy method to use. However, although thematic analysis is widely used, it is poorly defined and claimed (Braun and Clarke (2006). The themes depict something significant from the data which is related to the research question and represents a repeated pattern of meaning from the data set (Braun and Clarke, 2006).

The research involved descriptive data that aimed to examine the adoption of KM systems in NGOs in Grahamstown in the Makana region of the Eastern Cape Province, in order to enhance service delivery of NGO projects. Therefore, thematic analysis could be used to analyse and interpret the data from the questionnaires and focus group in order to acquire relevant information to achieve the research's objectives. The following decisions were made, as presented by Braun and Clarke (2006):

- The researcher used a more detailed and nuanced account of a group of themes from the data which related to a specific question or area of interest, as illustrated in Sections 7.2 and 7.3 of Chapter 7.
- The researcher decided to use a theoretical, top down approach as opposed to an inductive thematic analysis. This approach is driven by the researcher's theoretical or analytic interest in the area. This procedure of thematic analysis provides less of a rich description of the data and a more detailed analysis of some aspect of the data. Hence,

the data being coded is quite specific for a research question. This approach is also in line with the research's case study design as illustrated in Section 6.5.2.

- The researcher used a sematic approach as opposed to a latent approach in which themes would be identified. Therefore, the themes are identified on the surface meaning of the data.
- The researcher used a constructive approach to thematic analysis.

6.10.2 Method of data analysis

Several processes were used in analysing the data, as illustrated in the following paragraphs (Braun and Clarke, 2006):

1. Familiarizing yourself with your data: This phase involves the transcription of the interview-based questionnaire and focus group responses from verbal to written form and the electronic storage thereof. This allows the researcher to be immersed in the data by means of repeated and active readings of the data; constantly searching for meanings and patterns.
2. Generating initial codes: This phase involves formulating codes by identifying interesting features of the data. The qualitative data analysis software, known as Atlas.ti, was used in this research to help code the data to discover and analyse complex phenomena (Lewins and Silver, 2007). Coding depends on whether the themes are more theory-driven or more data-driven. As stated in Section 6.10.1, the research applied a theory-driven approach by approaching the data with specific questions in mind when coding.
3. Searching for themes: This process involves searching for themes by sorting the different codes into potential themes and organizing all the relevant coded data extracts within the identified themes. Hence, the researcher then considered how the different codes could be merged to form an overarching theme.
4. Reviewing themes: This phase involves reviewing the set of possible themes and refining them. This includes assessing whether the themes should be combined or broken down into separate themes. The researcher then checked the data for validity of the individual themes by ensuring that the data extracts matched the themes, as well as to code additional data that might have been omitted.
5. Defining and naming themes: This phase involves further refining the specifics of each theme by naming and defining the meaning of each theme.

6. Producing the report: The write-up in thematic analysis should represent the data in a manner that indicates both merit and validity to the reader. Sufficient evidence and examples from the data extracts to demonstrate the themes should be provided.

A thematic map was formed initially formed after analysing the questionnaire responses and was further expanded after conducting the focus group discussion, as illustrated in Section 6.5.2. This map represents the patterns in the data and illustrates the relationship between the different themes (Braun and Clarke, 2006).

Table 10 illustrates the 15-point checklist recommended by Braun and Clarke (2006). This check list was used in this study to ensure that all the concepts were fulfilled.

Table 10: Thematic analysis checklist (adapted from Braun and Clarke (2006, p.96)

Process	**Criteria**	**Checklist**
Transcription	1. The data have been transcribed to an appropriate level of detail and the transcripts have been checked against the tapes for 'accuracy'.	√
Coding	2. Each data item has been given equal attention in the coding process.	√
	3. Themes have not been generated from a few vivid examples (an anecdotal approach); the coding process has been thorough, inclusive and comprehensive instead.	√
	4. All relevant extracts for each theme have been collated.	√
	5. Themes have been checked against each other and back to the original data set.	√
	6. Themes are internally coherent, consistent, and distinctive.	√
Analysis	7. Data have been analysed / interpreted, made sense of / rather than just paraphrased or described.	√
	8. Analysis and data match each other / the extracts illustrate the analytic claims.	√
	9. Analysis tells a convincing and well-organized story regarding the data and topic.	√

	10. A good balance between analytic narrative and illustrative extracts is provided.	√
Overall	11. Enough time has been allocated to complete all phases of the analysis adequately, without rushing a phase or giving it a once-over lightly	√
Written report	12. The assumptions about and specific approach to thematic analysis are clearly explicated. 13. There is a good fit between what you claim you do and what you show you have done / i.e., described method and reported analysis are consistent. 14. The language and concepts used in the report are consistent with the epistemological position of the analysis. 15. The researcher is positioned as active in the research process; themes do not just 'emerge'.	√ √ √ √

6.11 Criteria for interpreting data

Lincoln and Guba (1985) consider four concepts of trustworthiness essential to establish a credible study in qualitative research which contains variations of different terms. Patton (2001) claims that validity and reliability are key concepts that should be addressed in any qualitative research when designing a study, analysing the findings and judging the quality of the study. Although the terms validity and reliability are generally associated with quantitative research in the qualitative research paradigm, terms such as neutrality, credibility or conformability, dependability, consistency or transferability are the essential criteria for quality (Lincoln and Guba, 1985).

Three out of the four tests presented by Rowley (2002) which relate to case study methods were used in this study as summarized in Table 10 below. The four tests include construct validity, internal validity, external validity and reliability. The tests are used in empirical social research to establish the quality of such research (Rowley, 2002; Yin, 2009). One of the validity tests is construct validity. The techniques in this test were mentioned previously in Section 6.4. Internal validity involves establishing causal relationships in which certain circumstances are presented to result in other conditions. However, this test was not used in this study, since internal validity is suitable for explanatory studies and not for descriptive studies (Rowley, 2002). External validity, also known as generalization, is defined as a common statement made by the representation of an inference drawn from observations (Schwandt, 1997). According to Rowley (2002), external validity of case study research is an important contribution to theory. The reliability test, also known as dependability, of research involves the degree to which occurrences are allocated to similar researches (Rowley, 2002).

Table 11: Checking case study design (adapted from Rowley, 2002, p.21)

Tests	Case study tactic	Phases of research in which tactic occurs	Section in research
Construct validity	Use multiple sources of evidence. Establish chain of evidence.	Data collection Data collection	Section 6.4 Section 6.4
External validity	Use replication logic in multiple-case studies. Use case study protocol.	Research design Data collection	Section 6.5.2 Section 6.7
Reliability	Develop case study database.	Data collection	Section 6.4

6.12 Ethical clearance procedure

The research abided by the policies, protocols and guidelines found in the latest version of the Rhodes University Ethical Standards Handbook. This research has been approved by the Rhodes University Ethical Standards subcommittee in the Computer Science and Information Systems Departments. This subcommittee ensures that the research activities are accomplished responsibly and that they meet the highest ethical standards. Sensitive information, such as financial information regarding the NGOs, will not be disclosed. The research involves human participation and although the researcher is aware of the identities of participants, this information will remain confidential and no identifiable information was reported in an effort to ensure that all participants' responses remain anonymous. The data collected was kept secure and deleted upon completion of the research. All participants were informed of the purpose of the research, the anticipated benefits of the research, how their privacy will be ensured, and that their participation is voluntary.

6.13 Conclusion

An interpretivist, qualitative research paradigm was used in this research. This was achieved by a discussion of the significance and justification for the ontology and epistemology selected in the research to examine the adoption of KM in enhancing service delivery of NGOs. In addition, a case study research methodology was applied to five NGO cases within the Makana region of the Eastern Cape Province in South Africa to examine the empirical observation. The five NGO cases were selected by using a suitability profile as recommended by Remenyi (2012). A case study method involves an in-depth study to gain an increase in understanding regarding the phenomena being studied within a real-life context (Yin, 1994; Jackson, 2008). A pilot study was initially used to test the case study method in order to identify possible discrepancies (Yin, 1994). A questionnaire was used as one of the techniques for data collection. Questionnaires are one of the most widely used methods for collecting data (Rowley, 2014). Subsequently, a focus group data collection technique was used in this research to further analyze the data collected. Focus groups are considered one of the most effective methods of gathering data (Robinson, 1999). The participants, including NGO managers and staff members or volunteer workers that are involved in the organization's services, voluntarily contributed to the research. Ethical clearance procedures were followed to ensure that the participants' responses were kept anonymous and confidential.

Chapter 7: Data results and analysis

SECTIONS	PURPOSE
Section 7.1: Introduction	A clear introduction is provided to introduce the chapter briefly.
Section 7.2: Questionnaire responses of the NGO cases	This section describes the key concepts raised in each NGO case.
Section 7.3: Cross-case analysis	A cross-case analysis was conducted in order to compare and contrast the five NGO cases.
Section 7.4: Themes (empirical themes)	The themes derived from the results were highlighted and explained.
Section 7.5: Initial thematic map	A holistic graphical illustration was presented on the initial themes found.
Section 7.5: Focus group conclusion	This section highlights the discussions made in the focus group.
Section 7.6: Align findings to theory	The findings were aligned to the existing literature.
Section 7.5: Expanded thematic map	The findings from the analysis were examined in combination with existing literature.
Section 7.7: Conclusion	A short summary concludes this chapter.

Chapter 7
Data results and analysis

7.1 Introduction

This chapter focuses on the data collected, as explained in Sections 6.4 and 6.5 of Chapter 6, and its analysis, as explained in Section 6.10 of Chapter 6, in order to answer the main research question.

7.2 Questionnaire responses of NGO cases

Five NGO cases were selected, as explained in Section 6.6 of Chapter 6, from Grahamstown of the Eastern Cape Province, as explained in Section 2.5 of Chapter 2, to participate in the study. In order to protect the identities of the NGOs each NGO case was generically labelled C1, C2, C3, C4 and C5 respectively. Each participant in the cases, as briefly explained in Section 6.9 of Chapter 6, was also anonymized and labelled P1, P2 and so forth, respectively. After having conducted and transcribed the responses from the interviews the data was then analysed, as explained in Section 6.10 of Chapter 6.

The aim of this study is to provide a framework for the adoption of KM systems to increase service delivery of NGO projects; therefore, the results of the data analysis are presented as a model. The findings should depict the participant's opinion and not the researcher's biases or perceptions. The three areas of interest that link to the research questions, as stated in Section 1.4 of Chapter 1, are: service delivery, organizational learning, KM practices and KM tools. These broad areas comprise of a number of main and sub-category codes in the coding frame. The following sub-sections provide a summary of the results of the interview-based questionnaire concepts found in each of the five NGO cases, as stated in Section 6.5.2 of Chapter 6.

7.2.1 Case study one (C1)

7.2.1.1 Service delivery

It appears from the analysis of C1 that both participants (P1 and P2) had similar, but also conflicting, views regarding the various challenges that C1 faces. Some of the challenges experienced are similar to the challenges identified in the literature review in Section 2.7 of Chapter 2. The major challenge raised was funding, as was evident in Section 2.7.2 of

Chapter 2. It was expressed that funding plays a major role in the services that C1 provide. There is currently insufficient funding available for the stakeholders and staff in this organization to perform the necessary activities. Most of the activities in the business plan of C1 have not been achieved due to the lack of funding. One of the participants stated that C1 was almost bankrupt because of delayed payments. Payments from mainly government organizations are not being paid on time, which has a negative impact on the services that C1 provides. P1 stated that certain aspects, such as staff training and the employment of qualified full-time workers, have been compromised due to a lack of available resources. The workers have not received any salary increases for the past three years.

Leadership, as explained in Section 2.7.1 of Chapter 2, is also viewed as a contributing factor in the provision of NGOs' services. Leadership is said to be provided by both managers and the Department of Social Development. The Department of Social Development has been said to favour and pay NGO managers that are social workers. This therefore influences the manner in which the organization provides its services. There are some other challenges in the organization regarding certain aspects, such as the allocation of funds.

A lack of skilled workers, as identified in Section 2.7.4 of Chapter 2, is also an obstacle that the organization faces. C1 does not have qualified workers to help run the organization. In addition, the organization is unable to afford training to obtain qualifications for the current staff. The general view is that there is a lack of skilled workers in NGOs in Grahamstown. C1 used to have a significant employee turnover resulting in their services being compromised. The insufficient number of employees has caused existing workers to work longer hours than what is technically required of them. A number of volunteers are actively engaged in the services that they provide.

Accountability, as explained in Section 2.7.3, was also viewed as a contributing factor that influenced the services provided by C1. P2 stated that accountability is the key factor in any organization in that everyone should be held accountable to ensure that the organization is run smoothly. The organization has policies enforced by the Department of Social Development and other relevant Acts. However, it is perceived that there are some communication challenges within C1 and between the Department of Social Development and other NGOs. Vital information, such as payments and requests, are not conveyed to the organization in advance. In addition, the policies imposed are very difficult and not much support is provided to accomplish them. Discussions were held between NGOs regarding the desperate need to change the policy and to assist with paying the salaries of NGO workers, but such requests were not followed through by the Department of Social Development.

7.2.1.2 Organizational learning

Respondents in C1 regarded organizational learning a contributing factor to the services that they provide. P1 stated that, within the context that C1 operates in, they experience various daily challenges and that it is essential to learn from mistakes in order to move forward. There are many factors that influence the manner in which C1 learns within their organization. P1 pointed out that financing is one of the factors that limits the extent to which C1 can learn. For example: there is insufficient funding to arrange trips to interact with similar NGOs that are located in other cities. Furthermore, P1 stated that more frequent input from the Department of Social Development is needed to guide and advise the workers in the organization, instead of the current situation of merely checking the financial reports of the organization. P2 argued that having the necessary skills and training within their field of work influence how they handle the challenges in their organization. There is currently no qualified worker that is able to overcome the challenges that C1 is facing, therefore the organization is reliant on other organizations to contribute to their services and to resolve the difficulties faced. P2 further stated that, if funding was made available, they could use it to enhance the skills of the workers.

Both participants affirmed that organizational structure, as explained in Section 3.5.5.1 of Chapter 3, influences the way that they learn in their organization. The tasks within C1 have been delegated to other members of staff. P1 believed that authority should not lie with a single person. Transparent and supportive management is considered to support learning in that the tasks are openly shared amongst management, the office team and the social workers. Important decisions will be escalated to the management committee for final decisions on the organization's running. A centralized form of decision making is considered to be most suitable to support organizational learning. Knowledge circulates reasonably well within the organization. Workers are able to voice their opinions and make suggestions to members of the committee and *vice versa*.

Both participants also believed that their organization's leadership influences organizational learning, as identified in Section 3.5.5.3 of Chapter 3. P1 articulated that leadership plays both positive and negative roles in organizational learning. However, both participants admitted that the current leadership style does not support learning within the organization.

P1 attributed this to a lack of understanding and miscommunication amongst workers. On the other hand, P2 attributed this to having insufficient funds to empower workers by enabling them to attend training sessions. For instance: where training attendance is made possible for a representative from C1, no feedback is communicated to other staff members who were not able to attend due to financial constraints.

