

Organizational Learning in the Public Sector

- a study with reference to the Eastern Cape
Department of Human Settlements

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DECLARATION

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OPSOMMING

Hoofstuk 1 bied 'n algemene inleiding tot die studie. Dit handel oor die agtergrond, rasionaal, navorsingsvrae, doelstelling en die teoretiese begronding van die navorsing.

Hoofstuk 2 bied 'n oorsig van relevante literatuur oor sisteemdenke, en in besonder van leer in lewende sisteme. Die volgende temas word behandel: lerende organisasie, organisatoriese leer, individuele, span- en organisasie-leer, enkelslag-, dubbelslag- en deuteroleer. Drywers van en beperkinge op organisatoriese leer word bespreek.

Hoofstuk 3 behandel literatuur oor 'lessons learnt systems' en hoe toepaslik dit in die openbare sektor kan wees. Daar word spesifiek gefokus op die Departement Menslike Vestigings in die Oos-Kaap Provinsie.

Hoofstuk 4 bied die analise aan van 'n ondersoek in bogenoemde departement om te bepaal in watter mate praktyke bestaan wat as organisatoriese leer gereken kan word, of as sodanig uitgebou kan word.

Hoofstuk 5 stel 'n raamwerk voor vir organisatoriese leer in die departement. Gevolgtrekkings vir die praktisyns van organisatoriese leer, sowel as die akademie daarvan, word gemaak.

SUMMARY

Chapter one provides a general introduction to the entire study. It covers the background; rationale; research questions; aims; objectives; and the theoretical grounding of the study.

Chapter two provides a review of relevant literature on systems thinking, in particular the role of learning in living systems. This chapter also explores definitions of both learning organization and organizational learning, covering the topics of individual, team and organizational learning, types of organizational learning including single-loop, double-loop and deuterio-learning. Enablers of and barriers to organizational learning are examined. Characteristics of a learning organization are discussed.

Chapter three reports on a literature review on the applicability of lessons learned systems, as a knowledge sharing tool in the public sector. Attention is given to the advantages and disadvantages and there is a focus on how this can be implemented in the Eastern Cape department of Human settlements. The chapter also reviews available literature on frameworks of organizational learning.

In Chapter four analyses are presented of empirical research in the Eastern Cape Department of Human Settlements to determine whether there are practices in place that support organisational learning, or might encourage the department to become a learning organization. The chapter interprets responses and provides findings.

In chapter five a framework that could facilitate organisational learning in the Department is suggested. The chapter highlights academic implications as well as implications of the study for practitioners of organizational learning; and draws conclusions.

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TABLE OF CONTENTS

Opsomming	iii
Summary	iv
Acknowledgements	v
List of tables	ix
List of abbreviations	ix
CHAPTER 1	
<i>THE PROBLEM OF ORGANIZATIONAL LEARNING IN THE PUBLIC SECTOR</i> 1	
1.1 Importance of Organizational Learning	1
1.2 The Objective of this Thesis	4
1.3 Delimitations and Assumptions	6
1.4 Research Methodology	6
1.5 Primary theoretical Grounding	6
1.6 Thesis Design and Chapter Layout	8
CHAPTER 2	
<i>ORGANIZATIONAL LEARNING AND LEARNING ORGANIZATION</i> 9	
2.1 Background	9
2.2 Learning Organization	9
2.3 Organizational Learning	11
2.4 Organizational Learning versus Learning Organization	14
2.5 Characteristics of a Learning Organization	17
2.6 Systems Thinking	21
2.7 Enablers of and Barriers to	23
2.7.1 Enablers of Organizational Learning	23
2.7.2 Barriers to Organizational Learning	25
2.8 Levels of Organizational Learning	30
2.9 Types of Organizational Learning	30
2.9.1 Single-Loop Learning	32
2.9.2 Double-Loop Learning	32
2.9.3 Deutero-Learning	33
2.10 Key Notions from Theory	34
Summary	36

CHAPTER 3	
KNOWLEDGE SHARING SYSTEMS AND FRAMEWORKS FOR ORGANIZATIONAL LEARNING	38
3.1 Introduction	38
3.2 Types of Knowledge Sharing Systems	38
3.3 Lessons Learned	40
3.4 Advantages and Disadvantages of Lessons Learned	42
3.5 Frameworks of Organizational Learning and Learning Organization	44
Summary	52
CHAPTER 4	
PERCEPTIONS OF ORGANIZATIONAL LEARNING IN THE DEPARTMENT	54
4.1 Introduction	54
4.2 Formulation of Questions	55
4.3 Analysis of Empirical Research	57
4.4 Findings	69
Summary	72
CHAPTER 5	
TOWARDS A FRAMEWORK FOR ORGANIZATIONAL LEARNING	74
5.1 Introduction	74
5.2 Comparison of Frameworks	75
5.3 The Consolidated Framework	81
5.4 Academic Implications of the Study for Organizational Learning in General	92
5.5 Implications of the Study for Practitioners of Organizational Learning	93
5.6 Conclusion	93
BIBLIOGRAPHY	96
ADDENDUM	109

LIST OF TABLES

Table 2.1: eight characteristics of traditional organization versus learning organization	19
Table 3.1: KM processes, mechanisms and technologies	46
Table 3.2: KM processes, mechanisms and technologies	47
Table 3.3: KM infrastructure	48
Table 3.4: comparison of CAS and OADI-SMM frameworks	50
Table 3.5: Senge's learning organization framework	52
Table 4: results of total responses	60

LIST OF ABBREVIATIONS

AAR	After Action Review
CAS	Complex Adaptive Theory
EL	Expertise Locator
ELS	Expertise Locator System
KM	Knowledge Management
KS	Knowledge Sharing
KSS	Knowledge Sharing System
LL	Lessons Learned
LLS	Lessons Learned System
LO	Learning Organization
NASA	National Aeronautics and Space Administration
OL	Organizational Learning
SDI	Service Delivery Innovation
SMM	Shared Mental Frameworks
SMS	Senior Management Service
ST	Systems Thinking

CHAPTER 1

The Problem of Organizational Learning in the Public Sector

1.1 THE IMPORTANCE OF ORGANIZATIONAL LEARNING

In recent years, considerable attention has been focused on the importance of organizational learning (OL). The concept of OL has been applauded as a tool to acquire competitiveness in an ever-changing business environment for which new management techniques and developmental strategies are needed in order to remain effective and relevant¹. The organizational learning platform interacts with different corporate resources and evolves from the unique combination of the firm's business strategy, competitive forces, corporate history and culture, and technological complexity².

According to Antal, Lenhardt, and Rosenbrock³, the literature on organizational learning is dominated by contributions stressing the competitive advantages that organizations can reap from engaging in learning and the rewarding experience employees can expect to enjoy in learning organizations. Dai, Duserick, and Huang see this as the reason why the competitive organizational learning is not easily imitated by competitors and the learning-based competitive advantage would be likely sustainable

Organizations can only remain effective, competitive and successful if they are adaptive toward OL⁴. Škerlavaj & Dimovski⁵ support this view when they state that organizational

¹ DiBella 1997:12

² Dai, Duserick, and Huang 2007:169

³ Antal, Lenhardt, and Rosenbrock 2001:865

⁴ Senge 1990:10

⁵ Škerlavaj & Dimovski 2007:1

learning has emerged as one of the most promising concepts in strategic management literature in late 1980s in relation to the concept of competitive advantage. Dai, Duserick, and Huang share the same sentiments by suggesting that if a firm successfully negotiated the learning evolution, it should obtain benefits from return on learning and learning-based competitive advantage.

A number of authors consider organizational learning as the fundamental aspect of competitiveness and link it with knowledge acquisition and performance improvement.

Innovation is a dynamic capability, that is, a 'learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness⁶. Organizational learning is seen by de Geus⁷ as one of the most important sources of a sustainable competitive advantage that companies have

It has been argued by a number of studies that organizational learning affects competitive advantage⁸, financial and non- financial performance⁹; ¹⁰, tangible and intangible collaborative benefits in strategic alliances¹¹, the unit cost of production¹², and innovation¹³.

Some authors believe it is the degree to which organizations learn which determines whether an organization can attain competitive advantage. Ollila, Harung & Gustavsson¹⁴ state that the rate at which an organization learns may become the only sustainable source of competitive advantage. Goh¹⁵ agrees with this statement, emphasising that to remain competitive, organizations are adopting a strategy of continuous learning.

Authors such as Fiol and Lyles¹⁶; Garvin¹⁷; and Lei, Slocum & Pitts¹⁸ claim that learning through better knowledge and understanding facilitates behaviour changes that lead to

⁶ Perdomo-Ortiz 2005: 3&164

⁷ de Geus 1988:70-74

⁸ Jashapara 2003:31-50

⁹ Bontis, Crossan, & Hulland 2002:437-469

¹⁰ Dimovski & Skerlavaj 2005:56-67

¹¹ Simonin 1997:1150-1173

¹² Darr, Argote, & Epple 1995:1750-1762

¹³ Llorens-Montes, Ruiz-Moreno, & Garcia-Morales 2005:1159-1172

¹⁴ Ollila, Harung & Gustavsson 1994: 33

¹⁵ Goh 2003:216

¹⁶ Fiol and Lyles 1985: 803-813

¹⁷ Garvin 1993:78-91

¹⁸ Lei, Slocum & Pitts 1999:24-38

improved performance. Emphasis has also been made by Jones¹⁹ that organizational learning is important for organizational performance, defining it as a process through which managers try to increase organizational members' capabilities in order to understand better and manage an organization and its environment to accept decisions that increase organizational performance on a continuous basis'

Authors such as Slater and Narver²⁰; Dickson²¹; Hurley and Hult²²; Baker and Sinkula²³; Farrell²⁴ agree that organizations should have the ability to engage in organizational learning processes to reach long-term competitive advantage, by encouraging innovation, particularly within dynamic and competitive environments. Organizations encourage employees to learn new skills continually to be innovative and to try new processes and work methods in order to achieve the strategic business objectives of the organization. However, Farrell; Baker and Sinkula believe there is a lack of empirical corroboration of the relationship between organizational learning and innovation.

According to Su²⁵, the benefits of learning for organizations are:

- Learning increases everyone's capacity to contribute to the success of the organization; and
- Learning enables the organization to be more effective in meeting its goals.

As Honey and Mumford²⁶ suggested, the benefits of making learning a priority in organizations are as follows:

- To ensure the long-term success of the organization;
- To make continuous improvement a reality; and
- To ensure successes and best practice are transferred and emulated.

From the above, it can be deduced that the importance of OL in any organization should not be under-estimated, as spinoffs such as competitive advantage; improved organizational

¹⁹ Jones 2000, 430-439

²⁰ Slater and Narver 1995: 63

²¹ Dickson 1996:102

²² Hurley and Hult 1998:42

²³ Sinkula 1999a:295

²⁴ Farrell 2000:201

²⁵ Su 2006:248

²⁶ Honey and Mumford 1996:95-96

performance; and innovation are attributed to it. Lipshitz, Popper and Oz²⁷ sum this up by stating that there has been increasing interest in the process of learning within the organizational context, encouraged by the belief that learning and innovation are essential to survive in competitive and dynamic environments.

As organizations are involved in ceaseless transformation, they should learn to understand, guide, influence and manage this transformation. It should be acknowledged that transformation is integral to organizations, which therefore requires that organizations should be transformed into learning systems.

1.2 THE OBJECTIVE OF THIS THESIS

This study was triggered by the observations of the researcher in the Eastern Cape Department of Human Settlements (Department) that the Department seemed to continuously repeat the same errors of judgement and operations without a clear plan how to rectify such errors.

Situations like this in departments are often ascribed to defective functioning of standard operations or inadequate management. But in this thesis a perspective from the view point of Knowledge Management is taken. From that point of view it can be seen that the problem is deeper. The starting point of this study is the assumption that the inefficiencies come about because of the absence of proper Knowledge Management, including the absence of systemic organizational learning policies and practices.

To implement OL strategies and practices in a public sector environment is, however, not as straight forward as it may seem. As was indicated in point 1.1 the topic of OL has been widely researched and discussed in literature. However, (as will be shown in Chapter 2) a literature review quickly demonstrates that the focus of the wide discourse on OL is almost exclusively directed to business organizations. There are very few studies available on non-profit organizations²⁸. According to Gilson, Dunleavy & Tinkler²⁹, OL has only recently become a theme in the study of public sector organizations.

It must be acknowledged that to some extent public sector departments function as organizations in the same way as private sector companies. Som & Nam for instance show

²⁷ Lipshitz, Popper and Oz 1996:292

²⁸ Som & Nam 2009: 310-323

²⁹ Gilson, Dunleavy & Tinkler 2009:5

that with the growing demand for services, public sector departments share the competition for the available funding. From that perspective they also need to acquire more innovative organizational capabilities or they lose out in the competition. In these areas public sector departments can learn much from the body of literature on OL to improve their organizational learning capacity³⁰.

But even so, there are clear differences between private and public sector organizations. They do not have the same output objectives, and organizational processes are not entirely the same. Public sector organizations are institutionally different. They have to serve society and not a selected group of clients. They are governed by political decisionmaking and not profit.

In fact, a primary assumption in this thesis is that public sector organizations face a much more complex environment than private sector companies. For that reason a concept of OL is necessary which includes systems thinking.

It is clearly not possible to simply copy and paste OL frameworks and practices from the general OL literature onto public sector organizations. There is a need to investigate appropriate ways to institutionalise learning processes within a public sector organization³¹.

With this in mind it can now be stated that:

the general objective of this thesis is to contribute to the discourse on OL in public sector organizations

To do so the thesis

- reviews selected literature on OL with the purpose of identifying key aspects of OL that are applicable to public sector organizations
- interprets the key aspects against the background of Systems Thinking and Complex Adaptive Systems theory
- on this basis, proposes an OL framework which is suitable for implementation in a public sector environment
- using the practical context of the Department of Human Settlements in the Eastern Cape Province as a reference point to help guide the conceptual design to maintain a sense of practicality

³⁰ Bovaird & Löffler 2003:49

³¹ Barrados & Mayne 2003:88

1.3 DELIMITATIONS AND ASSUMPTIONS

Organizational Learning is a very wide topic. The thesis is narrowed down by the following assumptions and delimitations:

- The thesis is first and foremost a conceptual study and the outcome is a conceptual framework
- The theoretical point of departure is that an OL framework for public sector organizations cannot be adequate unless OL is understood in the context of Systems Thinking and Complex Adaptive Systems (see point 1.5 below)
- As the thesis is primarily conceptual, it lay outside the scope of the research project to implement and evaluate the proposed framework
- Since real observations in the Eastern Cape Department of Human Settlements triggered the interest in the topic, the conditions in the Department function as decor of the conceptual analysis
- The researcher was granted permission to do a perception poll in the Department and the results provided some insight in the distinctive characteristics of a public sector organization in South Africa. These insights contributed to the conceptual framework being proposed
- The focus of the thesis is Organizational *Learning*, not organizational theory. For this reason no attempt was made to investigate in depth where the differences lie between private and public sector organizations

1.4 RESEARCH METHODOLOGY

As this is a conceptual study, a wide spectrum of literature on OL was reviewed. Following the point of departure which emphasises the importance of systems thinking, special attention was paid to literature in the field of systems theory and complex adaptive systems.

To gauge the perceptions of key figures in the Department a survey was designed and the results analysed in accordance with standard practice as described by Babbie & Mouton³².

1.5 PRIMARY THEORETICAL GROUNDING

A number of theories have been developed around organizational learning. However, the primary theoretical grounding for this study is Peter Senge's theory which emphasises that

³² Babbie & Mouton 2003:232

the most important ingredient for organizations to thrive is their ability to benefit from their own past experiences. The emphasis here is that organizations that succeed tend to be learning organizations. According to Senge³³ learning organizations are organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together. Senge³⁴ further explains that for a learning organization, “adaptive learning” must be joined by “generative learning”, learning that enhances our capacity to create’.

Organizations that fail to learn tend to perform far below their potential and are surpassed by their competition, while organizations that learn effectively advance and enjoy an immense competitive advantage³⁵. Senge recognises the dimension that distinguishes learning from more traditional organizations as the mastery of certain basic disciplines or ‘component technologies’ and identifies five that are said to be converging to innovate learning organizations. They are:

- Systems thinking;
- Personal mastery;
- Mental frameworks;
- Building shared vision; and
- Team learning

Senge³⁶ adds to this recognition that people are agents, able to act upon the structures and systems of which they are a part. All the disciplines are, in this way, ‘concerned with a shift of mind from seeing parts to seeing wholes, from seeing people as helpless reactors to seeing them as active participants in shaping their reality, from reacting to the present to creating the future’³⁷. It is to the disciplines that we will now turn.