The participants in C1 agreed that culture does influence learning to a certain extent, as identified in Section 3.5.5.2 of Chapter 3. The culture of the staff members in C1 was perceived by P1 to not be as open as it could be. P2 believed that their organization does not have a particular culture due to the organization consisting of individuals from different ethnic backgrounds. However, every stakeholder in the organization is willing to learn and is open to change. P2 expressed that there is a certain culture, originating from the Department of Social Development, the board of trustees and the workers regarding the manner in which things are achieved within an organisation, that influences NGOs. Open communication between the stakeholders and within the various levels within the organization needs to be established and properly facilitated. P2 explained that a lack of communication almost led to the failure of the organization. P2 also further expressed that, once an NGO is registered by the Department of Social Development and has received an NPO certificate, the organization has to abide by the rules of the Department and is accountable to the community. The historical challenge that C1 faces is the notion of "founder's syndrome", as referred to by P2. This means that the organization still must complete its transition from another form of organization by adapting new policies and ethics that abide with the Department of Social Development.

7.2.1.3 Knowledge management practices

The concept of KM is unknown by the C1 participants, but the logic is understood, even though differently termed, by P1. Both participants also believed that knowledge plays an important role in their organization. The types of knowledge particularly used in the C1 have been those emanating from past experiences and training. P1 suggested that there is a need for further training as staff members are perceived to know more than what they actually do. P2 emphasised that knowledge of one's self is critical within their organizational context. Furthermore, the current C1 procedures, regarding some aspects, often do not work. Instances have occurred within C1 where there was disagreement between staff members regarding the knowledge and understanding of what should be done within the organization, resulting in the case being escalated to the board. C1 currently has no formal process or strategy in place to support KM. To a certain extent, however, there were efforts to retain and store knowledge by various means. P1 explained that training, as well as involvement of the Department of Social Development is needed to acquire more knowledge. C1 has not experienced a large percentage of staff turnovers which has aided C1 in retaining its knowledge. The main medium of storage is by means of a paper filing system and, to a limited degree, on their computers. The loss of knowledge, as perceived by P1, was as a result of technical difficulties in that data had been deleted by a computer virus. P2 considered their organization to experience a loss of knowledge as they are unaware of the need for a KM policy.

7.2.1.4 Knowledge management tools

Both participants considered the role of KM techniques as important in their organization. P1 explained that KM plays a critical role as it enables communication and maintains relationship with each other through the sharing of knowledge. C1 uses various KM techniques, as identified in Section 4.3 of Chapter 4. C1 uses brainstorming as a technique and agrees that it is important in the organization. Staff meetings are conducted at least once a month. Emergency meetings, allowing staff members that work different shifts to meet together and brainstorm, are also held. C1, in conjunction with the Department of Social Development, is involved in training that enables NGO managers to get together and share experiences and training for social workers within the organization. Although training is provided to a certain degree by means of sharing and delegating of responsibilities amongst workers, there is insufficient funding to provide adequate training. After action reviews are used in the organization's staff meetings, allowing the workers to express their opinions and to discuss both successful and unsuccessful efforts made. Storytelling is, according to P1, not used to a satisfactory extent. The stories told include both positive and negative incidences, enabling the workers to learn from each other's experiences. However, P2 suggested that this technique is not a familiar concept and they are not particularly proficient in using it. C1 does not have a mentorship program in place.

C1 is a member of the Eastern NGO coalition that hosts conferences which has been helpful to the organization. P1 expressed that it allows opportunities to learn from and share with others. This form of engagement is a CoP technique. However, P1 further suggested that some forums established between NGOs have never been effective as there is no follow up concerning important issues being raised amongst NGOs. There is a clear desire for the Department of Social Development to teach and influence the workers at C1, as explained in

Section 7.2.1.2 of Chapter 7. Engagement with Rhodes University is also beneficial to C1 as it allows them to remain informed regarding other NGOs' challenges and activities.

C1 believes that the use of KM technologies to facilitate organizational learning plays an important role. Technologies, such as e-mail, telephones and databases, are used in this organization, as identified in Section 4.4 of Chapter 4. In addition, filing systems and databases are used to store the organization's documents. The use of computerized databases is vital in C1. The contents of their databases were erased due to technical difficulties and it has placed the organization in a detrimental position. The use of telephones to convey information is more readily used than instant messaging. On the other hand, face-to-face interactions are commonly used. This enables individuals, at least to a certain degree, to better understand each other. The organization is supposed to use technologies, such as video conferencing, to communicate with other stakeholders, but, due to insufficient funds, the organization is unable to provide this service. Sending e-mails and writing letters are also used as means to send messages. The need for accessible information is emphasized by the use of technologies.

7.2.2 Case study two (C2)

7.2.2.1 Service delivery

C2 has faced several service delivery challenges that continue to hinder the services that they provide. Some of the challenges experienced are similar to the challenges recognized in the literature review in Section 2.7 of Chapter 2. The participants, P3 and P4, suggested that their organization experiences varying problems that require different responses on a daily basis. Both participants also believed that funding certainly influences their service delivery. Although sufficient funding to run the organization, albeit with caution, is currently available, there are insufficient funds to accomplish desired projects. C2 has various means to raise funds, but conflicts regarding money seem to surface annually. Both participants stated that the increase of fixed expenditure, such as electricity, staff salaries and food, has had the most severe impact on the organization. Compromises thus had to be made regarding the allocation of funds. C2 is currently waiting on supporting funds.

Both participants agreed that leadership influences the services that their organization provides, as explained in Section 2.7.1 of Chapter 2. P4 expressed that leaders play various roles in the organization and are not limited to administration. This includes the responsibility to keep beneficiaries and other stakeholders informed. Leaders are further said to have the ability to "either make it work, or you make it happen or you ignore it." *(sic)* P3 explained that, due to the demanding nature of the organization, a strong leader is critically needed. Leaders also play an important role in mitigating and resolving service delivery challenges faced in C2. P3 suggested that the committee is by-passing management, causing conflict as a result of miscommunication. A democratic, informative and involved leadership style that is both firm and flexible is said to best suit the NGO. For instance, P4 expressed that a policy detrimental to the organization, as it would be costly to fulfil, had nevertheless been established.

Both participants agreed that most of the workers in their organization have adequate skills to deliver the organization's services. The organization relies on qualified workers to fulfill the organization's activities. It is articulated by P3 that not all of the workers are academically qualified, as the majority received in-service training to obtain the necessary skills. Furthermore, the number of employees of the organization and the type of their service contracts depend on the number of beneficiaries that the organization has, due to budget constraints. C2 is not dependent on volunteerism due to the nature of the organization, but volunteers do play additional and supportive roles in the organization.

Both participants agreed that accountability is a factor that influences the service delivery of the organization. C2 is said to abide by their constitution to ensure that their services are provided accordingly. P3 stated that management is obligated to report to the organization's council, which ensures that there is accountability in C2. The council is also responsible for the election of the management team and votes on certain endeavors of the organization. P3 disclosed that donors funding the organization also ensure that the funding provided is accounted for and that their audit trails are open for scrutiny.

7.2.2.2 Organizational learning

Organizational learning is a key influence on the organization's service delivery and performance. The factors that influence organizational learning in C2 are similar to those identified in the literature in Section 3.5.5 of Chapter 3. P4 expressed that active learning takes place daily, as there are always new things to implement and that the "learning curve is massive." It is said to be challenging at times as the organization has to readily adapt to the environment. P3 explained that the organization had faced insolvency, resulting in the former chairperson of C2 adapting and restructuring their operations in order to keep the organization running.

Both participants argued that the changing nature of the organization influences organizational learning in C2, as explained in Section 3.5.2 of Chapter 3. Organizational structure also plays a role in learning in C2, as stated in Section 3.5.5.1 of Chapter 3. Both participants expressed that there are different members with various levels of expertise within the organization; therefore, if an individual is uncertain regarding the best way to proceed, there is someone within the organization able to provide assistance regarding the particular situation or problem. Knowledge is said to circulate easily in C2, as there are various means to communicate knowledge, such as notice boards, announcements and e-mail. P3 suggested that a centralized structure is suitable to support organizational learning as all the knowledge originates from management and council. P4 also considered a centralized structure as suitable since "you can't have everyone having a finger in the pie because nobody knows what's going on." *(sic)*

P4 considered organizational culture, as identified in Section 3.5.5.1 of Chapter 3, to play a role in facilitating learning. P4 stated that C2 has diverse individuals and that the organization's culture is satisfactory. P3, however, stated that the current organizational culture has not currently been positive in nature due to some issues within the organization which "got a negative effect from a cultural point of view". *(sic)*

Organizational leadership is also viewed as a contributing factor that facilitates learning in C2, as highlighted in Section 3.5.5.3 of Chapter 3. P3 considered it to comprise of two parts of leadership, namely on the council side and on the organization's management team. Both participants agreed that their current leadership style supports organizational learning.

7.2.2.3 Knowledge management practices

Both participants suggested they are unfamiliar with the concept of KM, but that they do understand the meaning and recognize that they use it in their organization. P4 stated that their use of KM depends on external factors, their council and past experiences. Knowledge plays an important role in their organization. Knowledge from various sources is used in the organization, such as tacit, explicit and expert knowledge. Both participants expressed that there is a good KM strategy in place. P4 stated that the organizational occurrences are escalated and handled by dedicated knowledgeable individuals within the organization. P3 suggested that there could be possible knowledge loss in the organization due to the discontent between council and management, as explained in Section 7.2.2.1. P4, however, did not think that there was any knowledge loss in the organization as everything is communicated in the organization.

7.2.2.4 Knowledge management tools

The tools used in C2 are similar to the tools identified in Sections 4.3 and 4.4 of the literature review. KM techniques are regarded as important tools in C2. P4 stated that KM is "a matter of giving and taking and it must work vice versa." C2 uses various KM techniques, such as brainstorming, training and CoPs. After-action review occurs after a brainstorming session. Similar to other NGOs in the same field C2 is actively involved with the community. P4 stated that CoPs are vitally important in their organization and that they would battle without them. P3 considered training and brainstorming to be important and suitable in their organization. C2 does not have a mentorship program in place.

P4 explained that the organization should evolve though learning and technology and KM technologies thus play an important role in the organization, for instance: C2 uses a database that is updated on a weekly basis, combined with a paper-based filing system. P3 considered the use of DBMS to be an important tool in their organization. Instant messaging and e-mailing are also used by C2 and are important mediums of communication with external stakeholders.

7.2.3 Case study three (C3)

7.2.3.1 Service delivery

Although C3 has been well-established in Grahamstown, they have faced several challenges similar to the service delivery challenges highlighted in Section 2.7 of Chapter 2. One of the main challenges raised by the participants is that the government does not recognize their services and that corporates are subsequently unwilling to provide funding. Their main challenge has been to deal with attempts by government departments to change the core activities of the organization.

The role of leadership is an important influence on the services that C3 provides, as explained in Section 2.7.1 of Chapter 2. P6 stated that leadership is an important part of keeping NGOs running as NGO leaders need "a fine skill to keep an NGO running" *(sic)* since the job description is quite diverse. P5 believed that leaders also assist in highlighting the challenges that their organization faces, as well as finding solutions to them. C3 is perceived by P6 to have some leadership challenges within the different levels in their organization. This is attributed to the lack of training regarding leadership within a group as well as the workers' perceptions of working independently as compared to working as a group, due to their past experiences. The type of leadership style most suitable for NGOs, as suggested by P5, is that of a democratic, flexible and open-minded leader that can leverage the skills of the people in the organization. The structure in C3 has changed from having everyone responsible in the various levels of the organization to a more team-based work approach with an individual in charge. The latter has proven to be more suitable. P5 believed that the C3 workers do have adequate skills as they invest their time and money in training; in-service training included. Likewise, P6 agreed that some workers have the necessary skills whilst others have the passion to work in NGOs. P6 further expressed the opinion that workers in NGOs often start as volunteers and then work their way into leadership positions.

C3 has not experienced any recent employee turnover, but P5 recalled that the organization had to retrench staff because of the withdrawal of their main funders a couple of years before. P6 added that, due to the nature of the organization, workers are encouraged to take leave occasionally. Volunteers are actively involved in supportive roles, but not as part of the organization's core services. The number of volunteers engaged in C3 has decreased over the years and P6 suggested that either "people don't have time to volunteer or there is a desperate need to actually work for money." A dedicated staff member, as explained by P5, is needed to drive the volunteer program.

Funding is regarded as a huge influence on the projects provided by C3, as identified in Section 2.7.2 of Chapter 2. P6 stated that funding "definitely influences what you can and can't do and so every year I say it's a challenge for us to balance the budget just by maintaining the status quo of our service". *(sic)* The organization currently has insufficient funding as each financial year starts with a zero balance and the organization has to assess their status each month. The services that C3 used to provide have been cancelled due to a lack of funding.

Accountability in respect of the organization's beneficiaries is a factor that influences the organization's service delivery, as described in Section 2.7.3 of Chapter 2. C3 is said to be accountable to stakeholders as certain policies and practices, including an external auditor reviewing the organization's performance and finances, are in place. P6 stated that there was a larger number of NGOs established in the past, as it used to be easier to obtain a NPO number through Social Development then than it is at present. The NGOs that are still able to function are those that are accountable.

7.2.3.2 Organizational learning

Both participants agreed that organizational learning is a key influence on their organization's service delivery. P6 considered organizational learning as part of the successful leadership of an organization, because the correct utilization of organizational learning tools will assist leaders "to see what needs to be changed and what needs to stay the same and what needs to grow or decrease….." P5 suggested that the organization's strategic plan initiates the learning curve each year as it drives the organization's objectives. Various factors that influence organizational learning are similar to those identified in Section 2.5.5 of Chapter 3.

Organizational structure, as identified in Section 3.5.5.1 of Chapter 3, is articulated by both participants as a contributing factor to learning in C3. P6 stated that the current organizational structure, as explained in Section 7.3.2.1, is suitable for learning as the communication channel works relatively well. Measures to ensure that communication is relayed to everyone in the organization were adopted in C3, as explained by P5.

Organizational culture is viewed by both participants as a critical element influencing organizational learning, as identified in Section 3.5.5.2 of Chapter 2. P5 considered the culture of NGOs to have a "soft approach". Both participants regarded it as important that workers in the organization should be willing to share and learn from each other. P5 explained that, because there is "no financial gain, no incentive bonus, and no corporate ladder to climb" in NGOs, learning within the organization may be hindered. Even though there are some obstacles that may hinder the way that C3 learns, both participants agreed that the current organizational culture does support learning.

Organizational leadership, as identified in Section 3.5.5.3 of Chapter 3, is an important factor influencing organizational learning in C3. P6 explained that "if leadership does not encourage improvement and learning and evaluation and things like that you can very easily just dissolve into the masses I think or be pulled around by the nos." *(sic)* The current leadership style supports organizational learning in C3 as leadership has the best interests of the staff at heart and intends to improve the services that the organization provides. The leaders also enjoy sharing their knowledge and repeat what has worked best for them.