Strength here is the way in which systems theory is put to work. A good introduction to the basics and uses of this theory; and the way in which it can be brought together with other theoretical devices in order to make sense of organizational questions and issues is provided.

³³ Senge 1990: 3

³⁴ Senge 1990:14

³⁵ Gunderman & Chan 2007:650

³⁶ Senge 1990: 69

³⁷ Senge 1990: 69

Systemic thinking is the discipline that integrates the others, fusing them into a coherent body of theory and practice³⁸. Systems theory's ability to comprehend and address the whole and to examine the interrelationship between the parts provides both the incentive and the means to integrate the disciplines.

Senge argues that five disciplines underpin learning organizations. The Fifth discipline is systemic thinking that provides substance to the other four disciplines and hence to the learning organization as a whole³⁹.

1.6 THESIS DESIGN AND CHAPTER OUTLINE

The thesis can be divided into three components.

The first component is a selective review of important theory in the field of Organizational Learning, Learning Organization, Systems Thinking, Complex Adaptive Systems, and various Frameworks for the management of knowledge in organizations.

The second component is an empirical survey of perceptions regarding the above in the Department.

The third component is the attempt to integrate the various perspectives into a coherent framework for OL in a public sector organization.

The first component is discussed in Chapter 2 (Learning Organization and Organizational Learning), Chapter 3 (Knowledge Sharing Systems and Frameworks for Organizational Learning).

The second component is discussed in Chapter 4 (Perceptions of Organizational Learning in the Department)

The third component is dealt with in Chapter 5 (Towards a Framework for Organizational Learning)

³⁸ Senge 1990: 12

³⁹ Flood & Senge 1999:1

CHAPTER 2

Organizational Learning and Learning Organization

2.1 BACKGROUND

In this chapter a review of relevant literature on Learning Organization (LO) and Organizational Learning (OL) will be provided. Organizational Learning and Learning Organization in terms of process versus structure will be contrasted. Definitions of both Learning Organization and Organizational Learning will also be provided. The chapter will then discuss characteristics of a learning organization. A comprehensive overview of systems thinking will be provided, showing the role of learning in living systems. Levels such as individual, team and organizational learning; and types of organizational learning, which are single-loop learning; double-loop learning; and deuterio-learning are going to be examined. Aspects such as enablers of and barriers to organizational learning will be discussed. LO is explained next.

2.2 LEARNING ORGANIZATION

Peter Senge in 1990 drew attention to the notion of LO through his work, *The Fifth Discipline*. However, according to Kerka⁴⁰, there is no consensus on the definition of a learning organization. Garvin⁴¹ shares the same sentiments by stating that a clear definition of the learning organization has proved to be elusive. Despite the said lack of consensus, authors never stopped providing definitions, including Garvin⁴² who defines a LO as one that is skilled at creating, acquiring and transferring knowledge, and at modifying its behaviour to reflect new knowledge and insights.

⁴⁰ Kerka 1995:3

⁴¹ Garvin 2000: 9

⁴² Garvin 1993:110

McKnabb⁴³ defines a LO as one that is inherently agile, one that is quick to identify, digest and apply the lessons learned in its interactions with its environments.

Moilanen⁴⁴ sees a LO as a consciously managed organization with learning as a vital component in its values, visions and goals, as well as in its everyday operations and their assessment.

According to Senge⁴⁵, LO's are organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together.

The LO is an ideal towards which organizations have to evolve in order to be able to respond to the various pressures they face⁴⁶.

A learning company is an organization that facilitates the learning of all its members and continuously transforms itself⁴⁷.

The UK Industrial Society⁴⁸ defines a LO as one which continually transforms itself. The Society further explains that the process of transformation is a creative one in which a willingness to change and adapt its needs exists⁴⁹.

McGill, Slocum & Lei⁵⁰ define the LO as a company that can respond to new information by altering the very programming by which information is processed and evaluated.

A LO sustains internal innovation with the immediate goals of improving quality, enhancing customer or supplier relationships, or more effectively executing business strategy, and the ultimate objective of sustaining profitability⁵¹.

LO's are characterised by total employee involvement in a process of collaboratively

⁴³ McKnabb 2007:126-7

⁴⁴ Moilanen 2001:6

⁴⁵ Senge 1990: 3

⁴⁶ Finger & Brand 1999: 136

⁴⁷ Pedler, Burgoyne & Boydell 1991: 1

⁴⁸ UK Industrial Society 1997:3

⁴⁹ UK Industrial Society 1997:3

⁵⁰ McGill, Slocum & Lei (1992:5)

⁵¹ Mills & Friesen 1992:147

conducted, collectively accountable change directed towards shared values or principles⁵².

According to Berrio⁵³ several definitions of organizational learning have emerged from the literature, but the most popular was formulated by Senge. On the other hand, Garvin has attempted to consolidate different thoughts on LO which relies on the requirements that an organization must satisfy in order to become a learning organization.

Senge's definition portrays a LO as the organization in which a person cannot not learn because learning is so insinuated into the fabric of life and also as a group of people continually enhancing their capacity to create what they want to create. In addition Senge sees it possible that the rate at which organizations learn, may become the only sustainable source of competitive advantage.

The definitions have much in common but there are some differences as well. Some are of the opinion that it is impossible to achieve OL, e.g. the definition by Finger & Brand as they portray the LO as what organizations wish they would be. Others indicate that it is a possibility, however not as a result of individual learning but of learning by the whole organization. The definition by Pedler *et. al.* suggests that LO is enforced by senior management while the one by Watkins *et. al.* implies that it starts at the bottom and works its way up. Definitions by Pedler *et. al.*; Senge; and Garvin, all emphasise the power of learning to transform vision into action. Only the definition by Mills & Friesen associates a LO with the private sector by incorporating profitability. The section below explains OL.

2.3 ORGANIZATIONAL LEARNING

Garvin⁵⁴ argues that most discussions of OL do not get to the heart of how to make it happen in organizations. Their focus is on high philosophy and grand schemes, sweeping metaphors rather than the gritty details of practice Garvin. Sharing the same sentiments Ulrich, Jick & Von Glinow⁵⁵ state that to date there have been far more thought papers on why learning matters than empirical research on how managers can build learning capability. Stewart⁵⁶ notes that there is little consensus on what OL is.

⁵² Watkins & Marsick 1992: 118

⁵³ Berrio 2006:31

⁵⁴ Garvin 1993:79

⁵⁵ Ulrich, Jick & Von Glinow 1993: 59

⁵⁶ Stewart 2001:144

According to Gilson, Dunleavy & Tinkler⁵⁷ the canvass of OL is a large one, but the focus of studies is restricted by the themes of looking at experience, struggling to capture and employ knowledge, so as to improve the organization's performance. Gilson, Dunleavy & Tinkler⁵⁸ further state there are also differences of emphasis between authors, but OL itself is generally accepted as a good thing and the main variations consist of different emphases between authors on the components or pre-requisites for firms especially to become LOs. Key debating points are detected in different definitions provided by several authors.

Weick⁵⁹ argues that the defining property of learning is the combination of same stimulus and different responses, however it is rare in organizations, meaning either organizations do not learn or that organizations learn but in non-traditional ways. Weick adds that perhaps organizations are not built to learn, instead, they are patterns of means-ends relations deliberately designed to make the same routine response to different stimuli, a pattern which is antithetical to learning in the traditional sense. Authors define OL as:

- a system of actions, actors, symbols and processes that enables an organization to transform information into valued knowledge which in turn increases its long-run adaptive capacity⁶⁰.
- the activity and the process by which organizations eventually reach the ideal of a learning organization⁶¹.
- the development of knowledge held by organizational members, which is being accepted as knowledge and is applicable in organizational activities, therewith implying a potential change in those activities⁶².
- the capacity or processes within an organization to maintain or improve performance based on experience⁶³.
- the process of detection and correction of errors⁶⁴.
- the coming together of individuals to enable them to support and encourage one

⁵⁷ Gilson, Dunleavy & Tinkler 2008:6

⁵⁸ Gilson, Dunleavy & Tinkler 2008:7

⁵⁹ Weick 1991: 119

⁶⁰ Schwandt 1993:8

⁶¹ Finger & Brand 1999: 136

⁶² Berends, Boersma, & Weggeman 2003:1042

⁶³ Nevis, DiBella & Gould 1995:15

⁶⁴ Argyris 1977:117

another's learning, which will in the longer term be of benefit to the organization⁶⁵.

- comprised of the following processes: Open-minded inquiry, informed interpretation, and accessible memory⁶⁶.
- the process in which an organization's members actively use data to guide behaviour in a way as to promote the ongoing adaptation of the organization⁶⁷.
- a cyclical process that links individual belief to individual action; to organizational action; to environmental response; and back to individual belief⁶⁸.
- change in defensive routines within organizations; the development of an organizational learning culture; or both⁶⁹.
- the ability of an organization to gain insight and understanding from experience through experimentation, observation, analysis, and a willingness to examine both successes and failures⁷⁰.

A number of authors refuse to apply this notion to the public sector situation. Warwick⁷¹ asserts that it is not enough to unpack a briefcase with concepts and measures developed in other settings, unload them in a public agency and expect them to encompass all of the worthwhile reality to which they are exposed. Supporting this statement Gilson, Dunleavy & Tinkler⁷² state that a simple transposition of the private sector work on OL cannot be read across to government sector departments and agencies.

Bozeman⁷³ arguing against this view, points out that in many senses all organizations are public, and that the distinctiveness of public and private organizations is often overdrawn. Like government agencies, large companies are 'public' in many aspects of their business, respond strongly to external stakeholders (such as the media, market analysts, major investors, and their boards) and cope with strong loads of legal, economic and environmental regulation⁷⁴.

⁶⁵ Hodgkinson 2000:57

⁶⁶ Day 1994:10

⁶⁷ Edmondson and Moingeon 1998:12

⁶⁸ Friedman, 2001:398

⁶⁹ Pawlowsky 2001:72

⁷⁰ McGill, Slocum and Lei 1992:5

⁷¹ Warwick 1975:204

⁷² Gilson, Dunleavy & Tinkler 2008:9

⁷³ Bozeman 1987:84

⁷⁴ Bozeman 1987:85

The United Kingdom (UK) ministers signalled a clear intention that OL would play an important part in a continued drive for responsive, high-quality public services⁷⁵ through the 1999 UK Government White Paper on Modernising Government⁷⁶ that proposed that the Public Service must become a learning organization. Supporting this statement, Common⁷⁷ therefore, states that in the public sector OL can be regarded as the ability of an organization to demonstrate that it can learn collectively by applying new knowledge to the policy process or innovation in policy implementation. Each occurrence of OL can in turn be regarded as an innovation⁷⁸. McElroy adds that the means by which new knowledge is produced and integrated into widespread organizational practice is what is meant by the term “innovation”; and innovation and OL are largely synonymous terms.

It can be deduced that although authors differ in defining OL, they all see it as an important practice that needs to be implemented by organizations. It has also been stated that most authors imply that it might not apply in the public service. However, none of them has provided evidence that that really is the case. OL and LO are contrasted below.

2.4 ORGANIZATIONAL LEARNING VERSUS LEARNING ORGANIZATION

While McGill, Slocum & Lei,⁷⁹ do not distinguish between LO and OL Ang & Joseph⁸⁰ contrast these in terms of process versus structure. Their study incorporates research in both OL and LO and rather than dovetailing to specific learning concepts, this study embraces the eclectic nature of prior literature with the aim of evolving the underlying nomological network on OL and LO⁸¹.

According to Sun⁸² the extant literature offers the following five distinctions:

- Descriptive Versus Prescriptive

Sun states that this distinction was proposed by Tsang⁸³ and elaborated by Robinson⁸⁴ who

⁷⁵ Auluck 2002:109

⁷⁶ UK Government White Paper on Modernising Government 1999:56

⁷⁷ Common 2004:38

⁷⁸ McElroy 2002:97

⁷⁹ McGill, Slocum & Lei 1992:5-17

⁸⁰ Ang & Joseph 1996

⁸¹ Ang & Joseph 1996:4

⁸² Sun 2006:20-25

⁸³ Tsang 1997

⁸⁴ Robinson 2001

sees OL as concerned with how learning takes place in the organization thus a question of description, seen in the definitions of organizational learning provided above by Argyris⁸⁵; Hodgkinson⁸⁶; and Day⁸⁷.

In contrast, a learning organization is seen by Tsang as prescriptive and concerned with the question how should an organization learn. It is said to be dealing with prescriptions and interventions necessary to create an organization capable of continuous learning and change. This prescriptive approach is embraced by two definitions provided above, one by Garvin⁸⁸ and the other by Mills & Friesen⁸⁹.

- Naturally Occurring Versus not Naturally Occurring

In any organization some form of learning takes place hence Dodgson⁹⁰ describes organizational learning as naturally occurring, and as considered a natural state of the organization. On the other hand a learning organization needs effort, as it requires the implementation of prescriptions to move the organization beyond its existing form and behaviour. Organizational learning is as natural as learning in individuals while the learning organization can be distinguished as one that moves beyond this natural learning, and whose goals are to thrive by systematically using its learning to progress beyond mere adaptation⁹¹.

- Obtainable Versus Ideal

According to Örtenblad⁹², because organizational learning is naturally occurring, therefore it is considered to be obtainable or reachable. Kim states that all organizations have to learn in order to survive. Employees in their daily work life continue to adapt and improvise, when changing situations demand them to do so Sun⁹³.

However, according to Tsang, since double-loop capability is a necessary proficiency for the learning organization, it is considered an ideal state or form. Moilanen⁹⁴; Tosey & Smith⁹⁵

⁸⁵ Argyris 1977b:116

⁸⁶ Hodgkinson 2000:157

⁸⁷ Day 1994:10

⁸⁸ Garvin 1993: 80

⁸⁹ Mills & Friesen 1992:147

⁹⁰ Dodgson 1993

⁹¹ Dodgson 1993:380

⁹² Örtenblad 2001:129

⁹³ Sun 2006:20-25

⁹⁴ Moilanen 2001

⁹⁵ Tosey & Smith 1999

consider an organization to reflect different archetypes as it journeys towards this ideal state or form (which can be considered as a special type of archetype).

- Domain of Academics Versus Domain of Practitioners

Easterby-Smith et al.⁹⁶; Tsang consider OL to be the domain of academics whilst LO is considered the domain of practitioners. However they both have an infrastructure of journals, conferences, sponsorships, and internet discussion lists, and it is difficult to find significant crossovers of researchers and practitioners from one stream to another⁹⁷. This can also be viewed as a distinction between theory and practice.

- Distinction Made by Considering the Entities of Learning and Knowledge Location

Örtenblad makes a distinction between the two by considering three entities of learning: the individual learning on behalf of the organization as described by Argyris & Schön⁹⁸; and Kim⁹⁹; the organization as a super-person, and the collective by either reinforcing existing knowledge or enhancing existing organizational memory as viewed by Örtenblad as having memories, storing routines, procedures, documents, and cultures. Huber¹⁰⁰; Crossan et al.¹⁰¹; and Bontis, Crossan & Hulland¹⁰², view the LO in the same light.

In OL, knowledge exists outside the individual, and the organizational memory is the primary focus (Örtenblad). Therefore, the entities of learning are the individuals and the organization as a super-person, and must result in the enhancement of organizational memory. In the learning organization, organizational memory is less emphasized¹⁰³. The focus is more on individuals learning on behalf of the organization and enhancing their internal knowledge. Therefore, Sun sees the entity of learning as the individual, and knowledge existing primarily inside the individual (and to a lesser degree outside the individual).

Örtenblad¹⁰⁴ summarises this difference by asserting that the learning organization is a form of organization while organizational learning is activity or processes (of learning) in

⁹⁶ Easterby-Smith et al. 1998:259

⁹⁷ Easterby-Smith et al. 1998:272

⁹⁸ Argyris & Schön 1996

⁹⁹ Kim 1993

¹⁰⁰ Huber 1991

¹⁰¹ Crossan et al. 1999

¹⁰² Bontis, Crossan & Hulland 2002

¹⁰³ Sun 2006: 247-

¹⁰⁴ Örtenblad 2001:126

organizations, and that the learning organization needs effort while organizational learning exists without any efforts. If organizational learning signifies the process, then the learning organization represents the ideal or goal¹⁰⁵.

It is therefore evident that authors stress that OL as a technical or a social process. This opinion portrays OL as about the preparing, rendition of, and reaction to, information within and outside the organization in the most capable manner. The LO has learning as a continuous action, rather than a reaction to a specific challenge. Characteristics of such are provided below.

2.5 CHARACTERISTICS OF A LEARNING ORGANIZATION

Stewart¹⁰⁶ notes that there is little consensus on what an LO might look like. Garvin¹⁰⁷ argues that most discussions of OL do not get to the heart of how to make it happen in organizations, focusing is on high philosophy and grand schemes, sweeping metaphors rather than the gritty details of practice. Ulrich, Jick & Von Glinow¹⁰⁸ support this statement, arguing that to date there have been far more thought papers on why learning matters than empirical research on how managers can build learning capability. However, authors such as Senge¹⁰⁹; Watkins and Marsick¹¹⁰; Garvin¹¹¹; Kerka¹¹²; Moilanen¹¹³; Serrat¹¹⁴; Pace¹¹⁵; Schofield¹¹⁶; and Lewis, Benjamin, Juda and Marcella¹¹⁷, have identified a number of elements that characterise a learning organization.

Marsick and Watkins¹¹⁸ argue that a learning organization:

- creates continuous learning opportunities;
- promotes dialogue and inquiry;

¹⁰⁵ Perkins, Bess, Cooper, Jones, Armstead & Speer 2007: 306

¹⁰⁶ Stewart 2001:144

¹⁰⁷ Garvin 1993:79

¹⁰⁸ Ulrich, Jick & Von Glinow 1993:59

¹⁰⁹ Senge 1990

¹¹⁰ Watkins and Marsick 1992

¹¹¹ Garvin 1993

¹¹² Kerka 1995

¹¹³ Moilanen 2001

¹¹⁴ Serrat 2009:3-6

¹¹⁵ Pace 2002

¹¹⁶ Schofield 2004

¹¹⁷ Lewis, Benjamin, Juda and Marcella 2008

¹¹⁸ Marsick and Watkins in Pace, 2002: 461

- promotes collaboration and team learning;
- empowers people to evolve a collective vision;
- establishes systems to capture and share learning;
- connects the organization to its environment; and
- provides strategic leadership for learning.

According to Moilanen¹¹⁹, the learning organization eliminates structural obstacles of learning, creates enabling structures and takes care of assessing its learning and development. Moilanen further explains that an LO invests in leadership to assist individuals in finding the purpose, in eliminating personal obstacles and in facilitating structures for personal learning and getting feedback and benefits from learning outcomes.

Following are some of characteristics of an LO provided by Serrat:

- Adequate time, space, specialist support staff, and budgets for knowledge management and learning infrastructure, formal and informal communities of practice and other value networks (both internal and external), and learning and development programmes.
- Learning organizations require and encourage the development of leadership competencies at all levels in the organizational hierarchy, not just at the top.
- A learning organization provides creative opportunities for this knowledge to be developed and shared with others through interpersonal contact and access to documentation.
- Learning organizations ensure that individuals and teams are encouraged to use a range of ways of surfacing their tacit knowledge and making it available to others through carefully targeted documentation and collaborative working practices.
- In LO's Collaborative mutual learning arrangements with other organizations are common and fruitful.
- The creative use of information and communication technologies such as shared document drives, intranet pages, online communities and networks, wikis and other collaborative work spaces, blogging and online storytelling, staff profile pages, online webinars, podcasts, and social network analysis indicates that an organization takes learning seriously.
- Equal attention is paid to developing and retaining staff members at all levels.

¹¹⁹ Moilanen 2001:6

- Feedback mechanisms are increasingly being recognised as key elements of learning¹²⁰.

Learning organizations are characterised by total employee involvement in a process of collaboratively conducted, collectively accountable change directed towards shared values or principles Watkins and Marsick¹²¹.

Hitt¹²² adds an eighth element, synergistic teams, to the McKinsey 7-S Framework (seven key elements of an organization, namely, the structure, measurement system, management style, staff characteristics, distinctive staff skills, strategy/action plan, and shared values that he describes as the ‘missing link’. It is this element that Hitt regards as core in learning organization. Based on these eight elements characteristics of the traditional view of an organization and the characteristics of a learning organization are illustrated below.

Table 2.1: Characteristics of Traditional Organization versus the Learning Organization

Element	Traditional Organization	Learning Organization
Shared Values	Efficiency Effectiveness	Excellence Organizational Renewal
Management Style	Control	Facilitator Coach
Strategy/Action Plan	Top down approach Road map	Everyone is consulted Learning map
Structure	Hierarchy	Flat structure Dynamic networks
Staff Characteristics	People who know (experts) Knowledge is power	People who learn Mistakes tolerated as part of learning
Distinctive Staff Skills	Adaptive learning	Generative learning
Measurement System	Financial measures	Both financial and non-financial Measures
Teams	Working groups Departmental boundaries	Cross functional teams

Source: Hitt

According to Schofield¹²³ learning in organizations occurs where there is an alteration in behavioural intentions as a result of experience from trying to attain the policy objectives.

¹²⁰ Serrat 2009:3-6

¹²¹ Watkins and Marsick 1992: 118

¹²² Hitt 1995:18

¹²³ Schofield 2004:288

Garvin¹²⁴ identifies five distinguishing attributes of such an LO:

- systematic problem solving;
- experimentation and the testing of new knowledge;
- learning from experience;
- learning from others; and
- shared knowledge and knowledge-spreading mechanisms.

Not opposing the above, Huber¹²⁵ considers four constructs as integrally linked to organizational learning: knowledge acquisition, information distribution, information interpretation, and organizational memory.

Although acknowledging Senge's five disciplines as key to achieving a learning organization Kerka¹²⁶ sees the LO as having the following characteristics:

- Provision of continuous learning opportunities;
- Use of learning to reach their goals;
- Linking of individual performance with organizational performance;
- Fostering of inquiry and dialogue, making it safe for people to share openly;
- Embracing of creative tension as a source of energy and renewal; and
- Being continuously aware of and interacting with their environment.

According to Senge¹²⁷ a learning organization exhibits five main characteristics: Personal Mastery, Mental Frameworks, Shared Vision, Team Learning, and Systems Thinking.

- Personal Mastery. Organizations learn only through individuals who learn. Individual learning does not guarantee organizational learning, but without it no organizational learning occurs¹²⁸.
- Mental Frameworks. Individual employees and leaders strive for personal mastery in all their activities. Here Senge¹²⁹ analyses why some of the best ideas fail.
- Shared Vision. Employees and leaders alike have a shared mental framework of the world, the organization, its markets and competitors, and environment. According to

¹²⁴ Garvin 1993: 110

¹²⁵ Huber 1991:88

¹²⁶ Kerka 1995:3

¹²⁷ Senge 1990:6-10

¹²⁸ Senge 1990:140

¹²⁹ Senge 1990:174

Senge¹³⁰, shared vision is vital for the learning organization because it provides the focus and energy for learning. The discipline of shared vision is the set of tools and techniques for bringing disparate aspirations into alignment around the things people have in common¹³¹. Its leaders have a vision of where they want the organization to go.

- Team Learning. When a team becomes more aligned, a commonality of direction emerges, and individuals' energies harmonise¹³².
- Systems Thinking. An LO practices system thinking. The Fifth Discipline integrates the other four. Systems thinking also needs the disciplines of building shared vision, mental frameworks, team learning, and personal mastery to realise its potential. Building shared vision fosters a commitment to the long term. Mental frameworks focus on the openness needed to unearth shortcomings in our present ways of seeing the world. Team learning develops the skills of groups of people to look for the larger picture beyond individual perspectives. And personal mastery fosters the personal motivation to continually learn how our actions affect our world¹³³.

Senge¹³⁴ explains how important it is that the five disciplines develop as an ensemble, as it is much harder to integrate new tools than to simply apply them separately. Systems thinking therefore becomes a vital element as it fuses other disciplines into a coherent body of theory and practice.

2.6 SYSTEMS THINKING

Senge refers to systems thinking as a discipline for seeing wholes and further explains that it is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than snapshots. Judging by the following definitions, a number of authors share same sentiments:

Systems thinking is the ability to see the world as a complex system, in which we understand that everything is connected to everything else¹³⁵. Systems thinking is the art and science of making reliable inferences about behaviour, by developing an increasingly deep

¹³⁰ Senge 1990:206

¹³¹ Senge, Cambron-McCabe, Lucas, Smith, Dutton and Kleiner 2000:72

¹³² Senge, 1990: 234

¹³³ Senge, 1990: 12

¹³⁴ Senge 1990:13

¹³⁵ Sterman 2000:4

understanding of underlying structure¹³⁶.

According to Davidz & Nightingale¹³⁷, systems thinking is utilising modal elements to consider the componential, relational, contextual, and dynamic elements of the system of interest. Checkland¹³⁸ concurs with this by stating that systems thinking starts with an observer/describer of the world outside ourselves who wishes to describe it holistically in terms of whole entities linked in hierarchies with other wholes. Wolstenholme¹³⁹ adds that successful systems thinking is about being able to see the whole or context of a situation and its interconnections to its environment; and such a perspective enables unintended consequences of well-intended actions to be pre-empted and minimised.

O'Connor & McDermott¹⁴⁰ define systems thinking as an approach to problem solving, as viewing "problems" as parts of an overall system, rather than reacting to present outcomes or events and potentially contributing to further development of the undesired issue or problem. The only way to fully understand why a problem or element occurs and persists is to understand the part in relation to the whole¹⁴¹.

The key to understanding the systems approach is to:

- Identify a system. After all, not all things are systems. Some systems are simple and predictable, while others are complex and dynamic. Most human social systems are the latter.
- Explain the behaviour or properties of the whole system. This focus on the whole is the process of synthesis.
- Explain the behaviour or properties of the thing to be explained in terms of the role(s) or function(s) of the whole¹⁴².

The systems thinker retains focus on the system as a whole, and the analysis in step three (the third bullet) is always in terms of the overall purpose of the system (Reed¹⁴³).

¹³⁶ Richmond 1994:135

¹³⁷ Davidz & Nightingale 2008:1

¹³⁸ Checkland 1999:121

¹³⁹ Wolstenholme 2003: 20

¹⁴⁰ O'Connor & McDermott 1997:11

¹⁴¹ Capra 1996:30

¹⁴² Reed 2006:11

¹⁴³ Reed 2006:11

Relating to the learning organization, Senge¹⁴⁴ sees systems theory as able to understand the whole and to observe the relationship between multiple parts. OL focuses on how to create and foster effective knowledge processing environments in human social systems¹⁴⁵. The systems viewpoint is generally oriented toward the long-term view¹⁴⁶; hence McElroy¹⁴⁷ sees complexity theory as nothing but systems thinking in practice and its insights into the ontogeny of knowledge in living systems as germane to OL. McElroy further argues that complexity offers one of the most robust and widely-subscribed-to theories on the nature and role of learning in living systems, including the manner in which knowledge evolves human organizations.

Senge highlights the importance of feedback in the organization and explains why delays and feedback loops are so important. Senge adds that in the short term, you can often ignore them; they're inconsequential; and they only come back to haunt you in the long term. Sustainable innovation is an insight whose lineage is deeply rooted in OL and complex adoptive systems theory hence complex living systems are, by any other definition, learning organizations¹⁴⁸.

The systems thinking therefore suggests that systems be viewed in a holistic fashion. It involves approaching a system by the linkages and interactions between the elements that form the wholeness of the system. The systems thinking is a framework that is based on the impression that the abstract parts of a system can best be understood in the context of relationships with each other and with other systems, rather than in isolation.

2.7 ENABLERS OF AND BARRIERS TO ORGANIZATIONAL LEARNING

Over the years researchers have identified enablers of and barriers to OL. An overview of enablers of OL is provided in the following sub-section.

2.7.1 ENABLERS OF ORGANIZATIONAL LEARNING

Huber¹⁴⁹ notes that an entity learns if, through its processing of information, the range of its

¹⁴⁴ Senge 1990: 12

¹⁴⁵ McElroy 2002:19

¹⁴⁶ Senge 1990: 92

¹⁴⁷ McElroy 2002:45

¹⁴⁸ McElroy 2002:30-31

¹⁴⁹ Huber 1991: 88

potential behaviours is changed. Lewis, Benjamin, Juda and Marcella¹⁵⁰ concur that major enablers of OL are nurturing of learning; free exchange and flow of information; and valuing of people.

According to Kerka most conceptualisations of the learning organizations seem to work on the assumption that learning is valuable, continuous, and most effective when shared and that every experience is an opportunity to learn¹⁵¹.

Marsick and Watkins¹⁵² explored the dimensions of the learning organization and noted that:

- a learning organization must capture, share, and use knowledge so its members can work together to change the way the organization responds to challenges. People must question the old, socially constructed and maintained ways of thinking;
- learning must take place and be supported in teams and larger groups, where individuals can mutually create new knowledge; and
- the process must be continuous because becoming a learning organization is a never-ending journey.

Lindley and Wheeler¹⁵³ suggest managerial policies that can improve the propensity for learning; and the need for practicable frameworks that can inform competitive strategies. They developed what they called the “learning square” to depict four key organizational factors that foster learning and assist in framing strategic decision making in a learning context. They proposed that organizations could improve effectiveness by reviewing each of the factors and initiate strategies on the basis of an integrated view of the four.

The four interlinked factors in the framework comprise the corners of the square and include multidimensional goals, continual learning, shared vision, and using tacit knowledge. Multidimensional goals factor is based on the proposition that organizations set goals in terms of the following three dimensions: (a) externally in relation to competition and benchmarks; (b) internally in relation to core competencies; and (c) chronologically in relation to the organization’s history¹⁵⁴. Continual learning reflects the organization’s competitive advantage gained from continual improvements and adaptations to

¹⁵⁰ Lewis, Benjamin, Juda and Marcella 2008:290

¹⁵¹ Kerka 1995:3

¹⁵² Marsick and Watkins in Pace, 2002:458

¹⁵³ Lindley and Wheeler 2001:115

¹⁵⁴ Lindley and Wheeler 2001:115

environmental change.

Shared vision is premised on Senge's concept that an understanding of the corporate aims created collaboratively with shareholders and shared by members of the organization increases the effectiveness of organizational endeavours. The use of tacit knowledge, the personal, unarticulated knowledge of its (the organization's) individual members¹⁵⁵ gives an organization competitive advantage in dealing with change and implies the organization gives its members time to learn.

According to Leuci¹⁵⁶, the following are recommendations for cultivating an organizational culture in which learning and innovation can occur:

- Create and communicate an organizational vision for learning;
- Support shared learning;
- Reframe the focus on structure;
- Create a cadre of leadership to sustain organizational learning; and
- Inculcate the responsibility for organizational learning among all members.

When such a culture is ignored, the ability of people in organizations to acquire, apply, share, and embed new knowledge is hindered. Any culture contrary to this becomes part one of the barriers to OL which are discussed below.

2.7.2 BARRIERS TO ORGANIZATIONAL LEARNING

Antal, Lenhardt & Rosenbrock¹⁵⁷ highlighted barriers identified in the literature as interrupted learning processes; psychological and cultural types of barriers; and barriers related to organizational structure and leadership. March and Olsen¹⁵⁸; Kim¹⁵⁹; and Hedberg¹⁶⁰ have a lot to say on interrupted learning process barriers.

Interrupted Learning Processes

According to March and Olsen's theory, interrupted learning process barriers are grouped as follows:

¹⁵⁵ Senge, 1990:116

¹⁵⁶ Leuci 2005:280-289

¹⁵⁷ Antal, Lenhardt & Rosenbrock 2001:865

¹⁵⁸ March and Olsen 1975:156-159

¹⁵⁹ Kim 1993

¹⁶⁰ Hedberg 1981

- a) Role-constrained learning - an interruption in the connection between individual beliefs and individual action would result if individuals were limited by their role in the organization and unable to act on their learning.
- b) Audience learning - found when individuals change their own behaviour but cannot persuade others to change the organizational rules for behaviour. This highlights the idea that the link between individual action and organizational action is interrupted.
- c) Superstitious learning - occurs when organizational members draw incorrect conclusions about the impact of organizational actions on the environment.
- d) Learning under ambiguity - occurs when changes in the environment cannot be clearly identified¹⁶¹.