7.2.3.3 Knowledge management practices

The terminology of KM is new to both participants, but they understand the meaning thereof and P6 explained that they do use knowledge from previous experiences to improve their organization and learn from their mistakes. Both participants believed that knowledge plays an important role in their organization. P5 suggested that the use of knowledge in C3 is "the life blood as without knowledge we wouldn't be able to function." P6 highlighted that knowledge is important on all levels of the organization to learn from and to positively influence their services. From a leadership point of view, it will also assist to improve the management of both the people and the organization itself. Furthermore, P6 expressed the opinion that they "can't exist without all that knowledge" and that they "constantly got to be looking for more I think to better yourself and to take an old task and do it better." *(sic)* C3 has established a KM strategy that helps facilitate communication and organizational learning in the organization. C3 uses various types of knowledge to operate their services, but tacit knowledge is regarded as essential in their organization. P6 argued that the organization invests substantially in the training of their workers. This results in 'head knowledge' that is often lost when the organization experiences staff turnovers, as indicated in Section 1.3 of Chapter 1. The organization has measures in place to ensure that most of the knowledge is retained within to prevent the loss of experience.

7.2.3.4 Knowledge management tools

C3 uses various KM techniques, as identified in Section 4.3 of Chapter 4, such as brainstorming, training, storytelling, after action reviews and CoPs. C3 is not much involved with other NGOs due to the uniqueness of their services; however, they do attend conferences and collaborate with NGOs that are similar to them. Training is provided, and staff members are encouraged to teach each other within the organization. P6 considered brainstorming and CoPs to be most suitable for their organization since these techniques provide everybody with the opportunity to be heard and to contribute in order to learn. P5 considered training to be most suitable for their organization. Both participants considered KM techniques to play an important role in their organization. P6 stated that such techniques are used regularly and stored, thereby ensuring that the organization moves forward without repeating the mistakes of the past.

KM technologies, as highlighted in Section 4.4 of Chapter 4, are also considered to play an important role in C3 as P5 was of the opinion that they would not survive without technology. On the other hand, P6 stated that C3 is not fully reliant on technology but that technology is convenient and practical to use. C3 uses a DBMS to record all details of beneficiaries and projects, in addition to a paper-based filing system. Telephone and e-mails are also used as communication tools in C3. Video conferencing and data warehousing are not used in C3. P6 suggested that face to face facilitation is most suitable as the organization may "lose out on being personal" if they were to rely solely on technologies. DBMS and e-mailing are the most important technologies in C3.

7.2.4 Case study four (C4)

7.2.4.1 Service delivery

C4 faces several service delivery challenges, similar to those identified in Section 2.7 of Chapter 2, such as funding. P8 iterated that "funding is always a problem when it comes to NGOs". Funding is a major influence on what is done in the organization, as identified in Section 2.7.2 of Chapter 2. Currently C4 would seem to have sufficient funding to run their operations for the next couple of years; however, the organization is heavily dependent on donor funding which puts the organization at potential risk if a donor should withdraw. The Department of Social Development is not aiding the organization financially and regards their services as illegitimate. The organization has made several attempts to register as an NPO with the aforementioned, but unsuccessfully so. P7 regarded the lack of involvement by other stakeholders of C4, namely the beneficiaries of the organization, as a challenge.

Accountability to the organizations beneficiaries is one of the factors that influence service delivery, as described in Section 2.7.3 of Chapter 2. The organization is compliant as they have policies and practices in place to ensure accountability. P7 stated that they ensure open lines of communication with beneficiaries and donors since "its public funds that we use so we have a responsibility in terms of accountability to our beneficiaries." In addition, policies regarding the submission of financial reports are in place, ensuring accountability to both donors and funders. Most NGOs in Grahamstown are compliant organizations.

P7 stated that leadership is also one of the factors influencing the services delivered by C4, as identified in Section 2.7.1 of Chapter 2. P7 elaborated that leadership in their organization consists of the management board and the NGO manager. In contrast, P8 viewed leadership as not influential to the services that they deliver due to the absence of direct communication between the leaders and the workers to resolve the problems in the organization. The leadership consists of diverse individuals from different backgrounds and specialities, adding value to the organization. Both participants viewed leaders as important players in mitigating and resolving the service delivery challenges that C4 faces. Additionally, both participants stated that leaders should be dedicated and passionate to run the organization successfully.

P8 regarded the workers as lacking the necessary skills at times during which "people had to come into a work situation where they don't have the skills to work with challenges that comes up especially here, there are people that don't have the skills in order to help them to give a better service but at the end of the day we have to learn from experience." *(sic)* P7, in contrast, believed that most workers in Grahamstown NGOs do have the necessary skills as they "all have professional people within their structures." Workers remain with the organization for a considerable amount of time and C4 thus does not experience a significant rate of employee turnover. If such an employee turnover had been experienced, it would have affected their services. The nature of employment in C4 is as follows: workers that start in the organization as volunteers generally move their way up into permanent positions. C4 has quite a large volunteer's base and is thus reliant on volunteers in the organization, as indicated in Section 2.7.4 of Chapter 2.

7.2.4.2 Organizational learning

Organizational learning has a definite influence on the organization's services because attending to beneficiaries' needs, as well as dealing with and learning from problems, are constants. The organization is able to utilize several KM techniques, such as training, to facilitate their learning. Organizational culture plays a role in facilitating learning in C4. P7 articulated that "people are able to make their own decisions with regards to their needs or learning needs." P8 also explained that stakeholders' perception of the undesirability of organizational culture may negatively influence the organization.

Organizational leadership is a contributing factor in the organization, as indicated in Section 3.5.5.3 of Chapter 3. P7 stated that the leaders in C4 recognize the need for learning within the organization. P8 confirmed that the leaders in C4 facilitate learning in the organization. Hence, the current organizational leadership is said to support organizational learning in C4.

The structure of the organizational is contributory to learning in C4, as indicated in Section 3.5.5.1 of Chapter 3. The management board is engaged in providing learning opportunities to workers in the organization. Due to the small size of the organization knowledge circulates very quickly. P7 supported a more centralized organizational structure in which the workers are invited to request and discuss matters although the final decision is made by the management board. P8 believed that a more decentralized organizational structure is suitable for leaning in their organization because staff members add valuable input to the organization.

7.2.4.3 Knowledge management practices

The concept of KM is unfamiliar to both participants; however, P7 understood the meaning thereof and suggested that their organization practices it to some extent. Knowledge plays a vital role in C4 and all staff members have knowledge and experience regarding their organization's activities. There is no set process or strategy to support KM, but there is mutual agreement and understanding on learning amongst the workers of the organization. C4 has not experienced any knowledge loss since P7 stated that the workers have been in the organization for a long period of time.

7.2.4.4 Knowledge management tools

Both participants agreed that the use of KM techniques, as identified in Section 4.3 of Chapter 4, plays an important role in C4. C4 uses various techniques, such as brainstorming, training, after action reviews, mentorship programs as well as CoPs. C4 is involved in various collaborations with other similar NGOs in Grahamstown regarding projects, as well as training initiatives. P7 indicated that there is an apparent lack of communication between NGOs regarding training possibilities and general updates. Storytelling is used to relay knowledge regarding both beneficiaries and staff members. P8 considered brainstorming and training to be most suitable for their organization. Likewise, P7 considered brainstorming, storytelling, after-action reviews and CoPs to be the most suitable and essential techniques as they provide valuable insights for the organization.

The use of KM technologies, as indicated in Section 4.4 of Chapter 4, also plays an important role in the organization. C4 uses e-mail and the telephone as the main technological tools in its organization. P7 claimed that the lack of monitoring and evaluation is one of the biggest failures in NGOs. P7 further conveyed that collected information needs to be analysed and used constructively in the organization. C4 does not use DBMS, video conferencing and instant messaging tools to communicate as most of their beneficiaries do not have access to such technologies.

7.2.5 Case study five (C5)

7.2.5.1 Service delivery

C5 has experienced several service delivery challenges similar to some of the challenges identified in Section 2.7 of Chapter 2. Both participants considered the lack of funding as one of the major challenges. Funding influences the service delivery of C5 and the organization currently has insufficient funding available. P9 stated that funding provided by the Department of Social Development over the past couple of years has "remained static and on the other hand you know the cost of living and other economic dynamics moved on." *(sic)* The participants both claimed that the Eastern Cape Province does not provide the same amount of financial support than the other provinces. The different government departments do not collaborate with each other; resulting in miscommunication regarding the support of C5. The law intended to protect the rights of the organization's beneficiaries has been criticized by both academics and others.

Leadership is also a contributing factor that influences the services of C5, as described in Section 2.7.1 of Chapter 2. P10 argued that the organization cannot function without good leadership and that instructions issued by the board have been followed. P9 stated that they "must have a core group of people who subscribe to various leadership principles" and are properly skilled and equipped with the necessary information and knowledge to exercise good governance. Leadership plays an important role in mitigating and resolving the service delivery challenges faced by C5. The board of C5 consists of various individuals with expertise that assists the organization to run effectively and that provides training and the sharing of knowledge within the organization. Once trained, workers expect to be recognized and paid accordingly; however, C5 has insufficient funds to increase such salaries, because the labor cost is not funded. Some NGOs collapse because of a lack of leadership, mismanagement of funds, maladministration and other reasons. P9 believed that "there is a critical need for building capacity within the NGO sector" as there are no ongoing capacity building opportunities. Some better resourced NGOs are able to find external experts to facilitate this. The organization does not currently experience a high percentage of employee turnover. C5 is struggling to get volunteers from the community to contribute to their services. This is said to be a result of the high unemployment rate in Grahamstown and the desperate need to find remunerative work.

Accountability is also a factor contributing to the services that C5 provides, as described in Section 2.7.3 of Chapter 2. There should be good governance, openness, transparency and monitoring and evaluation practices in NGOs. P10 stated that "if you don't have accountability the service won't be smooth." *(sic)* C5 has several strategies in place to ensure that the organization is held accountable, for example: the organizational accounts are assessed before payments by government departments are made. P9 suggested that the funders should provide incentives to encourage accountability by means of either recognition or financial rewards.

7.2.5.2 Organizational learning

Organizational learning is a key contributor to C5's services. Learning is viewed as a continual process as the organization is not static. P9 stated that "organizational learning stems from external forces or the external environment" and, due to the limited resources available, other organizations are competing for their share of funding. C5 is open to sharing and publicizing information and knowledge by various means. P10 distinguished between written and verbal types of learning. There are various factors that influence learning in C5 that are similar to the factors identified in Section 3.5.5 of Chapter 3.

The resources of the C5 organization influence learning. C5 currently has limited resources available to provide organizational development training to facilitate learning. Organizational structure is also a factor that influences learning in C5. The current organizational structure, as indicated in Section 3.5.5.1, facilitates organizational learning since knowledge circulates relatively well in C5. Everyone's views are considered and valued. P9 did not consider organizational structure as a problem in smaller organizations.

Organizational culture is another factor contributing to learning in C5, as evident in Section 3.5.5.2 of Chapter 3. C5 has a diverse and open culture regarding both workers and beneficiaries. The current organizational culture supports learning in C5. Organizational leadership is also a contributing factor that facilitates learning in C5, as indicated in Section 3.5.5.3 of Chapter 3. The leaders of the organization aid in facilitating and providing opportunities for the workers to learn.

7.2.5.3 Knowledge management practices

The participants are familiar with the concept of KM. P9 stated that the management team was isolated from the staff members in the past, which was not conducive to establish KM. Knowledge plays an important role in C5. Different types of knowledge are used to run the

C5 organization. Both participants argued that C5 has a KM strategy, as well as other policies, such as budget and human resource policies. C5 has not experienced much knowledge loss, as highlighted in Section 1.3 of Chapter 1. The loss of knowledge if and when a staff member does leave the organization, will potentially contribute to the organization's knowledge loss, however. P9 suggested that a succession process that transfers skills to other staff members should be started early to avoid knowledge loss.

7.2.5.4 Knowledge management tools

C5 uses various KM tools that help facilitate learning in the organization. KM techniques, as highlighted in Section 4.3 of Chapter 4, play an important role in C5. P10 stated that C5 uses training and after-action reviews in respect of the workers and storytelling predominantly in respect of the beneficiaries. P9 also stated that C5 uses training provided by both government departments and individuals within the organization. Such KM techniques are viewed as similar to human resource techniques. P9 said that C5 is not "there" yet in terms of the implementation of the various KM techniques, as they do not have a human resource official. P10 suggested that the KM techniques used in C5 are those considered to be the most suitable at that time.

C5 uses some KM technologies and the participants considered the use of KM technologies to play an important role in their organization, as indicated in Section 4.4 of Chapter 4. C5 does not have an internet connection; making it difficult to communicate. A DBMS, containing all the relevant information of the organization, is stored on their computer. E-mails are used by one worker in the organization. P10 said that money plays an important role regarding the access to technology. P10 considered any available technology to be suitable for C5. P9 considered e-mails and internet connections to be more suitable in their organization.

7.3 Cross-case analysis

After considering the individual case analysis reports in Section 7.2, a cross-case analysis was conducted, as illustrated in Section 6.5.2 of Chapter 6, in respect of each of the four categories, to highlight the similarities and contrasts between the various cases. The use of cross-case studies helps to generate and to analytically test explanations (Miles and Huberman, 1994). Cross-case studies add to the validity and generalisability of the findings (Miles and Huberman, 1994) through replication logic (Eisenhardt, 1989).

7.3.1.1 Service delivery

The five NGO cases are from different divisions within the social services sector, but they all share similar and quite distinct challenges in the services that they provide. Some of these challenges relate to the service delivery challenges as identified in Section 2.7 of Chapter 2. The main challenge expressed by all cases was funding. Funding plays a major role in the organizational service delivery of all the cases. Two out of the five cases have sufficient funds available to run their operations, but concern regarding their future funding was nevertheless expressed. Three of the cases are struggling financially as there is constant uncertainty regarding the source of future funding. Other NGOs have closed down due to a lack of finance. The key discussions regarding the lack of available funding include:

- NGOs are dependent on government and/or donor funding (C1, C4 and C5).
- Government funding is often not paid timeously (C1 and C5).
- There is a need for government to provide contributions and/or to subsidize the worker's salaries (C1, C2, C4 and C5) as donors prefer to financially contribute towards the core operations of NGOs (C1).
- The amount of funding received is usually dependent on the number of beneficiaries of the NGO (C1, C2 and C4).
- Government does not recognize the legitimacy of some organizations and is unwilling to fund their operations; resulting in these organizations attempting to change their core business for compliance reasons (C3 and C4).

Stakeholder involvement is another factor that influences some cases. A lack of involvement between NGOs and their stakeholders hinders their services (C1, C4 and C5). The following points were made regarding this concern:

- Most participants argued that the relevant government departments should be more involved in the operations of their organization (C1, C3, C4 and C5).
- Uniformity should be established between provinces in terms of development and finances of NGOs (C4 and C5).
- Community awareness and involvement are viewed as essential to support NGO services (C1, C2, C4 and C5).