Kim added three new types of interruptions to the framework proposed by March and Olsen, whereby only two of them are barriers and puts those as follows:

- a. Situational learning - when learning occurs, but is forgotten or not codified for later use, as frequently happens in crisis management.
- b. Fragmented learning - when one actor or unit learns but the whole does not. This is typical in much decentralised organizations that do not have the networking capability to keep the parts connected¹⁶².

Hedberg also built on the learning cycle used by March and Olsen by introducing the concept of unlearning to the field of organization studies. Hedberg¹⁶³ believed that slow unlearning is a crucial weakness of many organizations and proposes that organizations should unlearn because knowledge grows, and simultaneously becomes obsolete as reality changes.

Psychological and Cultural Types of Barriers

Argyris has worked extensively on the topic of defensive routines that individuals develop to protect themselves from threatening situations, such as critically examining their own role in the organization. Due to these defensive routines people fail to discover how the very way they go about defining and solving problems can be a source of problems in its own right¹⁶⁴. Such defensive routines maintain themselves in organizational cultures that externalise blame

¹⁶¹ March and Olsen 1975:156-159

¹⁶² Kim 1993: 46

¹⁶³ Hedberg 1981:3

¹⁶⁴ Argyris 1991:100

and generate a sense of hopelessness and cynicism¹⁶⁵.

Failure leads to search and change, which leads to failure, which leads to more search and so on¹⁶⁶. The link between success and failure has been characterised by Sull¹⁶⁷ as a trap of learning, a trap he refers to as active inertia. When successful companies start to experience failure, they tend to engage in flurry of activities because they believe that paralysis is the greatest enemy rather than question the assumptions underlying their organizational strategy, processes, and practices¹⁶⁸. The tension between the characterisation of success as a barrier to learning and failure as a trigger of learning is heightened in the literature by the observation that organizations suffer from the tendency to over-sample successes and under-sample failures¹⁶⁹. The widely-shared, tacit assumptions which constitute an organization's culture can preclude organizational learning¹⁷⁰.

Barriers related to organizational structure and leadership

A centralised, mechanistic structure tends to reinforce past behaviours, whereas an organic, more decentralised structure tends to allow shifts of beliefs and actions¹⁷¹. Pawlowsky¹⁷² also cited hierarchy as a barrier to organizational learning. Authors such as Schein¹⁷³ have mentioned lack of good leadership as an impediment to organizational learning.

It has been proven that the culture of an organization can act as a powerful barrier to learning and that if this barrier is not grappled with explicitly, attempts to develop new ideas or behaviours will not take hold. Lack of leadership proved to be a serious problem with various forms: absence of support from top management; too strong a lead from outside the organization without a strong counterpart inside the organization; and individual, unconnected initiatives from lower levels in the hierarchy¹⁷⁴.

¹⁶⁵ Argyris 1990: 45

¹⁶⁶ Levinthal and March 1993: 105-106

¹⁶⁷ Sull 1999:42

¹⁶⁸ Sull 1999:43-45

¹⁶⁹ Levinthal and March 1993: 110

¹⁷⁰ Edmondson and Moingeon 1996: 23

¹⁷¹ Fiol & Lyles 1985:805

¹⁷² Pawlowsky 1992: 223

¹⁷³ Schein 1985: 317

¹⁷⁴ Antal, Lenhardt & Rosenbrock 2001:879

Leuci¹⁷⁵ divides barriers to OL into three groups:

- Individual Barriers;
- Organizational barriers ; and
- Stickiness in the Learning Process.

Leuci noted two specific individual barriers to organizational learning: limited accommodation or the breakdown of an individual's knowledge as justified true belief can occur in radically new situations and lead to one feeling trapped; and the gain of knowledge that can pose a threat to the individual's self-image¹⁷⁶.

Leuci bases organizational barriers on the work of authors such as Von Krogh, Ichijo, & Nonaka¹⁷⁷; Bruffee¹⁷⁸ and Schein¹⁷⁹; which have implied that organizational learning is threatening because it involves change. These authors identify similar barriers such as:

- barriers that interfere with justification when knowledge is publicly shared which are cultural in nature;
- legitimate language and common/shared language that are too fine or too general creating a barrier to communication and learning;
- existing organizational stories and culture that can make the sharing of contradictory ideas difficult;
- existing procedures, that can interfere, especially if they are designed in a way that impedes crossing disciplinary and functional lines within the organization; and
- organizational paradigms—strategic intent, vision and mission, and core values as these are by their nature part of the socialisation process to maintain the integrity of the organization¹⁸⁰.

Stickiness in the learning process grounded on Szulanski's¹⁸¹ research which focused on the barriers to the transfer of knowledge within business firms. His definition of transfer of practice is comparable to Nonaka and Takeuchi's¹⁸² concept of cross-leveling of knowledge

¹⁷⁵ Leuci 2005:69-74

¹⁷⁶ Leuci 2005:69

¹⁷⁷ Von Krogh, Ichijo, & Nonaka 2000

¹⁷⁸ Bruffee 1997

¹⁷⁹ Schein 1992

¹⁸⁰ Leuci 2005:71-72

¹⁸¹ Szulanski 2003

¹⁸² Nonaka and Takeuchi 1995

within an organization. In noting the difficulty and even failure that most organizations encounter in transferring best practices, (Leuci¹⁸³) highlighted that stickiness is encountered during the initiation, implementation, ramp-up, and integration stages of the knowledge transfer process.

Senge identifies the following seven learning disabilities explained by da Silva¹⁸⁴, which Senge¹⁸⁵ identifies as deficiencies that permeate human history and culture:

- I am my position. Individuals that only concentrate in their positions, or roles, in an organization, lose the sense of responsibility relative to results that are obtained via interactions involving several positions.
- The enemy is out there. In general this affirmation corresponds to an incomplete view of a given situation as inside the organization or outside is just part of the same system.
- The illusion of taking charge. Often, proactive attitudes just conceal disguised reactive attitudes, attempts to face the enemy out there. Genuinely proactive attitudes are consequences of a clear perception of the individual's contribution to his/hers own problems.
- The fixation on events. It is a requirement to recognise long term patterns and all the cause-effect connection chain, thus, avoiding concentration on events only.
- The parable of the boiled frog. Organizations, in general, are not prepared to face gradual threats to their existence. It is important to observe both fast and gradual changes.
- The delusion of learning from experience. Direct experience is the most powerful source for learning. However, when dealing with organizational problems, often, it is not possible to correlate the consequences of important decisions with their real causes.
- The myth of the management team. The management team is composed of managers from different functions and specialised areas in the organization. Supposedly, it should face all the deficiencies mentioned above. However, internal political disputes in these teams cause waste of energy and time, while trying to exhibit the impression

¹⁸³ Leuci (2005:73

¹⁸⁴ da Silva 2005

¹⁸⁵ Senge 1990: 17-26

of coherent team¹⁸⁶.

The above-mentioned barriers need to be tackled timeously. All the levels of OL which are discussed below are prone to these.

2.8 LEVELS OF ORGANIZATIONAL LEARNING

Researchers of OL have conflicting opinions with regards to learning in an organization. Argyris & Schon; Kim; Probst & Büchel; and Hedberg emphasise the importance of individual learning for learning in an organization; some such as Stata; and Cook & Yanow see the two as distinct processes; while Senge although not ruling out the contribution of individuals, attributes attainability of OL to teams.

According to Argyris & Schon¹⁸⁷, the main stream within the focus of organizational learning considers individuals as agents for organizations to learn. This is the reason learning by individuals is seen by Probst & Büchel¹⁸⁸ as a prerequisite of organizational learning. Organizational learning takes place through the medium of individuals and their interactions, which together constitute a different whole, with its own capabilities and characteristics¹⁸⁹.

Hedberg states that: ‘Organizations do not have brains, but they have cognitive systems and memories. As individuals develop their personalities, personal habits and beliefs over time, organizations develop their views and ideologies’¹⁹⁰. Organizational learning draws upon the integration of the sum of individuals’ learning to create a whole that is greater than the sum of its parts¹⁹¹. All learning takes place inside individual human heads; an organization learns in only two ways: (a) by the learning of its members, or (b) by ingesting new members who have knowledge the organization previously did not have’¹⁹².

According to Scarbrough, Swan & Preston¹⁹³ therefore, a learning organization should primarily focus on valuing, managing and enhancing the individual development of its employees. However, Kim¹⁹⁴ is concerned that if a distinction between the organization and

¹⁸⁶ da Silva 2005:4-5

¹⁸⁷ Argyris & Schon 1978:16

¹⁸⁸ Probst & Büchel 1997:15

¹⁸⁹ Probst and Büchel 1997, 17

¹⁹⁰ Hedberg, 1981: 6

¹⁹¹ Starkey 1996: 2

¹⁹² Simon 1991: 125

¹⁹³ Scarbrough, Swan & Preston 1998:2

¹⁹⁴ Kim 1993:42-43

the individual is not made explicit, a framework of organizational learning will either obscure the actual learning process by ignoring the role of the individual (and anthropomorphising organizations) or become a simplistic extension of individual learning by glossing over organizational complexities.

Apathetic about this distinction Popper and Lipschitz¹⁹⁵ state that individual learning and organizational learning are similar in that they involve the same phases of information processing; namely, collection, analysis, abstraction and retention.

In their study Lim & Chan¹⁹⁶ conclude that individual, team and organizational learning are inter-related. Senge summarises this by saying although individual learning does not ensure organizational learning, it is a prerequisite to organizational learning¹⁹⁷. Organizations, not just individuals, actually learn¹⁹⁸.

Stata¹⁹⁹ expresses a contrary opinion to this by drawing the following distinction between organizational learning and individual learning:

First, organizational learning occurs through shared insights, knowledge, and mental frameworks. Thus organizations can learn only as fast as the slowest link learns. Change is blocked unless all of the major decision makers learn together, come to share beliefs and goals, and are committed to take the actions to change. Second, learning builds on past knowledge and experience – that is, on memory. Organizational memory depends on institutional mechanisms (e.g. policies, strategies, and explicit frameworks) used to retain knowledge. Of course, organizations also depend on the memory of individuals, but relying exclusively on individuals, risks losing hard-won lessons and experiences as people migrate from one job to another.

Cook and Yanow²⁰⁰ supports the above, arguing that, what organizations do when they learn is necessarily different from what individuals do when they learn. Cook and Yanow, specifically believe that organizational learning is not essentially a cognitive activity, because at the very least, organizations lack the typical wherewithal for undertaking cognition. To

¹⁹⁵ Popper & Lipshitz 2004:41.

¹⁹⁶ Lim & Chan (2006:56)

¹⁹⁷ Senge 1990:139

¹⁹⁸ McElroy 2002:40

¹⁹⁹ Stata 1996: 318

²⁰⁰ Cook and Yanow 1993: 378

understand organizational learning people must look for attributes that can be meaningfully understood to possess and use.

Stressing the importance of team learning for the realisation of organizational learning, Senge²⁰¹ states that unless teams can learn, the organization cannot learn. Stata²⁰² also looks at the organizational learning as an umbrella that unifies systems thinking, planning, quality improvement, organizational behaviour, and information systems. Senge's view is similar to this one, however, aligning team learning to systems thinking. Both the perspective and the tools of systems thinking figure centrally in team learning²⁰³. Senge²⁰⁴ further explains that the tools of systems thinking are also important because virtually all the prime tasks of management teams: developing strategy; shaping visions; designing policy and organizational structures involve wrestling with enormous complexity.

It can therefore be deduced that individual learning, team learning and OL are inter-related. Authors discuss these levels differently, however in the end recognising how they complement one another. Individual learning accumulates to form team learning. Teams in turn benefit the organization through their shared knowledge and expertise. OL ultimately is attained as a result of individual and team learning. OL writers link these levels of OL to types of OL.

2.9 TYPES OF ORGANIZATIONAL LEARNING

Authors such as Senge; Argyris & Schön; Kell and Fiol and Lyles differentiate between: adaptive and generative learning; single-loop learning, double-loop learning and deuterio-learning; and lower-level and higher-level learning respectively. This chapter will describe organizational learning levels using Argyris and Schön framework.

2.9.1 SINGLE-LOOP LEARNING

The first organizational learning type as distinguished by Argyris and Schön is single-loop learning. Single-loop learning solves the presenting problems²⁰⁵. When the process enables the organization to carry on its present policies or achieve its objectives, the process may be

²⁰¹ Senge 1990:10

²⁰² Stata 1996: 318

²⁰³ Senge 1999:243

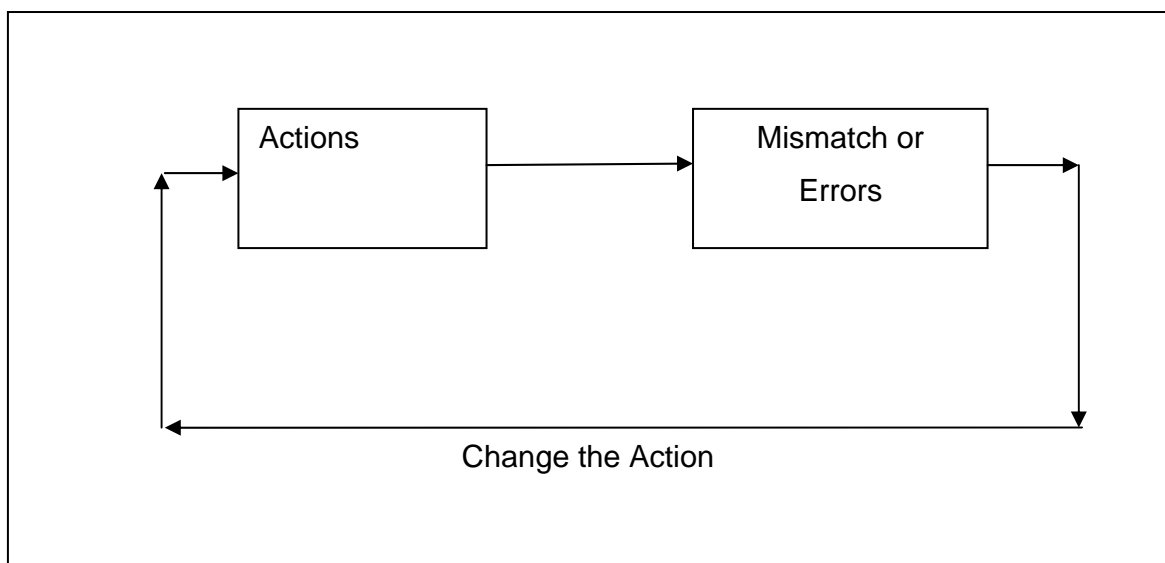
²⁰⁴ Senge 1999:243

²⁰⁵ Argyris and Schön 1990:92

called single loop learning²⁰⁶. It occurs when people attempt to correct the mismatches between actions and intended outcomes, simply by changing their actions when the governing values or assumptions that underlie those actions are not open to change²⁰⁷. See figure 2.1 below.

Single-loop learning asks a one-dimensional question to elicit a one-dimensional answer²⁰⁸. It addresses a difficulty but ignores a more fundamental problem, i.e. why the mismatch or error existed in the first place²⁰⁹. Single-loop learning is present when goals, values, frameworks and, to a significant extent, strategies are taken for granted²¹⁰.

Figure 2.1: Single-loop learning



Source: Argyris

2.9.2 DOUBLE-LOOP LEARNING

Double-loop learning takes an additional step or, more often than not, several additional steps²¹¹. It occurs when, in addition to detection and correction of errors, the organization is involved in the questioning and modification of existing norms, procedures, policies, and

²⁰⁶ Argyris 1977:116

²⁰⁷ Kell 2003:11

²⁰⁸ Serrat 2009:4

²⁰⁹ Kell 2003:11-12

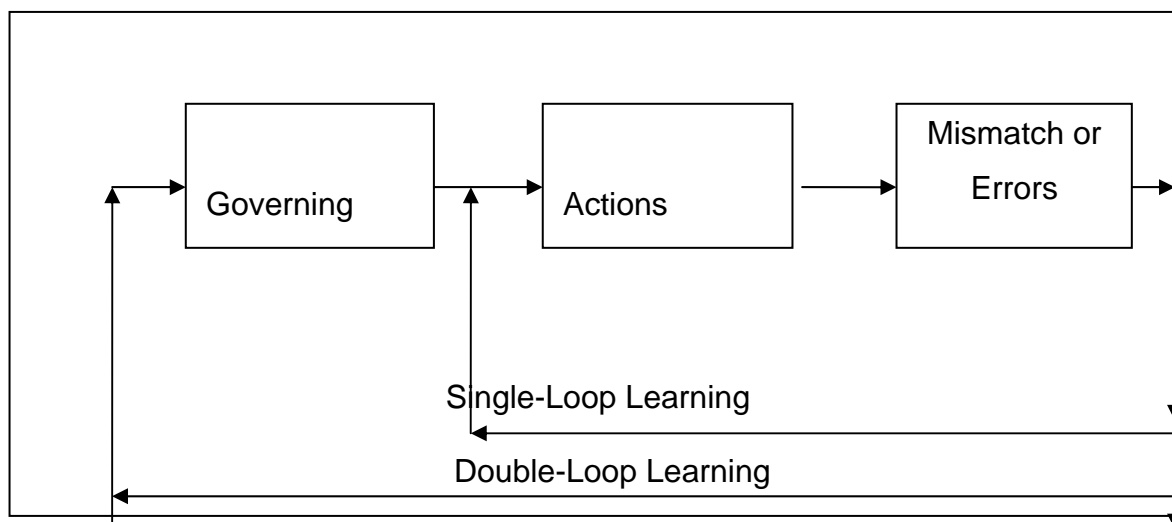
²¹⁰ Argyris and Schön 1990:92

²¹¹ Argyris 1994:64

objectives²¹². In other words, double-loop learning asks questions not only about objective facts but also about the reasons and motives behind those facts²¹³. This is illustrated in Figure 2.2 below.