The cases also revealed that accountability to stakeholders, like funding, is an influential factor in the services that the organizations provide. All chosen cases have suggested that they have been accountable and that they have implemented certain policies and guidelines to ensure that they remain accountable. A lack of accountability by other NGOs has resulted in the closure of some of these organizations. The following key points resulted from the cases:

- Accountability is regulated by the management team, committee board (C2) and external auditors (C3 and C5)
- Financial accountability is essential in attaining funding (C1, C3, C4 and C5).
- NGOs should abide by their constitution (C2 and C5).
- NGOs should prove their accountability to representative government agencies (C1).
- Well-managed NGOs are accountable and are generally still able to operate (C3).
- It is currently quite difficult to obtain an NPO number (C3 and C4).
- Monitoring and evaluation of NGOs are essential (C4 and C5) as there is a perceived failure in achieving this (C4).

All cases consider leadership as a major factor that influences the service delivery of NGOs. All cases agree that leaders should assist in the mitigation and resolving of challenges that the organization may face. Some cases have faced leadership challenges, and this has influenced their services. The following key points were raised in terms of this concern:

- The operational environment in which NGOs operate is constantly changing. Leadership is therefore considered to play an important role (C2, C3 and C5).
- Leaders may comprise of the management board, NGO manager (C1, C2, C3, C4 and C5) and division/sector leaders in the organization (C1, C2 and C4).
- The Department of Social Development values managers that have expertise in the operations of the organization (C1).
- Collaboration amongst workers in the organization is an important attribute in NGOs (C1, C2, C3, C4 and C5).
- A lack of collaboration may lead to leadership challenges due to miscommunication amongst workers (C1 and C5) and between the manager and the board regarding the making of vital decisions (C2).
- The committee board is comprised of individuals with diverse expertise that provide valuable input towards the running of the organization (C1, C2, C4 and C5).

Workers, including employees and volunteers, are actively involved in the services that some NGOs provide. Some cases experienced challenges due to the lack of skills of staff members (C1 and C3), high employee turnovers and/or dependency on volunteers (C1 and C4). The following points were raised with regards to the aforementioned:

- Workers with no prior experience ordinarily receive training from within in the organization (C1, C2 and C5).
- The lack of skills may be due to financial constraints (C1 and C5).
- The number of workers employed is dependent on the amount of funding that the organization obtains (C1, C2 and C3).
- Workers generally start as volunteers and work their way into semi- and permanent positions (C3 andC4).
- Some cases have faced high employee turnovers in the past (C1, C3 and C4).
- Some cases are not reliant on volunteers due to the nature of the organization; thus, volunteers are involved in supportive roles only (C2 and C3).
- Cases that typically need community involvement are reliant on volunteers and these volunteers are involved in the core operations of the organization (C1 and C4).
- The volunteer base has decreased recently (C3 and C5). This may be due to the need to earn money as a result of the high unemployment rate (C1, C3 and C5).
- Volunteerism appears to be losing its appeal (C3).

7.3.1.2 Organizational learning

Organizational learning is a key influence in the organization's service delivery in all cases. The learning curve is massive (C2). There are several factors that influence organizational learning, and some are similar to the factors identified in Section 3.5 of Chapter 3. The strategic plan of the organization influences and starts the learning curve (C3). The nature of the organization also influences learning in the organization (C2) because the operational environment of NGOs is constantly changing (C2 and C3) therefore, organizational learning is desirable. The amount of available resources in the organization is also considered to influence the manner in which individuals in NGOs can learn (C1 and C5).

Another factor that may influence learning is the culture of the organization. The current organizational culture is supportive of learning, as suggested by cases C2, C3, C4 and C5. The following points provide further explanation regarding the essence of organizational culture in learning:

- Workers in the organization should be self-driven and motivated towards their own personal learning and should be willing to share knowledge (C3 and C4).
- An open culture where knowledge is publicly shared is important to create awareness and for the organization's image (C1, C2, C3, C4 and C5); however, what is shared regarding the organization may depend on the manager and board (C1).
- There are no incentives, such as financial rewards, to provide encouragement and motivation to individuals, due to insufficient funds available (C3).
- The stakeholders' view of the organization is influenced by the culture of the latter (C4).

Organizational structure is considered as a factor that influences NGO service delivery in all five cases. The following points were raised with regards to the influence of organizational structure in facilitating learning:

- The incentive for individuals to progress may be hindered by workers unable to move up the corporate ladder (C3).
- A centralized structure approach in organizational learning is appropriate when decisions are made openly and democratically (C1, C2 and C3).
- Knowledge circulates relatively well in the current structure of all cases, which may be attributed to the small size of the cases (C4 and C5).

Organizational leadership is another factor that influences organizations in all the cases. The current leadership supports organizational learning in some cases (C2, C3, C4 and C5). The following points highlight the influence of leadership on learning in the cases:

- The empowering of individuals is considered an important part of leadership (C1).
- Clear goals need to be portrayed in order to improve and monitor learning by the leaders (C3).

7.3.1.3 Knowledge management practices

Only one of the case participants (C5) is familiar with KM terminology, but the majority are familiar with the concept thereof and most use KM in their organizations (C2, C3, C4 and C5). C2's KM processes include the referral of organizational matters to an experienced and knowledgeable individual and the utilization of a filing system. C3's KM strategy forms part of their strategic and budget plan for the organization. None of the cases has either a clearly documented strategy or a process that guides the organization's use of KM. However, they do utilize certain KM principles and practices in their operations.

All cases agree that knowledge plays an important role in the organizations. Similar and distinct types of knowledge are used by the cases. Tacit knowledge, using past experiences and personal knowledge, appear to be the most often used type of knowledge by all cases. C1, C3 and C5 agree that knowledge loss could result when the organization retrenches staff because the training of workers is considered an important investment. C2 regards the miscommunication between different levels within the organization as a negative influence; resulting in knowledge loss. Likewise, C1 argues that the organization may experience knowledge loss due to a lack of KM supportive strategies and processes in the organization. None of the cases believe that they are currently facing knowledge loss.

7.3.1.4 Knowledge management tools

All cases believe that KM techniques play an important role in their organization, as highlighted in Section 4.3 of Chapter 4. Both C1 and C2 regard communication as essential in the organization. There are several mediums by means of which the cases use KM techniques. The techniques used by all cases are training, after-action reviews and CoPs. C1, C2, C3 and C4 use brainstorming. Mentorship programs and storytelling are used by C3 and C4. Brainstorming is used in C3 to help assess what has worked best in the organization and to develop the organization's strategic plan. C1 uses brainstorming to share and resolve problems in the organization. CoPs are viewed as important techniques by C2, because they may seriously battle to operate without the community's involvement in the organization. CoPs are used between the NGOs. Storytelling is a useful technique in C1 and C4, as it allows workers in the organization to share other people's experiences and lessons learnt.

C1 believes that brainstorming, training, storytelling and after-action reviews are most suitable for their organization; C2 and C3 believe that brainstorming, training and CoPs are most suitable; C4 believes that brainstorming, training, storytelling and CoPs are important whilst C5 does not believe in subscribing to any particular technique and thus uses any technique that is suitable in a particular situation. It therefore appears that training, brainstorming and CoPs are considered to be the essential techniques that are used and accepted by the majority of the cases.

KM technologies, as indicated in Section 4.4 of Chapter 4, play an important role in all the cases. C2 understands that the organization has to adapt and grow as technology evolves. All cases use paper-based systems in addition to technology in their operations. C3 prefers face-to-face contact and chooses to not become fully dependent on technologies, fearing that it may cause the loss of the personal and caring nature of the organization. All cases use e-mail and telephone as KM technologies. DBMS are used in C1, C2, C3 and C5. C4 considers the lack of monitoring and evaluation as the biggest failure in NGOs. Video conferencing, database warehouses and system tools are not used in all the cases. C1 would like to use video conferencing but is unable to do so because of a lack of resources to facilitate the use thereof. C3 regards the use of video conferencing to be unnatural. Instant messaging is used by C2. C1 and C4 are unable to use instant messaging because their beneficiaries either do not have mobile phones or lack the knowledge and ability to use such technology.

C1 considers the use of a DBMS, telephone and e-mails to be the most suitable types of technologies in their organization; C2 suggests that DBMS, e-mail and instant messaging are ideal technologies; C3 regards DBMS and e-mails as the most suitable technologies in their organization; C4 states that e-mail and telephones are the most suitable technologies suitable, whilst the use of e-mails and all technologies available in the organization are considered to be important in C5. It thus appears that DBMS and e-mails are the essential KM technologies used and accepted by the majority of the cases.

7.4 Focus group

As explained in Section 6.4.2 of Chapter 6, a focus group discussion was conducted to analyse and verify the findings of the questionnaire.

7.4.1.1 Service delivery challenges

NGOs face several service delivery challenges, as highlighted in Section 7.3.1.1. One of the main challenges, faced by most NGOs, is insufficient funding. The difference between public and private funding was discussed in the focus group. The financial concerns rose by participants, as evident in Section 7.3.1.1, was also re-iterated in the focus group discussion. The participants (P11, P12 and P13) suggested that both public and private funders should be actively involved in the workings of NGOs. P12 and P13 claimed that government contributes an unsatisfactorily small portion of funds to worker's salaries. P12 added that government should be more involved in service delivery, not merely in administration. The concerns addressed by P11 and P13 included that delays in government funding have had a negative impact on their organizations. It is evident from the focus group discussion that NGOs presently rely more on government funding than on private funding.

The lack of accountability was the next service delivery challenge deliberated on by the focus group. Some participants were uncertain of the requirements regarding NGO accountability as required by the Department of Social Development (P11, P12 and P13). P10 highlighted that managers and staff should familiarize themselves with the NGO legislation and with the constitution of their own organization in order for the NGO to be accountable. P12 articulated that certain NGOs have been mismanaged and were unaccountable, but suggested that this is not the case with the majority of NGOs. The high occurrence rate of fraud in South Africa, combined with the delayed preventative processes by government departments, indicates that there has been mismanagement of government funds over the years. C3 and C4 have raised the alleged illegitimacy of some NGOs as a concern. The focus group participants expressed several reasons for the existence of this concern. P15 suggested that "the waiting period" to register an NGO with the Department of Social Development "is lengthier than it was before". P12 and P13 suggested that community-based organizations working from their houses are generally not registered. P11 and P12 also attributed this to a lack of understanding regarding the requirements involved to register an NGO.

A lack of stakeholder (such as both the government and the community) involvement has been identified as an obstacle to services delivery of some NGO cases. P12 and P15 disagreed that this factor hinders NGO's services; however, they do regard it as an important aspect that should be sustained. P15 believed that NGOs are established due to a need in the community "because of the gap between the duty holder and the people that provide the services." Therefore, key stakeholders should be actively involved in NGO operations. P12 believed that the government and the community are quite actively involved in their services. It is important to create awareness regarding the NGO and to maintain relationships with the stakeholders.

Community orientated NGOs are dependent on volunteers to contribute to their services. P11 and P12 agreed that volunteerism stems from the passion of individuals to contribute to the community without necessarily getting paid. P13 stated that, although they are dependent on volunteers in some respects in their organization, they do not perceive this dependency as a challenge. P12 suggested that a clear explanation of what is involved when volunteering should be provided when advertising. P15 said that volunteers should be encouraged to "identify areas that need strengthening within themselves for their personal growth" as well as to become involved in "giving back to the community." A volunteer friendly culture should be established to retain volunteers. The use of success stories to illustrate the impact of the work that NGOs provide is recommended as a technique to encourage volunteers.

7.4.1.2 Organizational learning

Additional factors that influence organizational learning, such as the nature and amount of resources, as well as the strategic plan of an NGO, were also explored in the focus group discussion. P15 claimed that the nature of an NGO, in relation to its culture, does influence the way in which individuals learn. This is particularly relevant to NGOs that have been operational for a long period of time and that are thus not necessarily open to organizational learning, because they are accustomed to the utilization of outdated processes. There is an urgent need for such NGOs to guide their staff members to adapt to the circumstances of today. NGOs are now expected to operate in a business-like manner, as opposed to the traditional charity-like approach. The participants reiterated that NGOs are caring by nature and that staff members join because they are passionate about a particular NGO's cause. The rotation of staff members aids the organization to include younger individuals, that are more open to change and learning, into the organization.

Another factor analysed in the focus group was the influence of resources on organizational learning in NGOs. All participants agreed that the amount of resources does not influence how NGOs learn. P12 stated that "resources are important for the availability of learning, but it doesn't influence the organizations ability to learn." *(sic)* P11 and P15 stated that learning begins with building a culture of learning, followed by the resources. Innovative ways of learning are sought and trump those that are expensive, due to the limited available funds available to most NGOs.

The last factor discussed in the focus group was the influence of a NGO's strategic plan on organizational learning. P12 and P15 agreed that the strategic plan occasionally influences how learning takes place in NGOs. NGOs are considered to rarely refer to their strategic plan, except when specifically needed. P12 suggested that a NGO's strategic plan could play a more significant role if it is agreed upon by staff members, formatted in an easily understandable way, available in visual format and discussed regularly. Some participants agreed that although the strategic plan of NGOs can play an important role in organizational learning, such plan is not often used by the majority of NGOs.

7.4.1.3 Knowledge management practices

Most participants in the focus group agreed that NGOs understand and/or practice KM. P12 further stated that NGOs do not generally use the term KM. NGOs use different types of knowledge; however, some focus group participants agreed that tacit knowledge is the most regular used knowledge type. The passion of the individual regarding the cause that the NGO is involved in also influences the degree of tacit knowledge gained and shared. P12 further stated that NGOs are increasingly reliant on explicit knowledge, such as policies and procedures, because of the changes in environment and the fact that explicit knowledge is required by funders. P15 explained that NGOs are struggling to balance tacit and explicit knowledge and that this has resulted in some NGOs, especially those with long standing communities, closing down. P12 added that it is important for NGOs to document their activities in "funders speak", as funders are becoming increasingly difficult to please, resulting in organizations closing down.

Some participants did not consider knowledge loss as a significant concern in NGOs; although the majority of participants indicated that they do experience it. P12 stated that "NGOs are quite sharing communities." *(sic)* P15 believed that knowledge loss may occur at management level, but that sharing of information and knowledge takes place amongst the staff. P15 added that, due to the limited amount of resources available to employ extra staff, workers in NGOs usually occupy more than one position. This means that when an individual leaves the organization, a gap is created that needs to be filled. Succession plans are rarely established or used. This is due to either time constraints or to the emotional investment that a particular organization foregoes to relinquish the knowledge gained.

7.4.1.4 Knowledge management tools

P15 considered the KM tools as important aspects, similar to monitoring and evaluation, in NGOs. P15 further argued that most NGOs are struggling to implement such tools due to a lack of experience and insufficient funding. The nature and attitude of NGOs still need to adapt to the processes required for KM tools to be successfully implemented and maintained. P12 stated that NGOs use the tools that are available without necessarily assessing which tools are most suitable. NGOs are more inclined to use what they are accustomed to, rather than exploring new methods. This is the position especially when the workers have been employed by the organization for a long period of time. P12 suggested that the human resources of NGOs play a role in the manner in which an organization utilizes its resources. NGO employees are typically paid a lower rate than employees in other organizations and this influences the skills attracted by the organization. P13 explained that their NGO does occasionally reflect on what has been successfully applied in their organization in order to ensure improvement.

The participants agreed that brainstorming, training and CoPs are the most suitable KM techniques. In addition, thereto P12 viewed mentorship is a beneficial but underutilized KM technique with a proper procedure to follow. Mentorship is regarded as a time-consuming task; thus, alternative techniques, such as brainstorming and others, are more readily used. The majority of participants considered KM technologies, such as database management systems, e-mails and telephones, as the most suitable technologies in some NGOs. P15 stated that e-mails are used at management level. Telephones are widely used, but the digital divide between the older and younger generation is huge. KM techniques are being prioritized and are increasingly used by some participants in NGOs. Although there is a slow shift towards using technology, personal interaction is considered to be very important in NGOs, as it ensures that roles are fulfilled with passion.

7.5 Developed thematic map

Figure 19 illustrated below represents the themes identified as part of the data analysis, as stated in Section 6.10. These themes were initially derived from the questionnaire and focus group discussion responses and were later reviewed and refined.

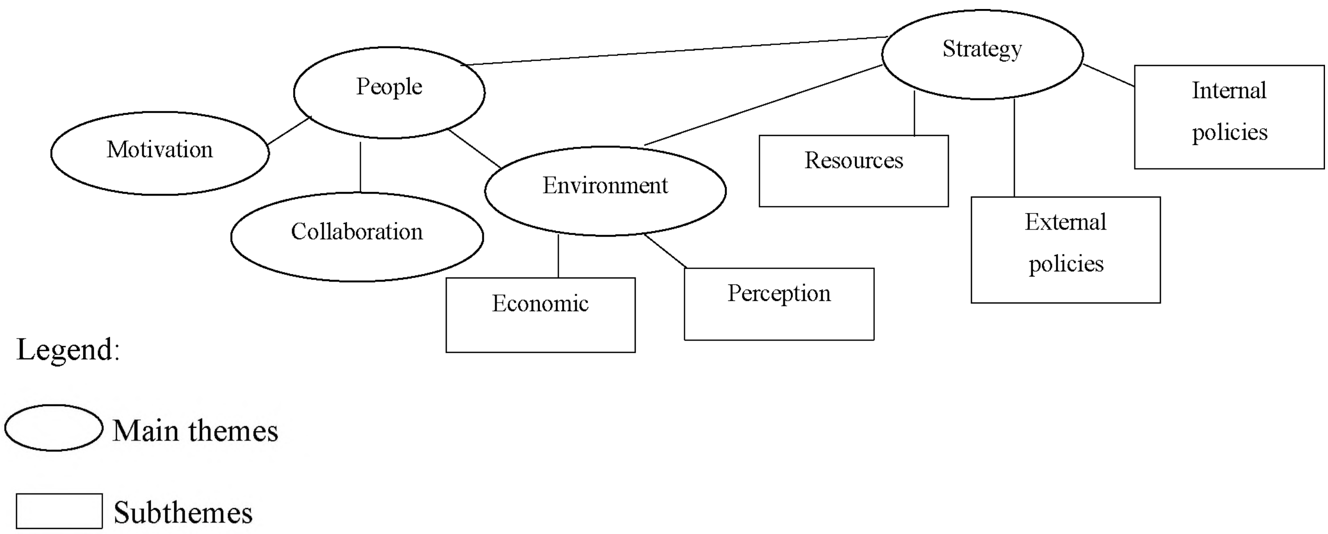

Figure 19: Thematic map

7.6 Themes (Empirical themes)

A thematic analysis approach was used to analyse the data obtained in the research, as explained in Section 6.1. This includes the identification of patterns and the grouping of coded items under overarching themes. A total of five main themes were identified by this process and are explained below, followed by quotations from the participants in support of the themes.

7.6.1.1 People

The people are important factors that drive the organization. Various stakeholders, such as managers, workers, committees, volunteers, government departments and communities, should be actively involved in the operations of NGOs. The insight and skills that they provide are essential to the driving of the organization. The NGO committees comprise of diverse individuals that have different specialities. This can potentially aid NGOs in decision making and promotes organizational learning by means of the sharing of different perspectives. One of the participants interviewed believed that the leaders of the organization should empower individuals to positively contribute to the services of NGOs. Some workers in NGOs are trained in spite of having no prior experience before joining the organization. A considerable amount of organizational resources is used for the development of staff members. Tacit knowledge is prominent amongst NGOs and is likely to contribute to knowledge loss in the organization if a worker leaves the organization.

"…at times I feel that the necessary skills are not there. So, people had to come into a work situation where they don't have the skills to work with challenges that comes up…" *(sic)*

"…there is a serious need to build human resource capacity within the NGO sector that cannot be disputed…" *(sic)*

7.6.1.2 Motivation

Motivation is essential to drive the workers in the organization in order to perform to the best of their abilities. The culture of the organization is influenced by the initiative of the workers of the organization. Some NGOs agree that workers should be self-driven, motivated for their own personal learning and willing to share knowledge with others. In the light of this, some NGOs state that there are insufficient incentives to drive workers to grow personally, due to the small size of the organization and the limited resources available. The involvement by most volunteers in the organization stems from a passion to help others and is not driven by financial gain.

"…but generally speaking people are really committed and work hard to deliver the services…" *(sic)*

"…with the NGO because we are not so stringent on, we don't link bonuses to, there is no incentive for this or you don't really grow the corporate ladder people tend to drag their feet sometimes…" *(sic)*

"…I think without being strong and determined I don't know what would happen…" *(sic)*

7.6.1.3 Collaboration

Collaboration is an essential theme in NGOs. Collaboration, by means of communication and involvement within and outside the organization, is considered to be essential in running the organization by most NGOs. Effective collaboration should exist between the different levels in the organization, such as the NGO manager, committees, workers and volunteers. Effective collaboration should also occur externally between various stakeholders of NGOs, such as the community and government agencies. The culture of an NGO also contributes to the collaboration of the workers. An open culture, where knowledge is publicly shared, is important to promote the organization's image and to create awareness. Leadership is also an essential factor determining the way that a NGO collaborates and should prevent challenges, such as miscommunication, amongst workers. This also influences the way that NGOs learn in their organization. The principle of KM advocates the unity of people; using the best practices of the organization, in collaborative settings, to improve the organization's effectiveness.

"…it is the different people that work here that brings different things to the table that you can learn from…" *(sic)*

"…another really difficult thing is that they always want everything yesterday. We don't get prior notice…" *(sic)*

"…it is often a broken sort of telephone because we have part time workers who take leave, the message was sent out on Tuesday and three members weren't here because they don't work on a Wednesday and so sometimes that causes a bit of confusion…" *(sic)*

"…but we also don't always communicate with one another in saying that we're going to have this training available…" *(sic)*

7.6.1.4 Strategy

NGOs are governed by a constitution, organizational plans/objectives and the NPO Act. There are various strategies and policies established to deliver their services. Monitoring and evaluation are also considered as approaches, but are not used in some NGOs. Accountability is a potential concern faced by NGOs. Tactics to guarantee accountability to the stakeholders of the organization are used by some of the NGOs interviewed. Furthermore, a KM strategy/process is adopted by most organizations. The various KM techniques and technologies are forms of strategies used in order to ensure that the organization is circulating knowledge and solving problems amongst the individuals in the organization. In order to provide services and to adopt KM systems, NGOs require resources. Some of the NGOs have an apparent lack of funding, which has potentially influenced the services that the NGOs provide to their beneficiaries, the KM tools used in the organization and the development of the skills of staff members.

"…certain things you can implement now and it can work for in the future, next week it can change..." *(sic)*

"…our books are audited every year obviously and we have an outside bookkeeper…" *(sic)*

"... there is a critical need for building capacity within the NGO sector…" *(sic)*

"…So I find the policy, which is part of service deliver, really difficult…" *(sic)*

"Funding plays a major role in our projects…" *(sic)*

"…if we had more money people could do all sorts of things and we can employ more staff and more qualified people…" *(sic)*

7.6.1.5 Environment

The last theme identified is the environment. The ever-changing nature of NGOs has caused uncertainty in respect of the operations of most organizations. For example: insufficient funding of some organizations has created insecurity regarding the coming months or years. The economic situation also plays a role in the amount of funding received from both private and public donors. The numbers of volunteers that contribute to the services of NGOs have lessened as a result of the current economic condition in Grahamstown, combined with the high unemployment rate.

"…where would you get another because the unemployment rate is so high in Grahamstown so unless you're offered a better paying job it would be foolish to leave..." *(sic)*

"…so the NGO culture is sometimes a soft approach…" *(sic)*

"say that you're a kind organization and some members of staff tend to think that when they have, when they don't perform that we are being mean and nasty when we have disciplinary action against them…" *(sic)*

7.7 Conclusion

This chapter followed the research methodology explained in Chapter 6. A conclusion is reached when theoretical saturation, wherein marginal improvement becomes small, is achieved (Eisenhardt, 1989). Hence, it is evident after analysing the data from both the questionnaire and the focus group discussion that there was no further study required to answer the research questions. In general, the results and conclusions produced in this chapter confirm the literature review and theoretical framework. The following chapter illustrates how the research questions were answered.

Chapter 8: Conclusions and recommendations

SECTIONS	PURPOSE
Section 8.1: Introduction	A clear introduction is provided to introduce the chapter briefly.
Section 8.2: Summary of findings	This section provides a summary of the findings.
Section 8.3: Responses to research question and sub-questions	The findings relating to each of the research sub-questions are highlighted in this section.
Section 8.4: Limitations and delimitation	This section identifies the limitations of the research to understand what has been both included and excluded in the study.
Section 8.5: Suggestions for further study	The possible future studies are explained in this section.
Section 8.6: Conclusion	A short summary concludes this chapter.

Chapter 8
Conclusions and recommendations

8.1 Introduction

The purpose of this chapter is to conclude the research by discussing the overall findings regarding the enhancement of service delivery of NGOs by means of the adoption of KM systems. This is accomplished by highlighting the main findings from each research sub-question, as stated in Section 1.4.1 of Chapter 1. The research limitations and future recommendations for further research are provided as well.

8.2 Summary of findings

Chapter 5 provides a detailed interpretation and the results of this research. The findings of this study are important to the academic body of knowledge in that:

- They offer an understanding of the service delivery challenges in NGOs in Grahamstown in the Makana region of the Eastern Cape Province;
- They offer insight into the extent to which NGOs use KM to promote organizational learning and the factors that influence organizational learning;
- They offer an evaluation of the KM frameworks and the contributing factors influencing the adoption of KM;
- They offer an understanding of the possible KM tools (techniques and technologies) that could be used in NGOs and identify which KM tools are considered as most suitable; and
- They provide a framework to aid NGOs in their adoption of KM systems.

A summary of the conclusions of this research are presented under each of the four research questions, provided in the following sub-sections.

8.2.1 What are the service delivery challenges facing NGOs in Grahamstown in the Makana region of the Eastern Cape Province?

NGOs provide services that are essential to the community that they operate in. Delivering such services however, comes with certain challenges that NGOs all over, but especially in Grahamstown, face. The service delivery challenges evident in the literature review, as explained in Chapter 1, coincide with the empirical findings of this research. Further clarification regarding how these challenges influence the service delivery of NGOs was gained as a result of this research. The most prominent challenge expressed by most participants in this study was insufficient funding. Several suggestions regarding the causes of the lack of availability of funds for NGOs provided by both private and government organizations and the negative impact that it has on service delivery, were made.

The lack of accountability regarding the services provided by NGOs was seen as a service delivery challenge; however, most NGOs were considered to be accountable. There was a need expressed that all staff members in NGOs should familiarize themselves with the NGO Act and the organization's constitution. Several other factors that influence this challenge were identified in this research.

Leadership is a major factor that influences service delivery of NGOs. Collaboration amongst workers within and between the various levels of the NGO (i.e. the management board, the NGO manager and the staff) is vital for the effective delivery of services. A lack of leadership due to various influences, such as miscommunication or the changing environment that the NGO operates in, affects the organization's effectiveness. NGO workers are actively involved in the services of NGOs. Potential challenges that NGOs face include high employee turnover, a lack of skills of staff and the dependency on volunteers.

The challenge of dependency on volunteers to contribute to services has been shown in this study to influence community orientated NGOs. The culture of the organization and the willingness of the volunteers influence the attraction of volunteers. The last challenge identified by the empirical study was the lack of stakeholders' (such as the government and the community) involvement. Although the services provided by NGOs are considered essential to the community, there is still an apparent lack of stakeholder involvement in respect of some NGOs. Awareness and participation are essential to provide support to NGO's services.

In summary, the following recommendations were proposed to NGOs to enhance service delivery in the organization:

- NGOs should innovatively seek alternative sources of funding;
- NGOs should ensure that they are accountable to beneficiaries and donors;
- NGOs should not entirely depend on volunteers for contribution to their core services; and

- NGOs should ensure that stakeholders (such as the government and the community) are suitably engaged in the workings of its organization.

8.2.2 What are the factors influencing organizational learning in NGOs in Grahamstown in the Makana region of the Eastern Cape Province?

Organizational learning is a key influence on the service delivery of NGOs. Various factors that influence organizational learning in NGOs were analysed. The factors identified in the literature review, as explained in Chapter 2, which include organizational structure, organizational culture and organizational leadership, coincide with the empirical findings of this research. Organizational culture refers to the principles and ethos of the organization. The organizational culture of workers should be self-driven, and they should be motivated by personal learning and the willingness to share knowledge. An open culture, where knowledge is publicly shared, is important for the organization's image. Organizational structure is the way that the organization is structured. Knowledge circulates relatively well in small NGOs, which promotes organizational learning. However, workers are unable to move up the corporate ladder, which may hinder incentives for the individual's progress. Organizational leadership is essential in organizational learning as it assists in empowering individuals and provides clear direction to improve and monitor learning.

The empirical study identified additional factors that influence the organizational learning of NGOs, including the nature of the organization and its strategic plan. The nature of NGOs is the manner in which NGOs operate, such as being passionate about its cause and being of a non-profit nature. There is an increasing need for NGOs to adapt their staff members to the current circumstances. In most cases NGOs are now expected to operate like a business. The strategic plan of NGOs influences how NGOs learn; however, it is not utilized by most NGOs. The amount of resources available does not substantially influence how NGOs learn as NGO are considered to be adaptive to limited resources available.

In summary, the following recommendations were proposed to NGOs to facilitate organizational learning in the organization:

- NGOs should ensure that a suitable organizational structure is formed to ensure that knowledge is easily circulated within the organization;
- NGOs should ensure that a climate that encourages learning and cultural practices is established;

- NGOs managers should have strong leadership abilities to facilitate organizational learning;
- NGOs should adapt to the nature of the environment that the organization operates in; and
- NGOs should ensure that organizational learning is incorporated into the organization's strategic plan.