According to Kim²¹⁴, double-loop learning provides opportunities for discontinuous steps of improvement where reframing a problem can bring about radically different potential solutions. It can therefore be said that organizational problem-solving capability is increasing when double-loop learning takes place²¹⁵.

Figure 2.2: Double-loop learning



Source: Argyris 1990, 92.

2.9.3 DEUTERO-LEARNING

The third, and highest organizational learning level deuterio-learning, which can be regarded as learning to learn²¹⁶. The Learnovation Consortium report²¹⁷ states that at this level, members of an organization reflect on, and enquire into the organization’s previous contexts and experiences of learning. Based on these reflections, the organization and its members learn to learn, understand what facilitates or inhibits learning and invent new approaches to

²¹² Kell, 2003:12

²¹³ Argyris 1994:65

²¹⁴ Kim 1993:45

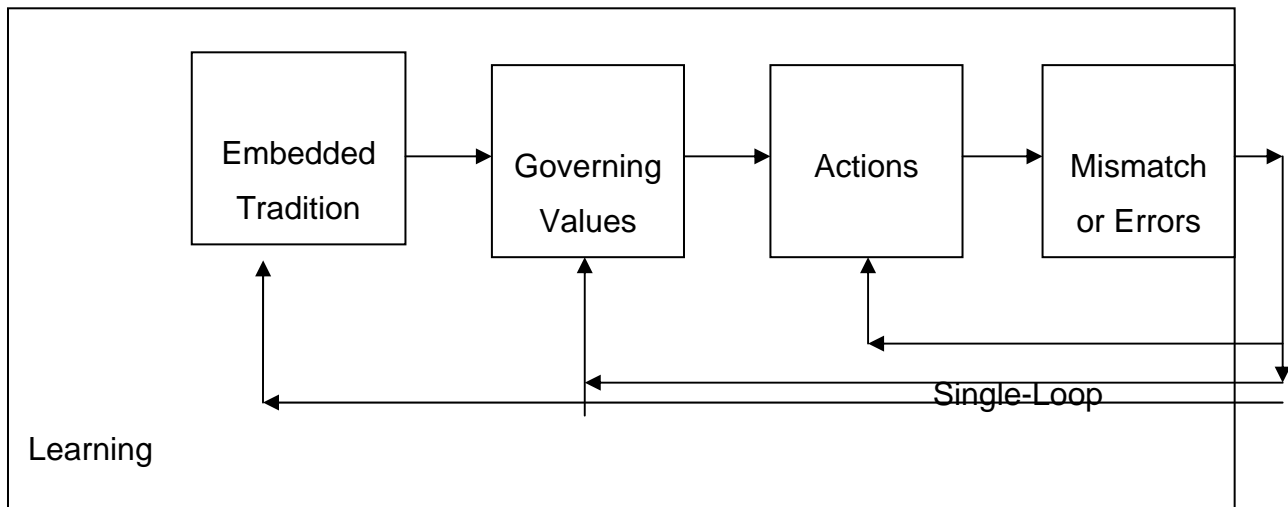
²¹⁵ Kell 2003:12

²¹⁶ Kell 2003:9

²¹⁷ Learnovation Consortium report 2008:4

learning²¹⁸.

Figure 2.3: Deutero-learning



Source: Nielsen²¹⁹.

Argyris and Schön state that:

Organizational learning involves the detection and correction of error. When the error detected and corrected permits the organization to carry on its present policies or achieve its present objectives, then that error-detection-and-correction process is single-loop learning. Double-loop learning occurs when error is detected and corrected in ways that involve the modification of an organization's underlying norms, policies and objectives. When an organization engages in deuteron learning its members learn about previous contexts for learning. They reflect on and inquire into previous episodes of organizational learning, or failure to learn. They discover what they did that facilitated or inhibited learning, they invent new strategies for learning, they produce these strategies, and they evaluate and generalise what they have produced²²⁰.

Making a distinction between lower and higher level of learning, Fiol and Lyles²²¹ see the lower level as focused learning that may be mere repetition of past behaviours, adjustments in part of what the organization does; and the higher level as related to the development of complex rules and associations regarding new actions.

²¹⁸ Learnovation Consortium report 2008:4

²¹⁹ Nielsen 1996: 36

²²⁰ Argyris and Schön 1978:2-4

²²¹ Fiol and Lyles 1985: 807

Senge²²² distinguishes between adaptive and generative learning. According to Slater & Narver²²³, what Senge refers to as adaptive learning, Argyris calls single-loop learning and what Senge sees as generative learning, is double-loop learning in Argyris's eyes. According to Senge for a learning organization it is not enough to merely survive. "Survival learning or what is more often termed adaptive learning is important—indeed it is necessary. But for a learning organization, adaptive learning must be joined by generative learning, learning that enhances our capacity to create"²²⁴.

From the above, it is clear that authors divide OL into two parts. When for Argyris and Schön the organization is involved in single loop learning or in double loop learning. For Fyol and Lyles, lower level learning or in higher level learning is what an organizations pursue. According to Senge, adaptive learning or generative learning is where organizations participate.

SUMMARY

Definitions of LO have much in common whereas there are some contrasts as well. The definition by Pedler, Burgoyne, & Boydell suggests that learning organization is enforced by senior management while the one by Watkins and Marsick implies that it starts at the bottom and works its way up. Definitions by Pedler, Burgoyne, & Boydell; Senge; and Garvin, all emphasise the power of learning to transform vision into action.

Although authors differ in defining OL, they all see it as an important practice that needs to be implemented by organizations. It has also been stated that most authors imply that it might not apply in the public service. However, none of them has provided evidence that that really is the case. OL is about the preparing, rendition of, and reaction to, information within and outside the organization in the most capable manner. The learning organization has learning as a continuous action, rather than a reaction to a specific challenge.

Senge²²⁵ further explains how important it is that the five disciplines develop as an ensemble, as it is much harder to integrate new tools than to simply apply them separately. Systems thinking becomes a vital element as it fuses other disciplines into a coherent body of theory and practice. The systems thinking therefore suggests that systems be viewed in a

²²² Senge 1990:14

²²³ Slater & Narver 1995:64

²²⁴ Senge 1990:14

²²⁵ Senge 1990:13

holistic fashion. It involves approaching a system by the linkages and interactions between the elements that form the wholeness of the system. The systems thinking is a framework that is based on the impression that the abstract parts of a system can best be understood in the context of relationships with each other and with other systems, rather than in isolation.

When an organizational culture in which learning and innovation can occur is ignored, the ability of people in organizations to acquire, apply, share, and embed new knowledge is hindered.

Individual learning, team learning and OL are inter-related. Authors discuss these levels differently, however in the end recognising how they complement one another. Individual learning accumulates to form team learning. Teams in turn benefit the organization through their shared knowledge and expertise. OL ultimately is attained as a result of individual and team learning.

Authors divide OL into two parts. When for Argyris and Schön the organization is involved in single loop learning or in double loop learning. For Fyol and Lyles, lower level learning or in higher level learning is what an organizations pursue. According to Senge, adaptive learning or generative learning is where organizations participate.

Chapter 3 will review available literature on lessons learned and types of knowledge sharing systems.

CHAPTER 3

Knowledge Sharing Systems and Frameworks for Organizational Learning

3.1 INTRODUCTION

In this Chapter, an overview of types of knowledge sharing systems will be provided. Based on theory, investigation will be done specifically on the applicability of lessons learned systems as a knowledge sharing system to the department. Attention will be given to advantages and disadvantages of lessons learned; focussing on how these can be implemented in the public sector. A review of OL and LO frameworks will also be provided.

3.2 TYPES OF KNOWLEDGE SHARING SYSTEMS

KSSs are designed to help users share their knowledge, both tacit and explicit²²⁶. Becerra-Fernandez, Gonzalez & Sabherwal²²⁷ further explain that these are systems that enable members of an organization to acquire tacit and explicit knowledge from each other.

According to McElroy²²⁸, knowledge sharing accounts for the ties between KM and OL. KM can help enhance employee's learning and exposure to the latest knowledge in their fields which can be accomplished in a variety of ways, including externalization and internalization; socialization; and communities of practice²²⁹. Chapter 3 of the RM Knowledge Translation Toolkit²³⁰ provides the following as a suite of tools that can help organizations become fluent knowledge managers: After Action Reviews (AARs);

²²⁶ Becerra-Fernandez, Gonzalez & Sabherwal 2004:299

²²⁷ Becerra-Fernandez, Gonzalez & Sabherwal (2004:301

²²⁸ McElroy 2002: xxiii

²²⁹ Becerra-Fernandez, Gonzalez & Sabherwal 2004: 52

²³⁰ RM Knowledge Translation Toolkit 2008

Communities of Practice; Exit interviews; Best practices; Knowledge centres; Knowledge harvesting; Peer assists; Social network; Storytelling; and White pages. Knowledge sharers' view is that the value proportion of KM helps make old learning more accessible and reusable for current-day workers, thereby improving their performance²³¹.

Knowledge sharing systems are classified according to their attributes. These specific types of Knowledge sharing systems include:

- Incident specific report databases;
- Alert Systems;
- Best practices databases;
- Lessons-learned (LL) Systems; and
- Expertise-locator (EL) Systems²³².

Incident reports describe an unsuccessful experience, an incident and lists arguments that explain the incident without posing recommendations²³³. Alert systems were originally intended to disseminate information about negative experience that has occurred or is expected to occur. However, current applications also include increasing exposure to positive experience²³⁴. Alert systems manage repositories of alerts that are organised by a set of related organizations that share the same technology and suppliers²³⁵.

Best practices are descriptions of previously successful ideas that are applicable to organizational processes²³⁶. These differ from lessons in that they capture only successful events which may not be derived from experiences²³⁷.

LL systems could be pure repositories of lessons or sometimes intermixed with other sources of information such as reports²³⁸. These are not focused on a single task; they address multiple tasks in the same system²³⁹.

The intent of the Expertise-locator (EL) Systems is to catalog knowledge competencies,

²³¹ McElroy 2002: xxiii

²³² Becerra-Fernandez, Gonzalez & Sabherwal 2004:305

²³³ Weber, Aha & Becerra-Fernandez 2001:17

²³⁴ Becerra-Fernandez, Gonzalez & Sabherwal 2004:305

²³⁵ Weber, Aha & Becerra-Fernandez 2001:17

²³⁶ Weber, Aha & Becerra-Fernandez 2001:6

²³⁷ Becerra-Fernandez, Gonzalez & Sabherwal 2004:305

²³⁸ Becerra-Fernandez, Gonzalez & Sabherwal 2004:306

²³⁹ Weber, Aha & Becerra-Fernandez 2001:17

including information not typically captured by human resources systems, in a way that could later be queried across the organization²⁴⁰. In this study focus is on LL systems whose purpose is to support organizational processes which according to Becerra-Fernandez, Gonzalez & Sabherwal²⁴¹, organizational learning constitutes part of.

3.3 LESSONS LEARNED

A lesson must be significant in that it has a real or assumed impact on operations; valid in that is factually and technically correct; and applicable in that it identifies a specific design, process, or decision that reduces or eliminates the potential for failures and mishaps, or reinforces a positive result²⁴².

Essential tasks of LL systems are described by Becerra-Fernandez, Gonzalez & Sabherwal²⁴³ as:

- Collect the lessons. Here lessons that may be incorporated into a LL system are collected. This task involves six possible lesson content collection methods, passive, reactive, after-action; proactive collection, active collection and interactive collection.
- Verification, this is where lessons are verified for correctness, redundancy, consistency and relevance
- Storing the lessons. The task relates to the presentation of the lessons in a computer-based system.
- Disseminate the lessons. What is done in this task is to look at how the information is shared to promote its reuse. Methods that are used in executing this task are: passive dissemination; active casting; broadcasting; active dissemination; proactive dissemination; and reactive dissemination
- Apply the lesson. This task relates to whether the user has the ability to decide to reuse the lesson. Categories of reuse are: browsable; executable; and outcome reuse.

Figure 3.1 below shows how this process unfolds.

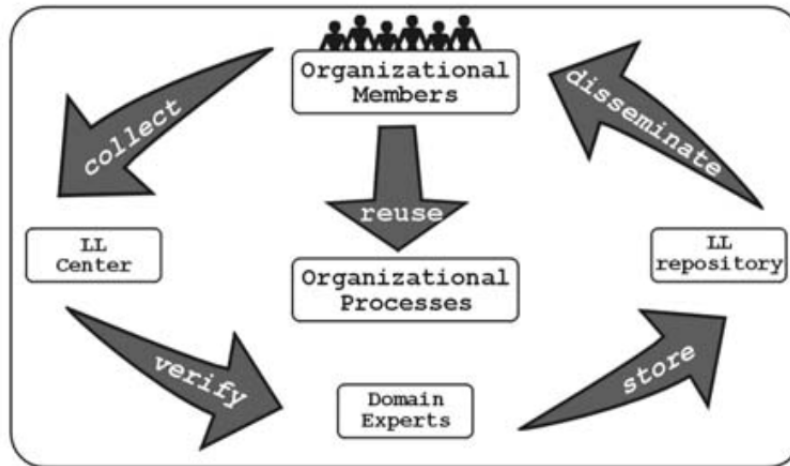
Figure 3.1 Lessons learned process

²⁴⁰ Becerra-Fernandez, Gonzalez & Sabherwal 2004:305

²⁴¹ Becerra-Fernandez, Gonzalez & Sabherwal 2004:307-308

²⁴² Secchi, Ciaschi, & Spence, (1999:57

²⁴³ Becerra-Fernandez, Gonzalez & Sabherwal 2004:307-308



Source: Weber, Aha & Becerra-Fernandez²⁴⁴

NASA as it follows the same process of lessons learnt explains it as the mechanisms used to collect, share, and disseminate lessons learned that unfolds as follows:

1. The collection process involves the capture of information through structured and unstructured processes such as mishap or accident reporting, project critiques, written forms, and meetings. The collection of lessons may come from as many sources as an organization is willing to solicit. Lessons learned can be based upon positive experiences that prevent accidents or save money or on negative experiences that result in undesirable outcomes. However, if an organization focuses only on failures, its overall program's effectiveness will be reduced and it will miss opportunities to improve all its processes.
2. The verification process serves to verify the correctness and applicability of lessons submitted. Domain or subject matter experts may be involved in coordinating and conducting reviews to determine whether or not a lesson is relevant across many other projects, is unique to a particular department or project, or applies globally to the organization as a whole.
3. The storage aspect of lessons learned usually involves incorporating lessons into an electronic database for the dissemination and sharing of information. Information should be stored in a manner that allows users to identify applicable information searches. In addition, each program should include a keyword and functional category search capability to facilitate information retrieval.

²⁴⁴ Weber, Aha & Becerra-Fernandez 2000:64

4. The final element, and the most important, is the dissemination of lessons learned, since lessons are of little benefit unless they are distributed and used by people who will benefit from them. Dissemination can include the revision of a work process, training, and routine distribution via a variety of communication media. Lessons can be “pushed,” or automatically delivered to a user, or “pulled” in situations where a user must manually search for them. Lessons can also be disseminated with an assigned priority descriptor, which denotes the risk, immediacy, and urgency of the lessons learned content²⁴⁵

According to Fong and Yip²⁴⁶ findings, real-life adoption of LLS can lead to the successful management of construction projects. By adopting LLS in construction, professionals can learn from lessons from past projects and share their knowledge or experience to create new lessons learned. As a result, it will facilitate the transfer from individual knowledge to become organizational knowledge Fong and Yip²⁴⁷. Lessons learned is the main characteristic which differentiates organizational learning from simple information exchange²⁴⁸.

3.4 ADVANTAGES AND DISADVANTAGES OF LESSONS LEARNED

Vandeville emphasizes the following:

Although the literature abounds with examples of lessons learned there appears to be little information on how to collect them. This appears to be primarily an ad hoc activity that often yields only anecdotal results. Collection seems to be loosely defined, and the analysis and subsequent usage of “lessons learned” information is often lacking. Many organizations treat the recording of lessons learned as an end in itself, thereby missing opportunities to use information that is already present in the company for improvement.

The experiences of the people who actually execute a process can be one of the most important sources of input to a process improvement program. Yet valuable experience is often lost because it is not captured in a timely fashion as it is being gained, if it is captured at all. The development of a structured approach for collecting and using this information provides a mechanism to promote organizational learning by harnessing

²⁴⁵ NASA 200:14-15

²⁴⁶ Fong and Yip 2006:27

²⁴⁷ Fong and Yip 2006:29

²⁴⁸ Britton 1998:16

the personal and team learning that is already taking place in the organization²⁴⁹.

Lessons learned (LL) practices are an important aspect of KM²⁵⁰. While communication of knowledge is important, it is the processes through which knowledge is shared that determine whether organizational learning occurs and, therefore, whether a knowledge-sharing process was a success²⁵¹.

It is critical to collect meaningful lessons learned information so that subsequent analysis will be productive. Often organizations leave it up to the staff to come forward with lessons learned. This lack of a collection infrastructure can lead to poor results. It may result in no information being captured, or the information captured may be relatively unusable²⁵².

According to Weber, Aha & Becerra-Fernandez²⁵³, lessons learned systems have been deployed by many military, commercial, and governmental organizations, to disseminate validated experiential lessons. Writers define LLS in several different ways, such as:

- activities, people and products that support the recording, collection and dissemination of lessons learned in organizations²⁵⁴.
- elements of both organizational learning and knowledge management. Lessons learned therefore forms part of organizational learning because it attempts to collate lessons learned from previous projects in an effort to encourage the organization, via its employees, to learn from past experience²⁵⁵;
- validated knowledge and experience derived from observations and historical study of military training, exercises, and combat operations²⁵⁶;
- procedures developed to ‘work around’ shortfalls in doctrine, organization, equipment, training and education, and facilities and support²⁵⁷; and
- knowledge or understanding gained by experience²⁵⁸.

²⁴⁹ Vandeville 2000:127

²⁵⁰ Graham & Thomas 2007:1

²⁵¹ Cummings 2003:4

²⁵² Vandeville 2000:130

²⁵³ Weber, Aha & Becerra-Fernandez 2000:63

²⁵⁴ Snider *et al.* 2002: 291

²⁵⁵ Carrillo 2005:236

²⁵⁶ U.S. Army 1997:1

²⁵⁷ U.S. Marine Corps 1994:1

²⁵⁸ Secchi *et al.* 1999:57

Secchi et al further explains that the experience may be positive, as in a successful test or mission, or negative, as in a mishap or failure. By adopting LLS transfer of knowledge from individuals to organization will be facilitated²⁵⁹. This statement brings the chapter to the stage where practical frameworks of OL are discussed and compared.

3.5 FRAMEWORKS OF ORGANIZATIONAL LEARNING AND LEARNING ORGANIZATION

Literature on OL and LO provide a number of theoretical frameworks that facilitate organizational learning provided by several authors such as Argyris and Schön who are said to have been the first to propose frameworks that facilitate organizational learning. These two authors distinguished between single-loop and double-loop learning as indicated in chapter two of this document. Others that followed are:

- Kim, who integrates Argyris, March and Olsen and another framework by Kofman into a single comprehensive framework;
- Nonaka & Takeuchi, who developed a four stage spiral framework of organizational learning;
- Bontis, Crossan & Hulland who empirically tested a framework of organizational learning that encompassed both stocks and flows of knowledge across three levels of analysis: individual, team and organization;
- Flood, who discusses the concept of organizational learning from Peter Senge and the origins of the theory from Argyris and Schon;
- Imants, who provides theory development for organizational learning in schools within the context of teachers' professional communities as learning communities, which is compared and contrasted to teaching communities of practice;
- Common, who discusses the concept of organizational learning in a political environment to improve public policy-making; and
- Bontis & Serenko, who proposed and validated a causal framework explicating organizational learning processes to identify antecedents and consequences of effective human capital management practices in both for-profit and non-profit sectors <http://en.wikipedia.org>²⁶⁰.

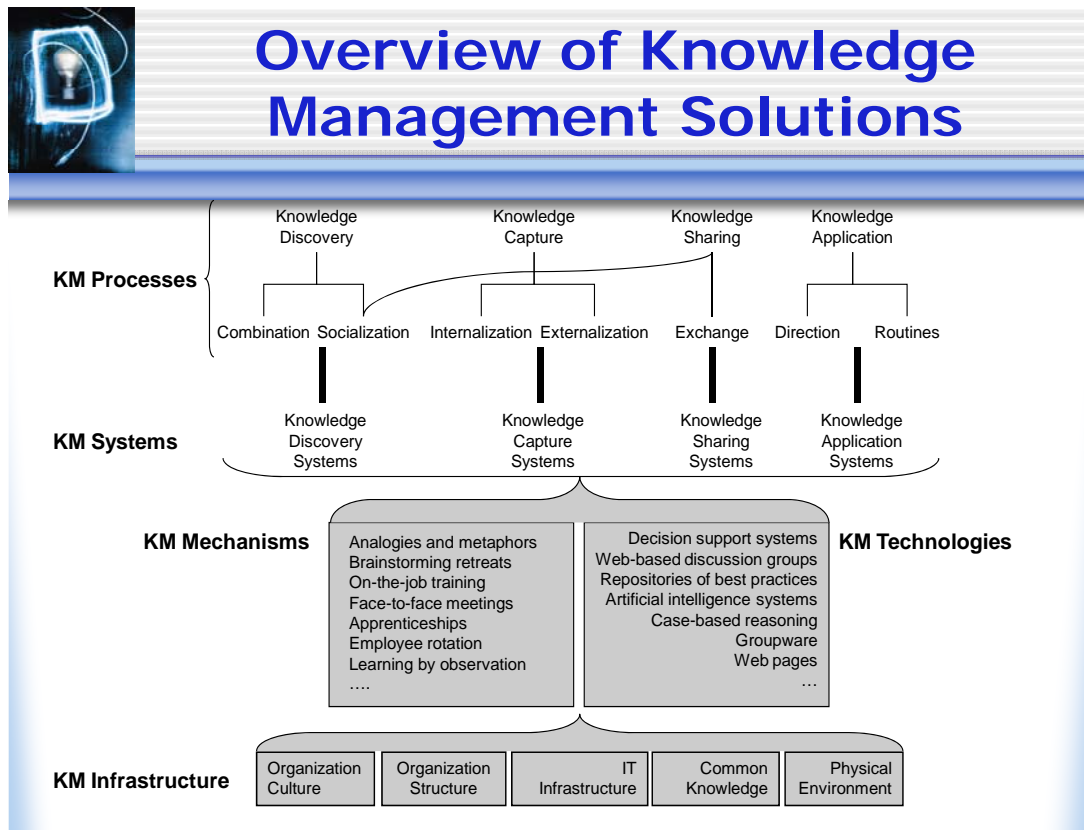
²⁵⁹ Fong & Yip 2006:29

²⁶⁰ http://en.wikipedia.org/wiki/Organizational_learning#Models.

However this study seeks to propose a framework for OL in public sector organizations.. Theory will therefore be applied in practical situations based on frameworks provided by Becerra-Fernandez et al; Kim; Santa Fe Institute (the complex adaptive systems theory (CAS)); and Senge.

We start with the KM framework of Becerra-Fernandez, Gonzalez & Sabherwal²⁶¹

Figure 3.1: The Knowledge Management Framework of Becerra-Fernandez, et al



Source: Becerra-Fernandez, Gonzalez & Sabherwal

According to the framework, knowledge management solutions refer to the variety of ways in which KM can be facilitated. KM solutions are divided into four broad levels: KM processes; KM systems; KM mechanisms and technologies; and KM infrastructure. KM processes are broad processes that help in discovering, capturing, sharing and applying knowledge. These four processes are supported by KM systems and seven important types of KM sub processes. KM systems are supported by KM mechanisms and technologies (see Table 3.1 below).

²⁶¹ Becerra-Fernandez, Gonzalez & Sabherwal 2004:47

Table: 3.1 KM Processes, Mechanisms and Technologies

KM Processes	KM Systems	KM processes	sub-	KM Mechanisms	KM Technologies
K Discovery	K Discovery Systems	Combination		Meetings, telephone conversations, collaborative creation of documents	Web portal, best practices and lessons learnt and data mining, repositories of information, Databases, Web-based access to data
		Socialisation		Employee rotation across departments, initiation conferences, brainstorming retreats, cooperative projects	Video-conferencing, electronic discussion groups e-mail
K Capture	K Capture Systems	Externalisation		Frameworks, prototypes, best practices, lessons learnt	Expert systems, chart groups, best practices and lessons learnt databases
		Internalisation		Learning by doing, on-the-job training, learning by observation and face-to-face meetings	AI-based knowledge acquisition, computer-based simulations, Computer-based communication
K Sharing	K Sharing Systems	Socialisation		Employee rotation across departments, initiation conferences, brainstorming retreats, cooperative projects	Video-conferencing, electronic discussion groups, e-mail
		Exchange		Memoranda, manuals, letters, presentations	Team collaboration tools, best practices databases, lessons

K Application	K Application Systems	Direction	Help desks, support centres and traditional hierarchical relationships in organizations	learnt systems, and expertise locator systems, repositories of information Databases, Web-based access to data
		Routines	Organizational policies, work practices, and standards	Capture and transfer of experts' knowledge, troubleshooting systems, and case-based reasoning systems; decision support systems
				Expert systems, enterprise resource planning systems, management information systems

Source: Becerra-Fernandez, Gonzalez & Sabherwal²⁶²

Table 3.2 KM Processes, Mechanisms and Technologies (Singling out KS)

KM Processes	KM Systems	KM processes	sub-	KM Mechanisms	KM Technologies
K Sharing	K Sharing Systems	Socialisation		Employee rotation across departments, initiation conferences, brainstorming retreats, cooperative projects	Video-conferencing, electronic discussion groups, e-mail
		Exchange		Memoranda, manuals, letters, presentations	Team collaboration tools, best practices databases, lessons learnt systems, and expertise locator systems,

²⁶² Becerra-Fernandez, Gonzalez & Sabherwal 2004:41

	repositories of information Databases, Web-based access to data
--	--

Source: Becerra-Fernandez, Gonzalez & Sabherwal²⁶³

KM mechanisms and technologies rely on the KM infrastructure which is a foundation for KM (see Table: 3.3 below).

Table 3.3 KM Infrastructure

Dimensions of MK Infrastructure	Related Attributes
Organizational culture	Understanding of the value of KM practices
	Managing support for KM at all levels
	Incentives that reward knowledge sharing
	Encouragement of interaction for creation and sharing of K
Organizational structure	Hierarchical structure of the department (decentralisation, emphasis on leadership rather than management)
	Communities of practice
	Specialised structures and roles (Chief K officer, KM department, traditional KM unit)
Information technology infrastructure	Reach
	Depth
	Richness
Common Knowledge	Aggregation
	Common language and vocabulary
	Recognition of individual K domains
	common cognitive schema
	Shared norms
physical environment	Elements of specialised K that are common across individuals
	Design of buildings (offices, meetings rooms, hallways)
	Spaces specifically designed to facilitate informal knowledge sharing (coffee rooms, cafeterias, water coolers)

Source: Becerra-Fernandez, Gonzalez & Sabherwal²⁶⁴

Therefore the KM infrastructure supports KM mechanisms and technologies, and KM mechanisms and technologies are used in KM systems that enable KM processes²⁶⁵.

²⁶³ Becerra-Fernandez, Gonzalez & Sabherwa, 2004:41

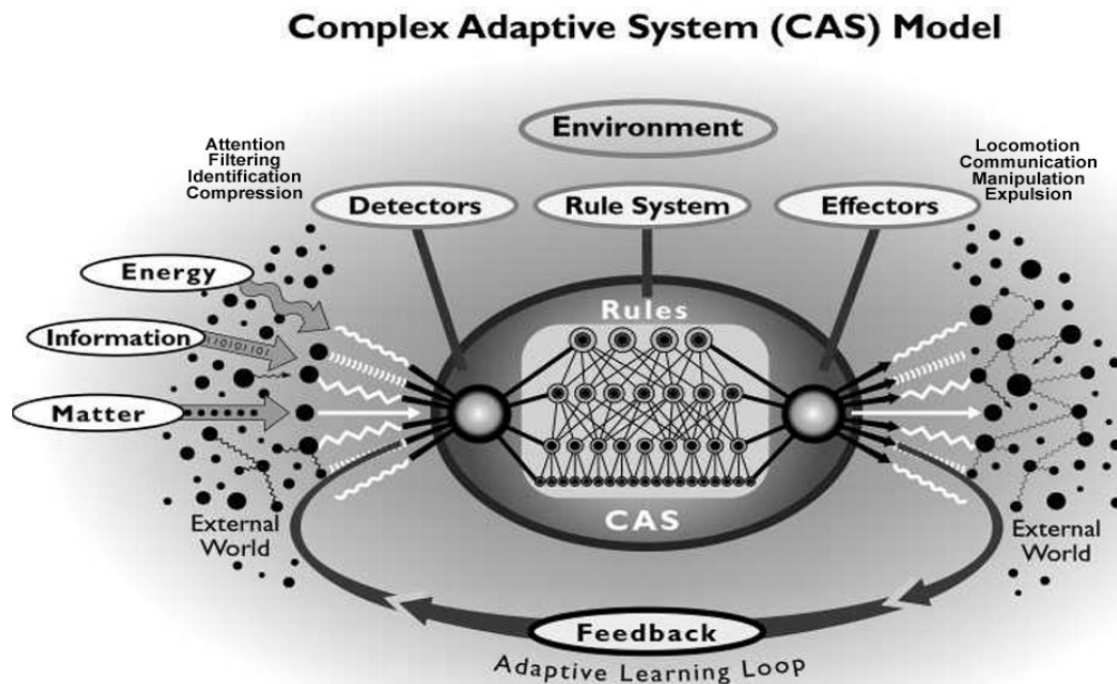
²⁶⁴ Becerra-Fernandez, Gonzalez & Sabherwa, 2004:46

²⁶⁵ Becerra-Fernandez, Gonzalez & Sabherwal 2004:32

According to Becerra-Fernandez, Gonzalez & Sabherwal, KS is one of the KM processes supported by two sub-processes mainly socialization and exchange. KS is the process through which explicit or tacit Knowledge is communicated to other individuals. Becerra-Fernandez, Gonzalez & Sabherwal²⁶⁶ highlight three important clarifications in this regard: Firstly KS means effective transfer, so that the recipient of knowledge can understand it well to act on it; secondly, what is shared is knowledge instead of recommendations based on the knowledge; third, KS may take place across individuals as well as across groups, departments, or organizations. Sharing Knowledge is clearly an important process in enhancing organizational innovativeness and performance²⁶⁷.

Depending on whether explicit or tacit knowledge is shared, exchange or socialisation processes are used. Socialisation facilitates the sharing of tacit knowledge. Exchange focuses on the sharing of explicit knowledge. It is used to communicate or transfer explicit knowledge between individuals, groups and organizations²⁶⁸.