8.2.3 What do NGOs understand by KM and to what extent are they adopting KM practices and principles?

Most NGOs understand and/or practice KM. Although it was evident that NGOs do not use the term 'knowledge management', most are familiar with the concept. The organization's KM strategy is part of the NGO's strategic and budget plan. Knowledge plays an important role in NGOs. Various types of knowledge are used in NGOs; however, the most regularly used type is tacit knowledge. NGOs are increasingly reliant on explicit knowledge, such as policies and procedures, due to changes in environment and the additional requirement by funders to provide explicit knowledge. Some NGOs struggle to balance tacit and explicit knowledge, which may result in closure in some cases. NGOs experience knowledge loss, but, in contrast to the findings of the literature review, it is not regarded as a significant concern. Knowledge loss generally occurs on the management level. Workers in NGOs fulfil more than one role as there are limited funds to employ more staff in distinct roles. This may result in a huge information gap if that individual should leave. NGOs are considered to be sharing communities. However, succession plans are neither readily established nor used, because of either time constraints or emotional investments in the NGOs.

In summary, the following recommendations were proposed to NGOs to facilitate the adoption of KM practices and principles:

- NGOs should utilize knowledge that is suitable for their organization;
- NGOs should balance the uses of tacit and explicit knowledge;
- NGOs should establish a KM strategy/process; and
- NGOs should ensure that workers understand the positive outcomes that the adoption of KM systems can provide.

8.2.4 What KM techniques and technologies would be most appropriate for supporting KM within NGOs in Grahamstown in the Makana region of the Eastern Cape Province?

KM techniques and technologies play an important role in NGOs; however, NGOs are struggling to implement these tools due to a lack of experience and insufficient funding. The nature of NGOs and the attitude of its employees must adapt to the processes required for the successful adoption and maintenance of KM tools. NGOs typically adopt KM tools that are available and familiar and will not necessarily assess and explore the most suitable KM tools. KM techniques, such as brainstorming, training and CoPs, are considered to be the most suitable KM techniques by some NGOs. KM technologies, such as database management systems, e-mail and telephones are considered as the most suitable technologies by some NGOs. KM techniques are prioritized and increasingly used by NGOs. There is a slow shift towards the use of technologies; however, personal interaction is very important to NGOs, especially in fulfilling their roles with passion.

In summary, the following recommendations were proposed to NGOs to ensure that the most appropriate KM tools are adopted:

- NGOs should emphasise the importance of the use of KM tools within the organization;
- NGOs should ensure that there is a positive workers' attitude to the use of KM tools;
- NGOs should adapt the nature of its organizations to the use of KM tools; and
  NGOs should re-evaluate their current KM techniques and explore other, potentially more suitable, KM techniques.

8.3 Revised conceptual framework

The framework developed from the literature review of this research, as illustrated in Section 5.5 of Chapter 5, was revised according to the findings of the data analysis and presented in Figure 20.

Similar to the initial conceptual framework, the revised framework highlights two aspects of NGOs, namely "challenges detracting from service delivery performance" and "strategies for enhancing service delivery". The red arrow that depicts NGOs moving backwards (right to left) represents the potential "challenges detracting from service delivery performance". Such challenges (listed below) are categorised into potential internal organizational service delivery challenges, direct KM challenges and organizational learning challenges.

The green arrow that depicts NGOs moving forwards (left to right) represents the possible "strategies for enhancing service delivery". Such strategies (listed below) are categorized into promoting KM system and organizational learning.

Through analysing the data collected, the findings from the consolidated theoretical framework, illustrated in Figure 17, were further verified and revised as well as additional concepts were included. Table 12 below illustrates how the data analysis informed the revision of the revised conceptual framework:

Table 12: Comparison between frameworks

Proposed conceptual framework	Revised conceptual framework	Comparison between frameworks
Challenges detracting from service delivery performance		
Internal organizational service delivery challenges		
Leadership challenges	Unchanged	N/A
Insufficient funding	Unchanged	N/A
Lack of accountability, legitimacy and transparency	Unchanged	N/A
Volunteer dependency	Volunteer dependency of community orientated NGOs	Some cases (C2 and C3) and focus group participants specified that reliance on volunteers is due to the nature of the organization; thus, volunteers are involved in supportive roles only. Therefore, this challenge was further refined to be more specific as it was evident from the data collected that community orientated NGOs are more dependent on volunteers.
N/A	Lack of stakeholder engagement	The data analysis highlighted that stakeholder involvement is another factor that influences some cases and focus group participants (C1, C4 and

		C5). A lack of involvement between NGOs and their stakeholders hinders their services. This challenge was not identified in the theoretical framework; thus, it was added to the revised conceptual framework.
Direct knowledge management challenges		
No standard KM framework	Unchanged	N/A
Few studies on KM in NGOs	Unchanged	N/A
Uncertainty of KM systems contribution	Unchanged	N/A
Uncertainty on selecting KM techniques and technologies	Unchanged	N/A
Organizational learning challenges		
Few studies on organizational learning	Unchanged	N/A
Resistance to publicize a negative image	Unchanged	N/A
Strategies for enhancing service delivery performance		
Promote KM system		
Utilizing knowledge suitable for the organization	Unchanged	N/A
N/A	Balance between the use of tacit and explicit	From the focus group discussion is was expressed that that NGOs are struggling to balance tacit and explicit knowledge, and that this has resulted in

	knowledge	some NGOs, especially those with long standing communities, closing. Thus, this element was added to the revised conceptual framework.
Forming a KM strategy/process	Unchanged	N/A
Adopting appropriate KM tools	Unchanged	N/A
N/A	Adapting the nature of NGOs to use KM tools	Most focus group participants indicated that NGOs understand and/or practice KM, although most do not generally use the term KM. P12 further stated that NGOs are increasingly reliant on explicit knowledge, such as policies and procedures, because of the changes in environment and the fact that explicit knowledge is required by funders. P15 argued that most NGOs are struggling to implement such tools due to a lack of experience and insufficient funding. The nature and attitude of NGOs still need to adapt to the processes required for KM tools to be successfully implemented and maintained.
N/A	Adapting worker's attitude to using KM tools	NGOs are more inclined to use KM tools that they are accustomed to, rather than exploring new methods, especially when the workers have been employed by the organization for a long period of time. Although there is a slow shift towards using technology, personal interaction is considered to be very important in NGOs, as it ensures that roles are fulfilled with passion.
Promote organizational learning		
Strong leadership	Unchanged	N/A
Suitable organizational	Unchanged	N/A

structure		
Encouraging learning climate and cultural practices	Unchanged	N/A
N/A	Adapting to the nature of the environment	Leadership within NGOs are considered to consistently be confronted with challenges due to the complexity and ever-changing nature of NGOs (C1, C2). Focus group participants agreed that NGOs that have been operational for a long period of time are thus not necessarily open to organizational learning, because they are accustomed to the utilization of outdated processes. Hence, there is an urgent need for such NGOs to guide their staff members to adapt to the circumstances of today.
N/A	Incorporating organizational learning in the organization's strategic plan	P12 and P15 participants agreed that the strategic plan occasionally influences how learning takes place in NGOs. P12 suggested that a NGO's strategic plan could play a more significant role if it is agreed upon by staff members, formatted in an easily understandable way, available in visual format and discussed regularly. Some participants agreed that although the strategic plan of NGOs can play an important role in organizational learning, such plan is not often used by the majority of NGOs.

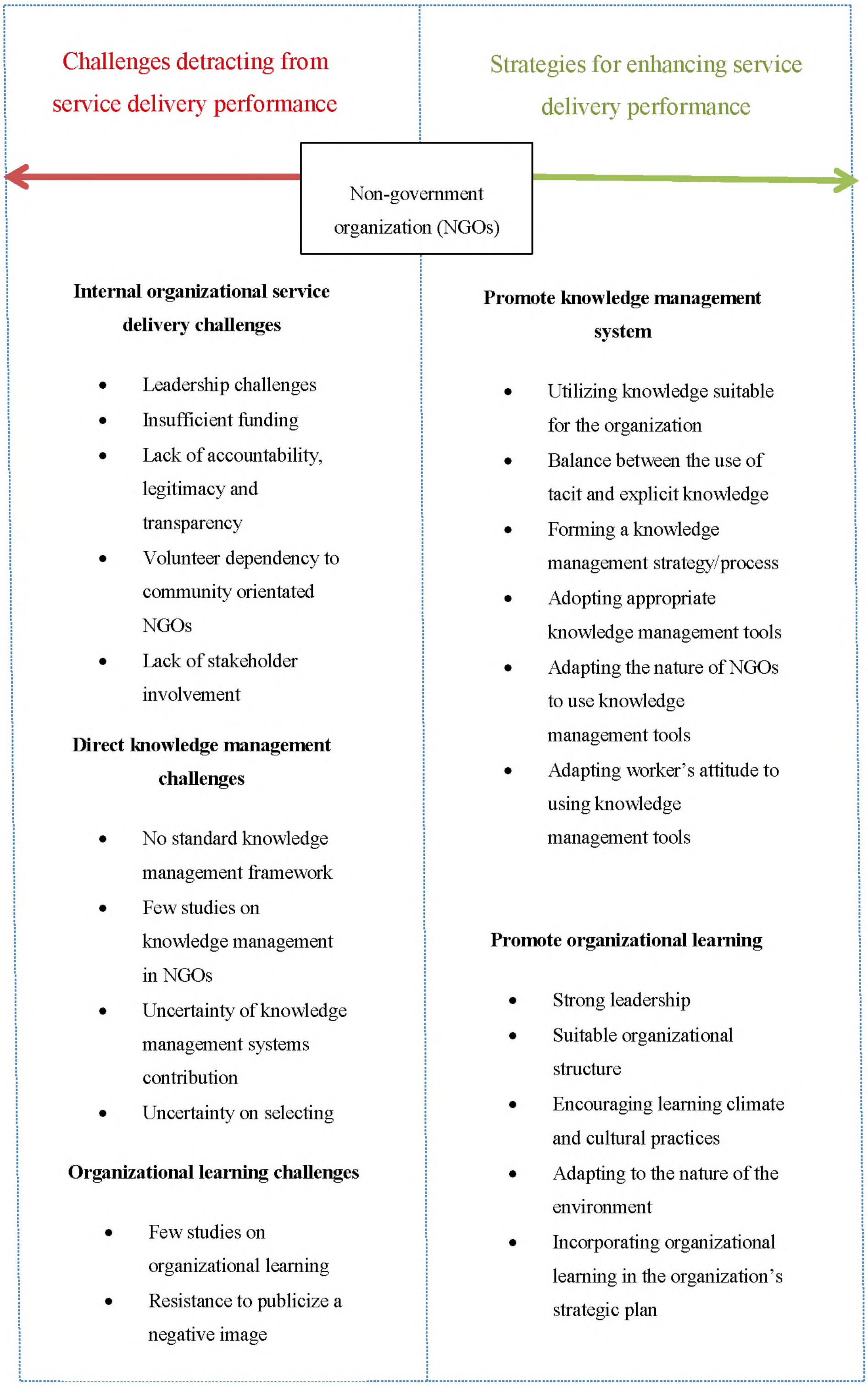

Figure 20: Revised conceptual framework

8.4 Limitations and Delimitations

The research presented some limitations regarding scope, time and cost. The research had limited funding and a set time frame which limited the scope of the study as it had to be completed within two years. The research sub-questions, as stated in Section 1.4.1 of Chapter 1, were clearly specified to achieve the goals of the research. Other aspects regarding the adoption of KM systems that can be studied in support of this study are set out in Section 8.5.

The sub-research questions of the study were limited in the following ways: firstly, in order to answer the first research sub-question, as stated in Section 1.4.1 of Chapter 1, the literature selected to answer this question was limited to the prominent service delivery challenges facing NGOs in South Africa and was not compared to other countries. The second research question identified the factors that influence organizational learning in NGOs. The literature review covered limited organizational learning factors that were related to NGOs, specifically. The third research question involved the assessment and use of KM practices in NGOs. The limitation posed to answer this research question involved assessing only a limited number of KM frameworks and particularly only those that relate to NGOs practices, not other organizations. To answer the last research sub-question, the literature review as evident in Chapter 4, only identified some of the possible KM techniques and technologies selected. Further analysis was made to answer this sub-question empirically by means of the responses of the participants. Aspects such as feasibility or implementation were not considered when assessing the most appropriate KM techniques and technologies for NGOs.

A relatively small number of NGOs were selected for data collection, thus the results may be considered restricted in terms of its relevance to other NGOs within the Eastern Cape and of NGOs in South Africa. The selected NGOs focused on specific characteristics, as highlighted in Section 2.3 of Chapter 2. Perspectives from other NGO classifications were not obtained which may cause the results to be subjective to a certain extent.

The use of case study research limits the extent of generalization to other situations. As highlighted in Section 2.2 of Chapter 2, one of the contributing challenges in defining NGOs include NGOs being a diverse group of organizations that cannot be generalized easily (Lewis, 2009). Further studies on different types of NGOs are essential to better understand the adoption of KM systems in NGOs.

It is important to note that this research is not intended to be a comprehensive assessment of all components of the adoption of KM systems in NGOs. This research was also limited to the responses gained from NGO participants and some participants may be unaware of certain elements influencing the adoption of KM systems.

8.5 Suggestions for further study

At the conclusion of this study the researcher recommends several future studies that may complement this research. Further study can involve an implementation strategy regarding how NGOs can implement KM practices and principles into their organization. As this research only focused on how NGOs adopt KM practices and principles, further studies need to be conducted to establish how NGOs can effectively adopt KM systems. Secondly, a supporting study can be conducted to assess the feasibility of the use of KM techniques and technologies that were deemed most appropriate in study, as well as to formulate an implementation strategy to use these KM tools.

8.6 Conclusion

NGOs face several service delivery challenges that affect their performance. It is evident that the adoption of KM systems can support NGOs to enhance service delivery of their projects. While the research revealed that some NGOs do utilise certain processes that may be loosely classified as KM, in practice several factors, including organizational learning and KM tools, need to be considered regarding the adoption of KM systems,.

This research provides several recommendations to strengthen the performance of NGO projects through KM. The revised proposed conceptual framework, as highlighted in Section 8.3, provides an overview of the strategies and challenges regarding the adoption of KM systems. This framework contributes to the existing body of knowledge within the context of South Africa and KM systems. The various research questions, as identified in Section 1.4, aided in the formation of this framework.

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Appendices

Appendix A – Ethical clearance approval

RHODES UNIVERSITY
Where leaders learn

Department of Information Systems
Hamilton building, Prince Alfred Street, Grahamstown, 6139, South Africa
PO Box 94, Grahamstown, 6140, South Africa
t: +27 (0) 46 603 8244
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e: informationsystems@ru.ac.za
www.ru.ac.za

10 June 2016

Dear Ms Nabiha Sherif

Ethics Clearance: Non-Government Organizations adoption of Knowledge Management systems to enhance service delivery of projects in Makana region of the Eastern Cape Province, South Africa.
Principal Investigator: Ms Nabiha Sherif
Tracking Number: CIS16-03

This letter confirms that the ethics application with tracking number CIS16-03 was **approved for ethical clearance** by the Rhodes University Ethical Standards subcommittee in the Computer Science and Information Systems Departments.