Figure: 3.2 Complex Adaptive Systems



²⁶⁶ Becerra-Fernandez, Gonzalez & Sabherwal 2004:34

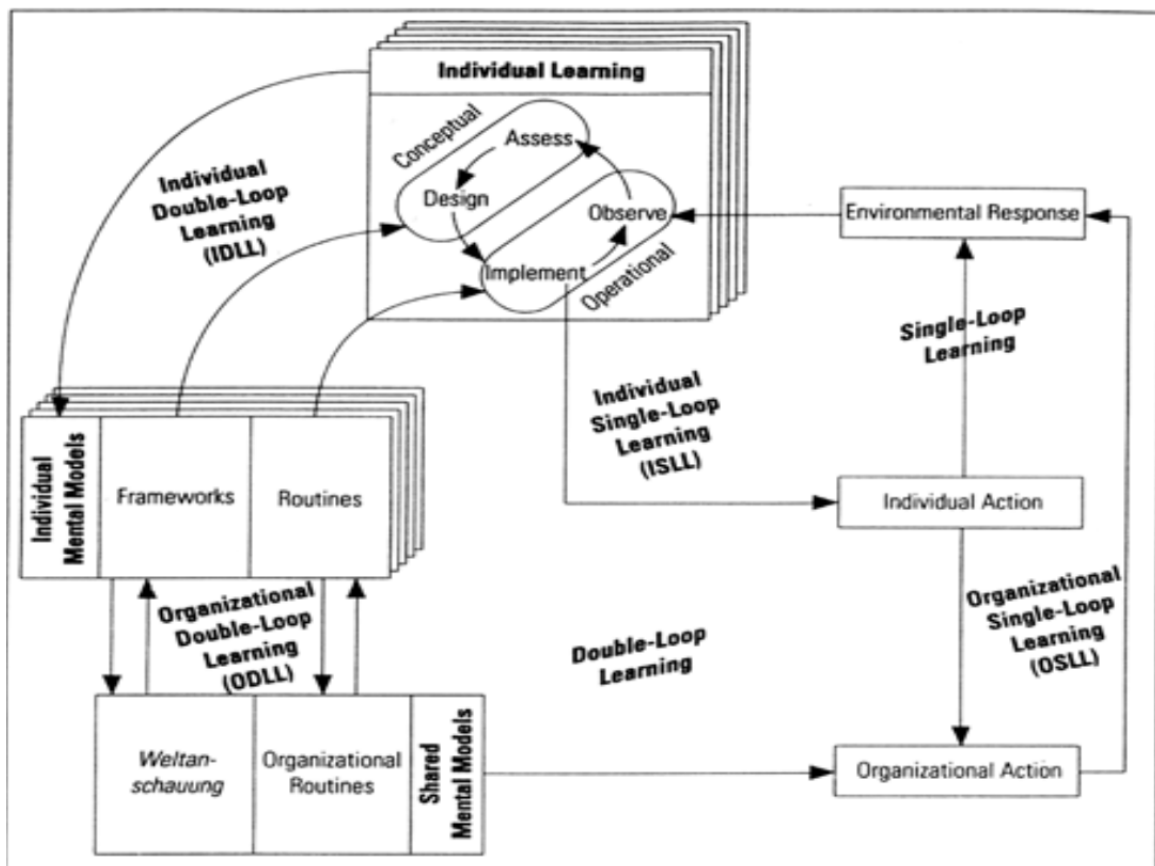
²⁶⁷ Becerra-Fernandez, Gonzalez & Sabherwal 2004:34

²⁶⁸ Becerra-Fernandez, Gonzalez & Sabherwal 2004:35

Source: McElroy²⁶⁹

The complex adaptive systems theory (CAS) holds that living systems self-organise and continuously fit themselves, individually and collectively, to ever-changing conditions in the environment. Of particular interest in its representation of complex living systems is the role played by knowledge as portrayed by the “Rule System” and the “Rules” it produces. As the system encounters incoming stimuli from its environment (information, energy, or matter), it fashions its response by invoking pertinent knowledge contained in its rule sets. Actions then taken, produce effects inside the system itself and/or externally. The results are fed back into the system for immediate and future reference. Rules, or knowledge, are refreshed in the process. Feedback and rules in the science of complexity, then, are strikingly similar to the roles played by “experiential feedback” and “organizational knowledge,” as conceived in emerging knowledge management frameworks.. In other words they learn²⁷⁰.

Figure: 3.3 Shared Mental Frameworks Cycle



²⁶⁹ McElroy 2002: 27

²⁷⁰ McElroy 2002:27-149

Source: Kim²⁷¹

According to Mc Elroy²⁷² this framework is composed of two separate, but related, learning cycles: individual learning and organizational learning. Kim's framework combines the two to convey the importance of interplay between them if learning at either level is to occur. Individual learning is informed by organizational knowledge (mental frameworks) and, conversely, organizational knowledge is produced, collectively, by individuals.

The author calls this framework the OADI-SMM framework (observe, assess, design, implement – shared mental frameworks). An organization can only learn through its members and therefore the aggregation of individual mental frameworks affects organizational learning. The mental frameworks in individual minds is where a vast majority of an organization's knowledge (both know-how and know-why) lies.

The author identifies the types of incomplete learning cycles, such as situational learning (where a problem is encountered, solved, but learning is not codified for later use); fragmented learning (e.g. highly decentralized organizations such as universities where networking capabilities to share learning are weak); and opportunistic learning (e.g. when an organizations shared mental frameworks (values, culture, and standard operating procedures) are purposely bypassed in order to capitalize on a time sensitive opportunity). Mental frameworks must be shared and made explicit to help increase organizational learning²⁷³.

Table 3.4: McElroy compares the Complex Adaptive Systems Framework (Figure 3.2) and Kim's OADI/SMM framework (Fig 3.3) as follows:

OADI/SMM Framework	CAS Framework
- Observe (concrete experience)	- Detectors (sensory perception)
- Assess (reflect on observations)	- Rule System and Rules (sense-making)
- Design (form abstract concepts)	- Rule System and Rules (knowledge creation)
- Implement (test concepts)	- Effectors (locomotion, communication, action)
- Environmental Response (feedback)	- Experiential Feedback (feedback)

²⁷¹ Kim 1993: 44

²⁷² Mc Elroy 1999:8

²⁷³ Kim, 1993:43-45

and concludes that while the mapping is far from precise, the functional similarities between certain elements of Kim's organizational learning framework and the complex adaptive systems framework are striking.

Table: 3.5 Senge's learning organization framework

Discipline	Description
Personal Mastery	In this discipline individuals seek to develop a coherent and accurate picture of their current situation, and to formulate a personal vision for where they would like to be. The gap between current reality and the envisioned state creates motivation to achieve more of the person's desired results.
Mental Frameworks	This discipline is about cultivating a reflective intellectual posture and developing a greater understanding of the assumptions, feelings, and perceptions that influence thoughts and actions. By reflecting on these, the individual becomes more aware—and better able to notice and control their own behaviours and choices.
Shared Vision	In this discipline the group/team builds a shared picture of the future. They also can determine guiding principles, practices, and shared commitments to synergistically work in the direction of the collective outcome that is desired.
Team Learning	The activities within this discipline harness the collective power of the group working harmoniously with each other. The idea being that the complementary, supportive, and summative efforts of the group are greater than what would be achievable by the individuals independently.
Systems Thinking	Systems thinking helps people develop frameworks about the complex interactions that occur within an organization. The ways activities are systemically linked to one another tend to either promote growth, decline, or stability. Central to this discipline is the idea of feedback cycles (loops) that either reinforce the status quo (provide stability) or drive exponential effects. For example, compound interest is a type of feedback loop that produces an increasing rate of growth over time. Alternately, production inelasticity can be a limiting factor that creates stability. The inability of a production system to meet increasing demand may serve to reduce the demand back to lower levels that can be achieved.

Source: Osborne²⁷⁴

SUMMARY

An overview of types of knowledge sharing systems has been provided. Investigation on the applicability of lessons learned systems as a knowledge sharing system to the department has

²⁷⁴ Osborne 2008:3-4

been done.

This chapter also reviewed available literature on frameworks of organizational learning. Four frameworks of OL were identified. An attempt was then made to apply theory in practical situations based on four identified. Evidence is presented in the literature that, it is difficult for these frameworks to meet all the requirement of an LO.

CHAPTER 4

Perceptions of Organizational Learning in the Department

4.1 INTRODUCTION

This chapter reports on an opinion probe which was done in the Eastern Cape Department of Human Settlements to gain some insight in:

- a) how much of the concepts related to OL are understood in the context of a functioning public sector department, and
- b) what important factors have to be taken into account when designing an appropriate framework for OL in public sector organizations.

Data collection was achieved by means of a standardized self-administered questionnaire. According to Babbie & Mouton, standardized questionnaires have an important strength in regard to measurement generally. A total of 37 people were targeted, consisting of 28 senior managers and 8 general managers. These levels of management were chosen because they are supposed to have expertise in this area as knowledge management forms part of the Senior Management Service (SMS) Competency Framework in the public service.

In an attempt to strengthen leadership and management capacity in government as its core function, an SMS Handbook was developed. The purpose of this handbook is to respond to the Public Service's challenge to recruit, develop and retain competent leaders and managers and to reward them for good performance, recognising excellence and innovation (<http://www.dpsa.gov.za>).

Chapter 5 of this handbook contains the SMS Competency Framework. This SMS Competency Framework is meant to ensure that the Public Service achieves its objective of

professionalising the Public Service, especially at the Senior Management level²⁷⁵. The competency framework provides the Public Service with a description of the key skills, knowledge, behaviours and attitudes that are expected of its Senior Management cadre.

It helps to establish a common set of performance expectations that can be consistently applied throughout the Public Service²⁷⁶. The competencies that appear in the SMS Competency Framework are in no order of importance to the role of senior managers in the Public Service. Members of the SMS are supposed to undergo a competency test based on this framework when they are being hired. All the following eleven competencies are viewed as being critical for high performance in the senior manager's role:

- Strategic Capability and Leadership;
- Programme and Project Management;
- Financial Management;
- Change Management;
- Knowledge Management (KM);
- Service Delivery Innovation (SDI);
- Problem Solving and Analysis;
- People Management and Empowerment;
- Client Orientation and Customer Focus;
- Communication; and Honesty and Integrity.

The KM Competency is defined as being able to promote the generation and sharing of knowledge and learning in order to enhance the collective knowledge of the organization²⁷⁷.

The questionnaire had three components composed of twenty questions. Six questions revolved around systems thinking; another six addressed LO related issues; and eight were on OL.

4.2 FORMULATION OF QUESTIONS

Based on the theoretical work described in chapters 1 to 3, the following seven key notions were selected for the opinion probe in the Department.

- Knowledge management

²⁷⁵ SMS Handbook 2003: 157

²⁷⁶ SMS Handbook 2003: 161

²⁷⁷ SMS Handbook 2003: 170

- Learning from own past
- Promotion of collaboration
- Innovation
- Communication
- Complexity thinking
- Paying attention to organizational structures

Statements that formed the questionnaire were formulated based on those. Out of the twenty statements that the respondents responded to, six were derived from the literature on LO; eight from OL; and another six from ST. Definitions of LO, OL and ST were provided in the questionnaire in case the respondents did not have full understanding of what those mean. The first statement “The Eastern Cape Department of Human Settlements (the Department) is a learning organization” was based on the definition of LO provided for them to compare whether the Department is the kind of an organization that is defined by Senge.

The second and third statements “Department uses learning to reach its goals”; and “the Department links individual performance with organizational performance” have been formulated out of characteristics of LO provided by Kerka on page 22. Statement four, “the Department fosters dialogue” is based on elements of an LO provided by Marsick and Watkins; and Kerka on pages 20 and 23 respectively. Statement five, “the Department has structures that facilitate team learning” has been created out of Marsick and Watkins’s; and Senge’s properties of an LO which appear on pages 19 and 23. Statement six, “the Department still has a traditional hierarchical structure” has been formulated out of barriers to OL given by Edmondson and Moingeon; Fiol & Lyles; and Pawlowsky on page 29.

Statement seven “in the Department people are empowered to evolve a collective vision” is based on the characteristics by Marsick and Watkins on page 19 and Senge; Senge, Cambron-McCabe, Lucas, Smith, Dutton and Kleiner; on page 23. Statement ten, the Department acquires and encourages the development of leadership competencies at all levels has been derived from Leuci’s recommendations for cultivating an organizational culture in which learning and innovation can occur that appear on page 27 and ; Serrat’s characteristics of an OL on page 20. Statements eight, “adequate resources are allocated for learning”; nine a retention strategy exists in the Department”; nine, “A retention strategy exists in the Department”; eleven “creative opportunities for knowledge to be developed and shared with others through interpersonal contact and access to documentation are provided”; twelve, “individuals and teams are encouraged to use a range of ways of surfacing their tacit

knowledge and making it available to others”; thirteen, “collaborative mutual learning arrangements with other organizations are made”; and fourteen, “creative use of information and communication technologies is encouraged”, are have all been derived from characteristics of an OL provided by Serrat on page 21.

The fifteenth statement, “the Department maintains its stability by making adjustments based on feedback” has been derived from Moilanen’s explanation on page 20 that “an LO invests in leadership to assist individuals in finding the purpose, in eliminating personal obstacles and in facilitating structures for personal learning and getting feedback and benefits from learning outcomes”. Statement sixteen, “the Department uses its mistakes as opportunities for learning” has been formulated out of Garvin’s identifies five distinguishing attributes of an LO and Hitt’s eight characteristics of the traditional organization versus the learning organization on page 22. The seventeenth statement, “in the Department employees work together to change the way the organization responds to challenges is derived from Watkins and Marsick’s argument on page 26 that “a learning organization must capture, share, and use knowledge so its members can work together to change the way the organization responds to challenges. People must question the old, socially constructed and maintained ways of thinking”.

Statement eighteen, “in the Department learning is emphasised through a unified whole rather than the individuals” has been formulated from Senge’s reference to systems thinking as “a discipline for seeing wholes and further explains that it is a framework for seeing interrelationships rather than things on page 24”. Statement nineteen, “officials in the Department are continuously aware of and interact with their environment” has been formulated out of the arguments by Marsick and Watkins on pages 20 and Kerka on page 23. Statement twenty, “feedback mechanisms exist in the Department” is based on Serrat’s characteristics of OL on page 20.

4.3 ANALYSIS OF THE EMPIRICAL RESEARCH

This section analyses the results of the empirical study in order to achieve the set objectives. It shows the outcome of each statement as presented by respondents in terms of figures and percentages. This section also explains the responses utilising descriptive statistics.

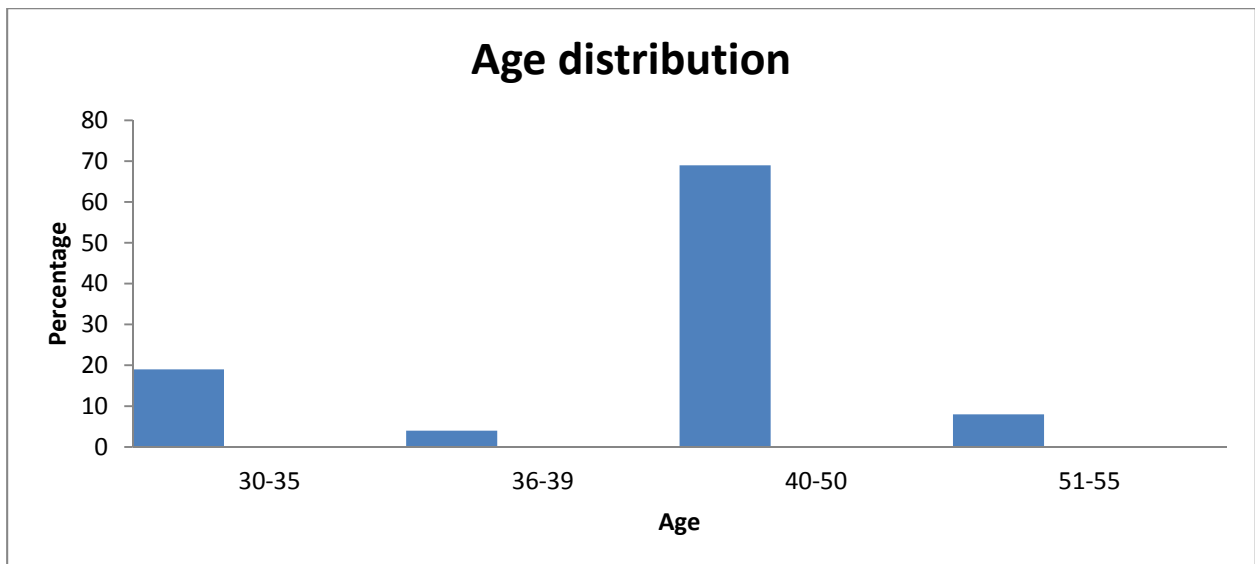
The questionnaire is attached as annexure A. The response frequency distribution totals table is annexure B. The questionnaire is divided into four sections. Section A contains the biographical data of the respondents. Section B consists of six statements on LO, Section C

consists of eight statements on OL, and Section D consists of 6 statements on systems thinking. All the sections use a five point Likert type scale, ranging from strongly disagree to strongly agree.