Please ensure that the ethical standards subcommittee is notified should any substantive changes be made, for whatever reason, during the research process. This includes changes to the investigators. Please also ensure that a brief report is submitted to the Ethics Subcommittee on completion of the research – a submission link is available on RUConnected for that purpose (see http://ruconnected.ru.ac.za/course/view.php?id=5470). The purpose of this report is to indicate whether or not the research was conducted successfully, whether any aspects could not be completed, or if problems arose that the ethical standards subcommittee should be aware of. If a thesis or dissertation arising from this research is submitted to the Rhodes University Library's electronic theses and dissertations (ETD) repository, please notify the committee of the date of submission and/or any reference or cataloguing number allocated.

Note:

- This clearance is valid form the date of this letter until the time of completion of the data collections.
- The Ethics Subcommittee cannot grant retrospective ethics clearance.
- Progress reports should be submitted annually unless otherwise specified.

Yours sincerely,

Krauss

Prof Kirstin Krauss
Chairperson: CS& IS Ethics Subcommittee of RUESC

Appendix B – Institution participation letter and form

RHODES UNIVERSITY

Grahamstown • 6140 • South Africa

DEPARTMENT OF INFORMAITON SYSTEMS
Tel: [+27] 0715277231
E-mail:g11s3491@campus.ru.ac.za

[Date]

Hamilton Building, Prince Alfred Street, 6139
PO Box 94, 6140
Grahamstown
South Africa

Dear [Name]

Re: Invitation to conduct research at your institution

Nabiha Sherif (under the supervision of Chris Upfold) is an Information Systems postgraduate Masters student at Rhodes University carrying out research titled "Non-government organizations' adoption of knowledge management systems to enhance service delivery of projects in the Makana region of the Eastern Cape Province, South Africa." The aim of this research is to determine how non-government organizations can adopt knowledge management systems to enhance service delivery of their projects. The participation and cooperation of your institution is important to ensure that the results of the research are accurately portrayed.

The research will be undertaken by means of interview based questionnaires with at least two employees in your institution. The data to be collected by this research will involve an interpretive, qualitative case study approach on five NGO cases from the Makana region of the Eastern Cape Province. The identity of your institution and the employees who voluntarily consent to participate will be treated with complete confidentiality. The collection of this data will require about 30 to 60 minutes completing of each participant.

This research has been approved by the Rhodes University Ethical Standards subcommittee in the Computer Science and Information Systems Departments. This subcommittee ensures that the research activities are accomplished responsibly and that they meet with the highest ethical standards. Any comments and enquiries can be directed to the committee via e-mail at informationsystems@ru.ac.za or telephone on 046 603 8244.

We request your guidance in identifying potential participants at your institute that would be suitable to interview (at a time and date that suites them).

Copies of the participant's research information and consent forms are attached for your information. If you have questions or wish to verify the research, please feel free to contact us.

If you would like your institution to participate in this research, please complete and return the attached form.

Thank you for your time and I hope that our request will be met with your favorable consideration.

Yours sincerely,

Nabiha Sherif
Research Student
g11s3491@campus.ru.ac.za
071 527 7231

Chris Upfold
Supervisor
c.upfold@ru.ac.za
0466038244

Appendix C – Questionnaire participation letter

RHODES UNIVERSITY
Grahamstown • 6140 • South Africa

DEPARTMENT OF INFORMATION SYSTEMS
Tel: [+27] 0715277231
E-mail: g11s3491@campus.ru.ac.za

[Date]

Hamilton Building, Prince Alfred Street, 6139
PO Box 94, 6140
Grahamstown
South Africa

Dear [Name]

Re: Invitation to participate in research study

You are invited to participate in a questionnaire as part of my Master's research study titled "Non-government organizations' adoption of knowledge management systems to enhance service delivery of projects in the Makana region of the Eastern Cape Province, South Africa." The aim of the questionnaire is to discuss the following principal research question: "How can non-government organizations adopt knowledge management systems to enhance service delivery?"

I am extending this invitation since I understand that you have a rich experience in the operations of non-government organizations and your opinions on this subject would be highly appreciated. I expect the result of this research to be valuable to organizations such as your own. Please note that your organization's identity, as well as your personal responses and identity as a participant, will be kept anonymous and confidential.

No preparation is required and the questionnaire will require between 30 and 60 minutes completing. I am hoping to submit this questionnaire at a time and date that suits you. We will provide you with all the necessary information to assist you to understand the study and to explain what would be expected of you (the participant). This research has been approved by the Rhodes University Ethical Standards subcommittee in the Computer Science and Information Systems Departments. This subcommittee ensures that the research activities are accomplished responsibly and that they meet with the highest ethical standards. Any comments and enquiries can be directed to the committee via e-mail at informationsystems@ru.ac.za or telephone on 046 603 8244.

Participation in this research is completely voluntary and this letter of invitation does not obligate you to take part in this research study. You will be required to provide written consent, including your signature, date and name to verify that you understand and agree to the conditions in order to participate. Further information containing guidelines and including the risks, benefits and your rights as a study subject, will be provided Please note that you have the right to withdraw without penalty at any given time during the study.

Please notify myself (Nabiha Sherif), via e-mail or telephone, whether you would like to participate in the questionnaire, or if you require clarification or further information about this event, or would like to refer another potential participant.

Thank you for your time and I hope that our request will be met with your favorable consideration.

Yours sincerely,

Nabiha Sherif	Chris Upfold
Research Student	Supervisor
g11s3491@campus.ru.ac.za	c.upfold@ru.ac.za
071 527 7231	046 603 8244

Appendix D – Questionnaire research information

Questionnaire- Research information

The purpose of this document is to provide information regarding the ethical implications of this Master research study. We strongly encourage you to read the details contained in each section in order to participate in the focus group and to indicate your agreement by signing at the end.

Research title: Non-government organizations' adoption of knowledge management systems to enhance service delivery of projects in the Makana region of the Eastern Cape Province, South Africa.

Researchers: Ms. Nabiha Sherif, g11s3491@campus.ru.ac.za, 071 527 7231

Mr. Chris Upfold, c.upfold@ru.ac.za, 046 603 8244

Research purpose: The purpose of this research is to investigate the adoption of knowledge management systems to enhance service delivery of NGO projects in the Makana region of the Eastern Cape Province of South Africa.

PROCEDURE

The questionnaire will be answered individually with the assistance of a facilitator to help guide the process. Questions posed are available in the participant questionnaire document. You may decline to answer questions if you wish. You may withdraw your participation without penalty at any time by informing one of the researchers. You are encouraged to be honest and open, but to remain within the limits in protecting confidentiality.

TIME COMMITMENT

Your participation in this questionnaire will last between 30 and 60 minutes. Transcripts of your responses will be made available to you within one month. It will take less than 1 hour to read and to check to ensure that your views were accurately represented.

BENEFITS AND CONCERNS

The benefits derived from participating in the research include an increased knowledge of the research area. The results of the study will be provided to the organization and can be applied within the non-government organization that the participant works in to enhance the organization's performances by means of the adoption of knowledge management. There will be no compensations and/or payments for participating in the questionnaire. There are no anticipated risks resulting from participating in the questionnaire. Measures to prevent and reduce possible harm to the participants will be taken. A slight possible risk may be a feeling of embarrassment when answering the questions. All responses will be kept private, anonymous and confidential. All possible concerns will be prevented and mitigated by the researchers.

ANONYMITY OF PARTICIPANTS AND CONFIDENTIALITY OF DATA

All potentially identifiable personal and organizational information, such as the organization's and participant's names in the data, will be coded to protect the participants' identities. The location of the NGOs will be removed to protect the participant's identity. The code keys will be kept confidential and will only be known to the researchers of this study. Any identifiable stories or circumstances will be slightly altered to protect your confidentiality. The discussions will be audio recorded and transcribed. All information will be kept securely in a password protected computer, in a locked room and will not be discarded upon completion of the research (which is estimated to be by December 2016).

PUBLICATION

The results of this questionnaire may be publicized by the researcher/supervisor; however, participant confidentiality and anonymity requirements will be respected.

FURTHER INFORMATION

This research has been approved by the Rhodes University Ethical Standards subcommittee in the Computer Science and Information Systems Departments. This subcommittee ensures that the research activities are accomplished responsibly and that they meet with the highest ethical standards. Any comments and enquiries can be directed to the subcommittee via e-mail at informationsystems@ru.ac.za or telephone on 046 603 8244.

You are encouraged to ask the researcher any questions throughout the duration of the study as well as after the completion of the research.

Please tick the relevant options below and provide your e-mail or mailing address if you would like further information after the completion of the research (optional):

☐ If you are interested in obtaining a copy of the final findings of the whole research

☐ If you are willing to be contacted in the future for a follow-up

Please provide your e-mail or mailing address:

____

Research participant

I, ________________________________, understand what is involved in this research and I agree to participate in this questionnaire

_______________________________ _________________

Signature of participant Date

Researcher

The participant is providing informed consent to participate in this study

_______________________________ _________________

Signature of witness/researcher Date

Appendix E – Informed consent form- questionnaire

RHODES UNIVERSITY

INFORMED CONSENT FORM

Department of Information Systems

Research Project Title:	Non-government organizations' adoption of knowledge management systems to enhance service delivery of projects in the Makana region of the Eastern Cape Province, South Africa
Principal Investigators:	Ms. Nabiha Sherif, Mr. Chris Upfold

Participation Information

- I understand the purpose of the research study and my involvement in it.
- I understand the risks of participating in this research study.
- I understand the benefits of participating in this research study.
- I understand that I will receive no payment for participating in this study.
- I understand that I may withdraw from the research study at any stage without any penalty.
- I understand that participation in this study is done on a voluntary basis.
- I understand that while information gained during the study may be published, I will not be
  identified and my personal results will remain confidential.
- I understand that the information gained will be used in the above-mentioned research and my identity and personal results will remain confidential and anonymous.
- I understand that my responses will be audio recorded and the recordings will be kept confidential and discarded upon completion of the above-mentioned research.
- I understand that I have had the opportunity to ask any question concerns or request further clarifications about this research to the researchers, Ms. Nabiha Sherif (via email at g11s3491@campus.ru.ac.za or telephone on 071 527 7231) and Mr. Chris Upfold (via email at c.upfold@ru.ac.za or telephone on 046 603 8244), from the Department of Information Systems at Rhodes University.
- I understand that I can make any comments or enquiries about participating in this research to the Rhodes University Ethical Standards subcommittee in the Computer Science and Information Systems Departments via email at informationsystems@ru.ac.za or telephone on 046 603 8244.

Information Explanation
The above information was explained to me by: Nabiha Sherif. The above information was explained to me in English and I am in command of this language.

Voluntary Consent	
I, , hereby voluntarily consent to participate in the above-mentioned research.	
Signature:	Date: / / 2016

Investigator Declaration	
I, Nabiha Sherif, declare that I have explained all the participant information to the participant and have truthfully answered all questions asked to me by the participant.	
Signature:	Date: / / 2016

Appendix F – Questionnaire schedule

Research questionnaire

GENERAL INFORMATION

Researchers: Ms. Nabiha Sherif, g11s3491@campus.ru.ac.za, 071 527 7231

Mr. Chris Upfold, c.upfold@ru.ac.za, 046 603 8244

Research title: Non-government organizations' adoption of knowledge management systems to enhance service delivery of projects in the Makana region of the Eastern Cape Province, South Africa.

Purpose: The purpose of this research is to investigate the adoption of knowledge management systems to enhance service delivery of non-government organizations (NGOs) projects, in the Makana region of the Eastern Cape Province of South Africa.

INTRODUCTION

The purpose of this questionnaire is to gain a better understanding of the research topic from the views and opinions of willing participants. The collection and use of this primary data follows the specifications set out in the questionnaire's research participant information and consent forms.

The following questions are sectioned into four research sub-questions:

5. What are the service delivery challenges facing NGOs in the Makana region of the Eastern Cape Province?
6. What are the factors influencing organizational learning in NGOs in the Makana region of the Eastern Cape Province?
7. What do NGOs understand by knowledge management and to what extent are they adopting knowledge management practices and principles?
8. What knowledge management technologies and techniques would be most appropriate for supporting knowledge management within NGOs in the Makana region of the Eastern Cape Province?

QUESTIONNAIRE QUESTIONS

Research Question 1:

Service delivery can be defined as the interaction between the providers (NGOs) and the beneficiaries where the providers offer a service through projects.

Service delivery

1. What type of services is your organization involved in?
2. Have you experienced any service delivery challenges in the projects that you have been involved in and, if so, how would you describe these challenges?
3. In your opinion, is leadership a factor that influences the service delivery of your projects and, if so, why?
4. Would you say that leadership plays an important role in mitigating and resolving service delivery challenges faced by NGOs and, if so, how?
5. In general, do you believe that workers (leaders, employees and volunteers) in NGOs in the Makana region of the Eastern Cape Province have the necessary skills to deliver their services (can effectively manage human and financial resources)?
6. What type of leadership style would you say best suits NGOs?
7. To what extent would you say that funding influences service delivery of your projects?
8. Is there sufficient funding to accomplish your organization's projects?
9. In your opinion, is accountability to your beneficiaries a factor that influences service delivery of your projects?
10. Are there policies, guidelines or practices in place to establish accountability to donors and beneficiaries in your organization?
11. How would you describe the accountability of other NGOs in the Makana region of the Eastern Cape Province?
12. To what degree does your organization experience employee turnover and, if so, does it impact on your service delivery?
13. How actively engaged are the volunteers in your organization and how do they contribute towards service delivery?

14. In your opinion, does your organization face any external challenges (political, economic, social, technological, environmental and legal) and, if so, which challenges would you say impact the most on your service delivery?

Research Question 2:

Organizational learning is defined as the process of creating, circulating and retaining knowledge in an organization.

Organizational learning

1. How would you describe the way that you learn in your organization?
2. In your opinion, is organizational learning a key influencer in your organization's service delivery and performance?
3. What is your opinion on publicizing information of your organization's performance to enhance awareness (positive and negative aspects)?
4. What do you consider as the factors that influence organizational learning?
5. Do you consider your organizational structure to be a contributing factor to learning in your organization?
6. How easily does knowledge circulate in your organization?
7. What type of organizational structure (centralized or decentralized) would you suggest to support organizational learning?
8. In your opinion, does organizational culture play a role in facilitating learning in your organization?
9. How would you describe the current organizational culture in your organization?
10. Does your current organizational culture support organizational learning?
11. Do you consider leadership to be a contributing factor in facilitating learning in your organization?
12. Does the current leadership style support organizational learning?

Research Question 3:

Knowledge management is defined as the practice of selectively applying knowledge from previous experiences of decision making to current and future decision-making activities with the express purpose of improving the organization's effectiveness.

Knowledge management

1. Are you familiar with the concept of knowledge management?
2. Would you say that knowledge plays an important role in your organization?
3. Do you know of any types of knowledge that are important in your organization (tacit/explicit knowledge and procedural, expert or community-generated knowledge)?
4. Is there a process or strategy to support knowledge management in your organization (acquire, retain, store)?

5. Would you say that your organization faces knowledge loss and if so, to what would you attribute the knowledge loss?

Research Question 4:

Knowledge management techniques

1. Which knowledge management techniques are you familiar with and which techniques does your organization use?
    - Brainstorming
    - Recruitment
    - Training
    - After action reviews
    - Storytelling
    - Mentorship program
    - Community of practice
    - Others
2. Which techniques would you say are most suitable for your organization?
3. Do knowledge management techniques play an important role in your organization?

Knowledge management technologies

1. Which knowledge management technologies are you familiar with and which technologies does your organization use?

    Storage tools:

    - Database management systems (DBMS)
    - Data warehousing and system tools
    - Others

    Communication and collaboration tools:

    - Video conferencing
    - Face-to-face facilitation
    - E-mail
    - Instant messaging
    - Others
2. Which technologies would you say are most suitable for your organization?
3. Does technology play an important role in your organization?

Appendix G – Focus group participation letter

RHODES UNIVERSITY

Grahamstown • 6140 • South Africa

DEPARTMENT OF INFORMATION SYSTEMS
Tel: [+27] 0715277231
E-mail: g11s3491@campus.ru.ac.za

[Date]

Hamilton Building, Prince Alfred Street, 6139
PO Box 94, 6140
Grahamstown
South Africa

Dear [Name]

Re: Invitation to participate in research study

You are invited to participate in a focus group discussion as part of my Master's research study titled "Non-government organizations' adoption of knowledge management systems to enhance service delivery of projects in the Makana region of the Eastern Cape Province, South Africa." The aim of the focus group is to discuss the following principal research question: "How can non-government organizations adopt knowledge management systems to enhance service delivery?"

I am extending this invitation to you as I understand that you have a rich experience in the operations of non-government organizations and your opinions on this subject would be highly appreciated. I expect the result of this research to be valuable to organizations such as your own.

No preparation is required and the focus group will last between 60 and 90 minutes. I am hoping to hold this focus group meeting at Rhodes University, Hamilton Building in the Atrium room, at [Time] on [Date]. If this date is inconvenient please let me know and kindly provide another date that is more suitable or recommend an alternative participant.

The focus group will consist of 6 to 8 individuals with experience similar to yours. Any comments made by any members of this group will be treated as confidential. Therefore, I will be asking for your assurance that you will also keep the identities and views of the other members confidential. Furthermore, your organization's identity and your personal responses and identity as a participant will be kept anonymous and confidential. If you participate in the focus group I would be pleased to make the results of the research available to you upon request.

We will provide you with all the necessary information to assist you in understanding the study and to explain what would be expected of you (the participant). This research has been approved by the Rhodes University Ethical Standards subcommittee in the Computer Science and Information Systems Departments. The subcommittee ensures that the research activities are accomplished responsibly and that they meet with the highest ethical standards. Any comments and enquiries can be directed to the subcommittee via e-mail at informationsystems@ru.ac.za or telephone on 046

603 8244.

Participation in this research is completely voluntary and this letter of invitation does not obligate you to take part in this research study. You will be required to provide written consent that will include your signature, date and name to verify that you understand and agree to the conditions in order to participate. Further information containing guidelines and including the risks, benefits and your rights as a study subject, will be provided. Please note that you have the right to withdraw without penalty at any given time during the study.

Please notify myself (Nabiha Sherif) via e-mail or telephone whether you would like to participate in the focus group, or if you require clarification or further information about this event, or would like to refer another potential participant.

Thank you for your time and I hope that our request will be met with your favorable consideration.
Yours sincerely,

Nabiha Sherif	Chris Upfold
Research Student	Supervisor
g11s3491@campus.ru.ac.za	c.upfold@ru.ac.za
071 527 7231	046 603 8244

Appendix H – Focus group research information

Focus group- research information

The purpose of this document is to provide information regarding the ethical implications of this Master research study. We strongly encourage you to read the details contained in each section in order to participate in the focus group and to indicate your agreement by signing at the end.

Research title: Non-government organizations' adoption of knowledge management systems to enhance service delivery of projects in Grahamstown in the Makana region of the Eastern Cape Province, South Africa.

Researchers: Ms. Nabiha Sherif, g11s3491@campus.ru.ac.za, 071 527 7231

Mr. Chris Upfold, c.upfold@ru.ac.za, 046 603 8244

Research purpose: The purpose of this research is to investigate the adoption of knowledge management systems to enhance service delivery of non-government organization's projects in Grahamstown in the Makana region of the Eastern Cape Province of South Africa.

PROCEDURE

The focus group will be led by a facilitator to guide the discussion. Questions posed are directed to the group and not to individuals. Questions posed are available in the participant focus group questions document. You may decline to answer questions if you wish. You may withdraw your participation at any time without penalty by informing one of the researchers. You are encouraged to be honest and open, but to remain within the limits in protecting confidentiality.

TIME COMMITMENT

Your participation in this focus group will require between 60 and 90 minutes of your time. Transcripts of your responses will be made available to you within one month. It will take less than 1 hour to read and check to ensure that your views were accurately represented.

BENEFITS AND CONCERNS

The benefits derived from participating in the research include an increased knowledge of the research area. The results of the study will be provided to the organization and can be applied within the non-government organization that the participant works in to enhance the organization's performances by the adoption of knowledge management. There will be no compensations and/or payments for participating in the focus group. There are no anticipated risks resulting from participation in the focus group. Measures to prevent and reduce possible harm to the participants will be taken. The probable harm in participating in this focus group includes possible embarrassment when answering questions and intimidation from the other focus group participants. All possible concerns will be prevented and mitigated by the researchers.

ANONYMITY OF PARTICIPANTS AND CONFIDENTIALITY OF DATA

All potentially identifiable personal and organizational information, such as the organization's and participant's names in the data, will be coded to protect the participants' identity. The location of the NGOs will be removed to protect the participant's identity. The code keys will be kept confidential and will be known only to the researchers of this study. Any identifiable stories or circumstances will be slightly altered to protect your confidentiality. We would like to gain your assurance that you will keep the identities and views of the other members confidential. The discussions will be audio recorded and transcribed. All information will be kept securely in a password protected computer, in a locked room and will not be discarded upon completion of the research (which is estimated to be by December 2016).

PUBLICATION

The results of this section may be publicized by the researcher/supervisor; however, participant confidentiality and anonymity requirements will be respected.

FURTHER INFORMATION

This research has been approved by the Rhodes University Ethical Standards subcommittee in the Computer Science and Information Systems Departments. The subcommittee ensures that the research activities are accomplished responsibly and that they meet with the highest ethical standards. Any comments and enquiries can be directed to the subcommittee via e-mail at informationsystems@ru.ac.za or telephone on 046 603 8244.

You are encouraged to ask the researcher any questions throughout the duration of the study as well as after the completion of the research.

Please tick the relevant options below and provide your e-mail or mailing address if you would like further information after the completion of the research (optional):

☐ If you are interested in obtaining a copy of the final findings of the whole research

☐ If you are willing to be contacted in the future for a follow-up

Please provide your e-mail or mailing address:

____

Research participant

I, _______________________________, understand what is involved in this research and I agree to participate in this focus group

______________________________ ________________

Signature of participant Date

Researcher

The participant is providing informed consent to participate in this study

______________________________ ________________

Signature of witness/researcher Date

Appendix I – Informed consent form- focus group

RHODES UNIVERSITY

INFORMED CONSENT FORM

Department of Information Systems

Research Project Title:	Non-government organizations' adoption of knowledge management systems to enhance service delivery of projects in Grahamstown in the Makana region of the Eastern Cape Province, South Africa
Principal Investigators:	Ms. Nabiha Sherif, Mr. Chris Upfold

Participation Information
• I understand the purpose of the research study and my involvement in it. • I understand the risks of participating in this research study. • I understand the benefits of participating in this research study. • I understand that I will receive no payment for participating in this study. • I understand that I may withdraw from the research study at any stage without any penalty. • I understand that participation in this study is done on a voluntary basis. • I understand that while information gained during the study may be published, I will not be identified and my personal results will remain confidential. • I understand that the information gained will be used in the above-mentioned research and my identity and personal results will remain confidential and anonymous. • I understand that I will hold the identities and views of the other focus group members confidential. • I understand that my responses will be audio recorded and the recordings will be kept confidential and discarded upon completion of the above-mentioned research. • I understand that I have had the opportunity to ask any question concerns or request further clarifications about this research to the researchers, Ms. Nabiha Sherif (via email at g11s3491@campus.ru.ac.za or telephone on 071 527 7231) and Mr. Chris Upfold (via email at c.upfold@ru.ac.za or telephone on 046 603 8244), from the Department of Information Systems at Rhodes University. • I understand that I can make any comments or enquiries about participating in this research to the Rhodes University Ethical Standards subcommittee in the Computer Science and Information Systems Departments via email at informationsystems@ru.ac.za or telephone on 046 603 8244.

Information Explanation
The above information was explained to me by: Nabiha Sherif The above information was explained to me in English and I am in command of this language

Voluntary Consent	
I, , hereby voluntarily consent to participate in the above-mentioned research.	
Signature:	Date: / / 2016

Investigator Declaration	
I, Nabiha Sherif, declare that I have explained all the participant information to the participant and have truthfully answered all questions asked to me by the participant.	
Signature:	Date: / / 2016

Appendix J – Focus group questions

Research focus group questions

Non-government organization

Challenges detracting from service delivery performance

Potential internal organizational service delivery challenges

- Leadership challenges
- Insufficient funding
- Lack of accountability, legitimacy and transparency
- Volunteer dependency
- Lack of stakeholder involvement

Direct knowledge management challenges

- No standard KM framework
- Few studies on KM in NGOs
- Knowledge loss
- Uncertainty of KM systems contribution
- Uncertainty on selecting KM techniques and technologies

Organizational learning challenges

- Few studies on organizational learning
- Resistance to publicize a negative image

Strategies for enhancing NGO service delivery

Promote Knowledge Management system

- Utilizing knowledge suitable for the organization
- Forming a KM strategy/process
- Adopting appropriate KM techniques
- Adopting appropriate KM technologies

Promote organizational learning

- Strong leadership
- Suitable organizational structure
- Encouraging learning climate and cultural practices
- Incorporating organizational learning in the organization's strategic plan
- Dedicating sufficient

The purpose of this study is to investigate how non-government organizations (NGOs), in Grahamstown in the Makana region of the Eastern Cape Province, adopt knowledge management systems to enhance service delivery in their projects. Several areas were explored which include:

- Understanding the service delivery challenges faced by NGOs
- Identifying the factors that influence organizational learning in NGOs
- Assessing what NGOs understand by knowledge management and to what extent they are adopting knowledge management practices and principles
- Understanding what knowledge management tools would be most appropriate for NGOs

The diagram depicts a framework to aid in enhancing service delivery by means of the adoption of knowledge management systems in NGOs. The following questions are derived from parts of this framework (that are displayed in purple) to gain further insight.

Part 1:

Definition: Service delivery can be defined as the interaction between the providers (NGOs) and the beneficiaries where the providers offer a service by means of projects.

The first section highlights the potential service delivery challenges faced by NGOs.

1. In an interview with local NGOs we discussed the challenges that NGOs face in the Makana region of the Eastern Cape Province. One of the main challenges that most NGOs face is insufficient funding. Some NGOs express that government should pay the salaries of NGO workers as donors are considered to be more willing to donate directly to the organization's services. The question I would like to further explore in this focus group is:
   Do you agree with what was found and to what extent is private versus public funding the major issue?
2. All NGOs interviewed have experienced that their organizations are accountable (in terms of their constitution and the NPO Act). Considering the significant number of NGOs that had closed down, the expressed need to improve monitoring and evaluation practices and the high number of non-compliant NPOs in the Eastern Cape Province by the Department of Social Development, I would like to discuss the following question:
   Do you believe that NGOs in the Makana region of the Eastern Cape are accountable?
3. Two of the NGOs interviewed are considered to be illegitimate by respective government departments and are recommended to change. In light of this some interview participants expressed that it is currently quite difficult to obtain an NPO number by the Department of Social Development.

Do you believe that the current policies governing NGOs are suitable and to what extent do you believe that government departments should be involved?

4. Some NGOs consider that there is a lack of involvement by stakeholders (such as government and community) and that this is hindering their services. Therefore, I would like to further discuss this concern:
   Do you consider the lack of stakeholder involvement as a service delivery challenge and how does it impact on the services of NGOs?
5. It emerged from the interview responses with local NGOs that some of the community orientated organizations are considered to be dependent on volunteers to contribute towards their service delivery.
   Do you consider some NGOs dependent on volunteers to contribute towards their service delivery and would you consider this to be a challenge?

Part 2:

Definition: Organizational learning is defined as the process of creating, circulating and retaining knowledge in an organization.

Organizational learning

1. Several factors, such as organizational culture, leadership and structure are considered to influence organizational learning in NGOs. Three additional factors identified in the interviews will be further examined:
   a. Do you consider the nature of NGOs to contribute to how individuals learn in the organization?
   b. Do you consider the amount of resources available in NGOs to contribute to organizational learning in the organization?
   c. Would you regard the strategic plan of the organization to influence organizational learning in NGOs?

Part 3:

Definition: Knowledge management is defined as the practice of selectively applying knowledge from previous experiences of decision making to current and future decision-making activities with the express purpose of improving the organization's effectiveness.

Knowledge management

1. It is believed that knowledge management plays an important role in NGOs. Do you believe that NGOs understand and/or practice the concept of knowledge management?
2. It appeared from the NGOs interviewed that different types of knowledge (tacit/explicit knowledge and procedural, expert or community-generated knowledge)

are used accordingly between the organizations. Tacit knowledge has seemed to be the most used knowledge type in NGOs. Would you consider this to be true?

3. The NGOs interviews are believed to not experience knowledge loss. Potential knowledge loss is considered to occur when a worker leaves the organization and does not disseminate knowledge acquired. Do you believe that knowledge loss is a significant concern in NGOs?

Part 4:

Definition: Knowledge management tools comprise of techniques and technologies.

Knowledge management techniques include: brainstorming, training, after action review, storytelling, mentorship program and community of practice, amongst others.

Knowledge management technologies include: storage tools-database management systems (DBMS) and data warehousing and system tools amongst others, as well as communication and collaboration tools, namely video conferencing, e-mail, instant messaging, amongst others.

Knowledge management tools

1. It emerged from the responses of some NGOs that they use various knowledge management tools in their organization.
   Do you believe that NGOs properly assess the use of the appropriate knowledge management techniques and technologies?
2. Analysis of the use of knowledge management techniques in some NGOs indicates that brainstorming, training and community of practice are the techniques that are considered to be the most suitable and most commonly used.
   Do you consider these techniques to be most suitable in NGOs?
3. Analysis of the use of knowledge management technologies in some NGOs indicates that database management systems, e-mails and telephones are the techniques that are considered to be the most suitable and commonly used.
   Do you consider these technologies to be most suitable in NGOs?
4. Do you consider knowledge management techniques or knowledge management technologies to be prioritized and used increasingly in NGOs?