As this study was conducted in order to explain organizational learning related behaviour in the Eastern Cape Department of Human Settlements, questionnaires were distributed to twenty nine senior managers and eight general managers of the Department. Out of twenty nine questionnaires distributed to senior managers, twenty one were received and out of the eight distributed to general managers seven were returned. The total of questionnaires that were returned was twenty eight. Out of twenty eight questionnaires received two were spoilt. Data was therefore collected through self-administered questionnaires from twenty six respondents.

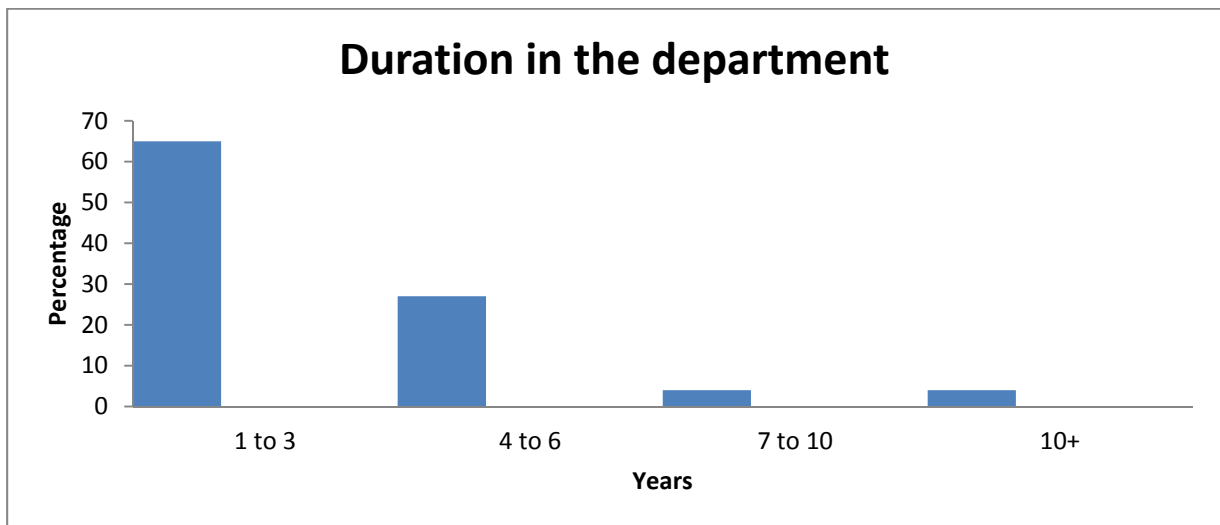
The respondents were divided into two groups, female and male. Of the twenty six respondents thirty five per cent were female and sixty five per cent were male. Following below is the illustration of the age distribution of respondents in figure 4.1. The age distribution ranges from 1980 to 1955. The highest age distributions for respondents were for respondents born between 1970 and 1960.

FIGURE 4.1



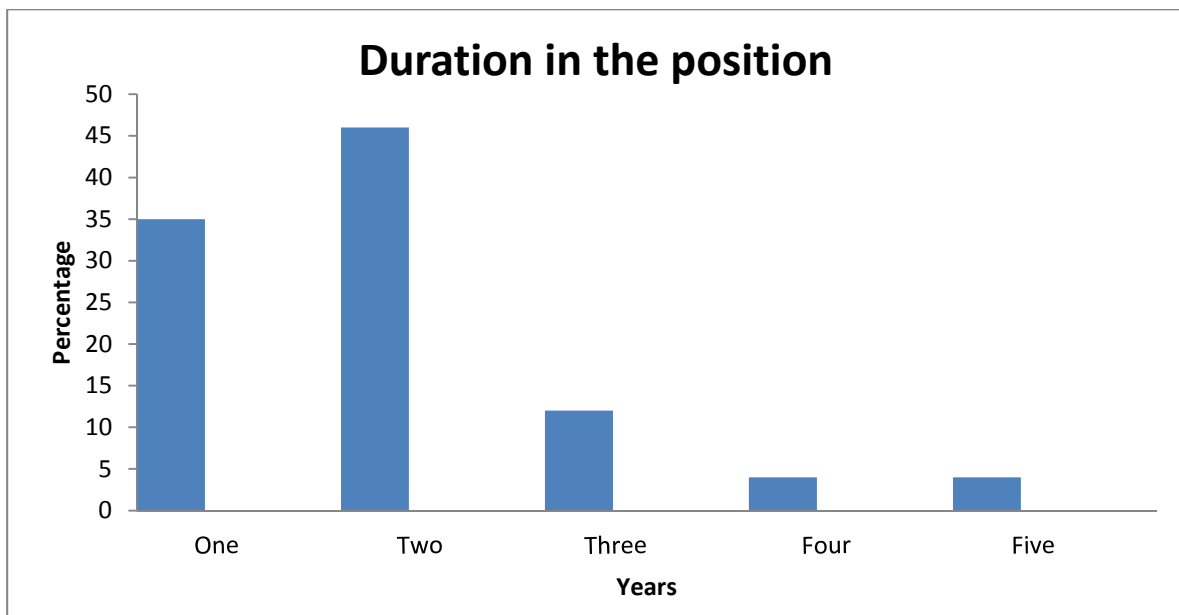
Respondents were also asked to indicate their highest level of education. They indicated that they all have tertiary education. As the respondents were also asked to indicate their how long have they been with the Department Fig. 4.2 shows their responses. It showed that sixty five per cent of the respondents have been departmental employees for less than three years.

FIGURE 4.2



As the respondents were requested to indicate as to how long they have been holding the positions they are in, Fig 4.3 below illustrates that forty six per cent have been holding the positions for two years followed by thirty four per cent who have been holding the positions for a year.

FIGURE 4.3



Twelve per cent of respondents had been holding the same positions for three years, four per cent for four years and four per cent for five years as well.

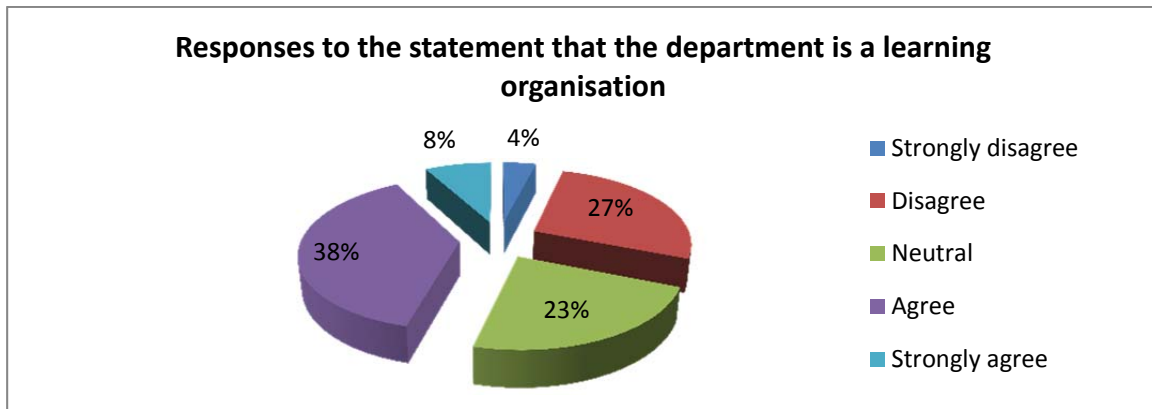
TABLE 4 - RESULTS OF RESPONSES

Questions	Strongly Disagree	Disagree	Neutral	Agree	Strong Agree
1. The Eastern Cape Department of Human Settlements (the Department) is a learning organization.	1	7	6	10	2
2. The Department uses learning to reach its goals.		7	9	10	
3. The Department links individual performance with organizational performance.	1	7	9	7	2
4. The Department fosters dialogue.		11	4	11	
5. The Department has structures that facilitate team learning.	3	11	4	6	2
5. The Department still has a traditional hierarchical structure.	1	5	5	11	4
7. In the Department people are empowered to evolve a collective vision.	1	6	7	12	
8. Adequate resources are allocated for learning.	4	12	10		
9. A retention strategy exists in the Department.	7	10	9		
10. The Department acquires and encourages the development of leadership competencies at all levels.		9	11	6	
11. Creative opportunities for knowledge to be developed and shared with others through interpersonal contact and access to documentation are provided	2	7	6	10	1
12. Individuals and teams are encouraged to use a range of ways of surfacing their tacit knowledge and making it available to others		11	7	8	
13. Collaborative mutual learning arrangements with other organizations are made.	5	7	6	8	
14. Creative use of information and communication technologies is encouraged.	1	6	9	10	
15. The Department maintains its stability by making adjustments based on feedback.		9	11	6	
16. The Department uses its mistakes as opportunities for learning.		6	8	11	1
17. In the Department employees work together to change the way the organization responds to challenges.	1	10	12	3	
18. In the Department learning is emphasised through a unified whole rather than the individuals.	3	14	5	4	
19. Officials in the Department are continuously aware of and interact with their environment.	1	6	10	9	
20. Feedback mechanisms exist in the Department.	2	9	9	5	1

N = 26

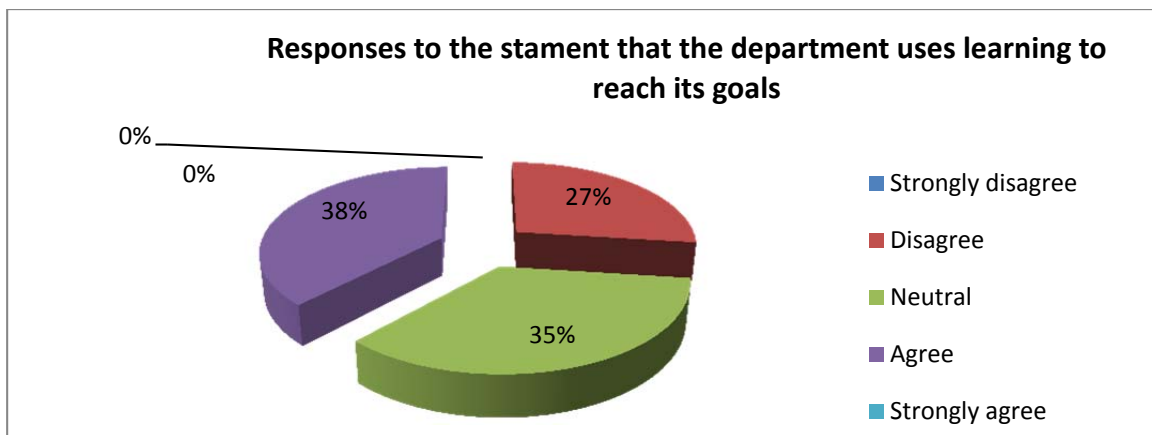
Responses to each of the twenty statements are interpreted below. Each interpretation is followed by an illustrating graph.

FIGURE 4.4.1



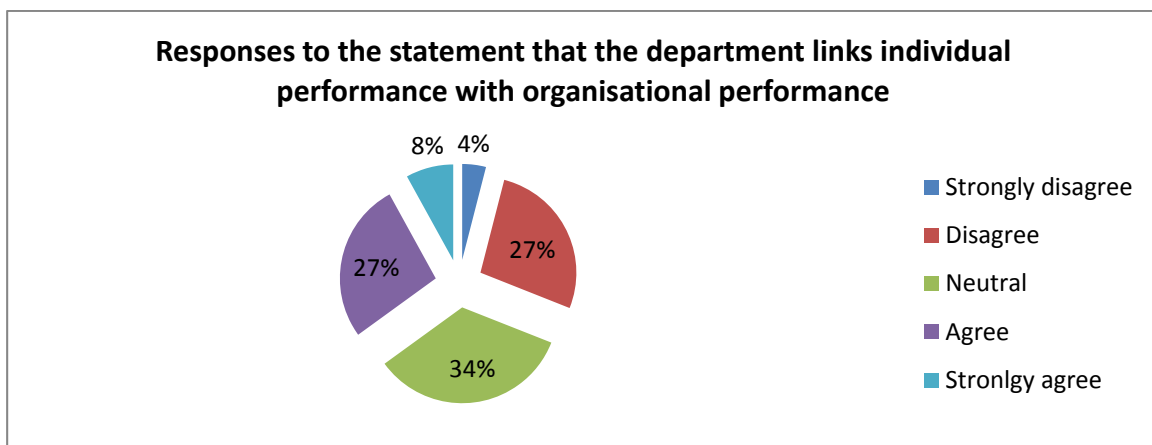
Eight per cent strongly agree and twenty seven per cent disagree while thirty eight per cent agree and only four per cent strongly disagree that the Department is a learning organization.

FIGURE 4.4.2



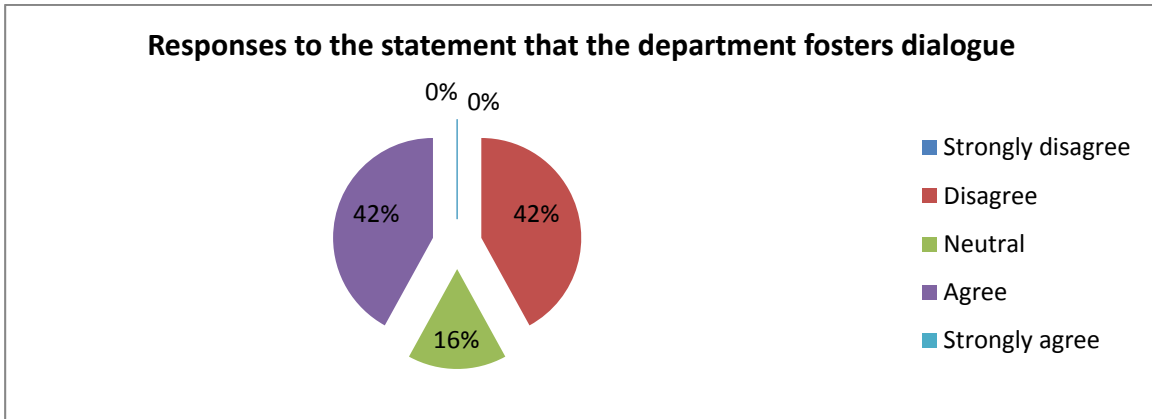
Twenty seven per cent disagree that the department uses learning to reach its goals while thirty eight per cent agree.

FIGURE 4.4.3



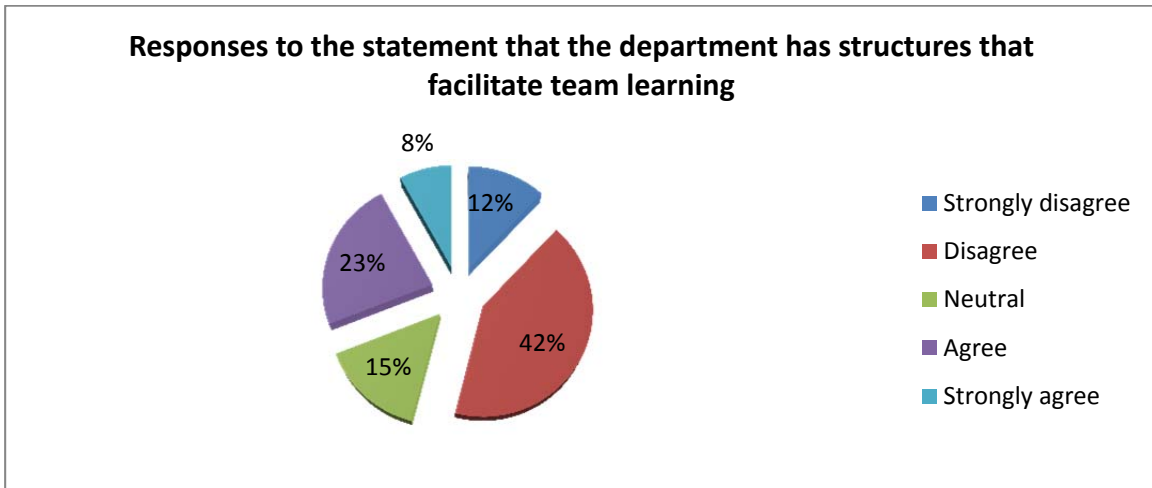
Only four per cent strongly disagree and twenty seven per cent agree while another twenty seven per cent are neutral and eight per cent strongly agree that the department links individual performance with organizational performance.

FIGURE 4.4.4



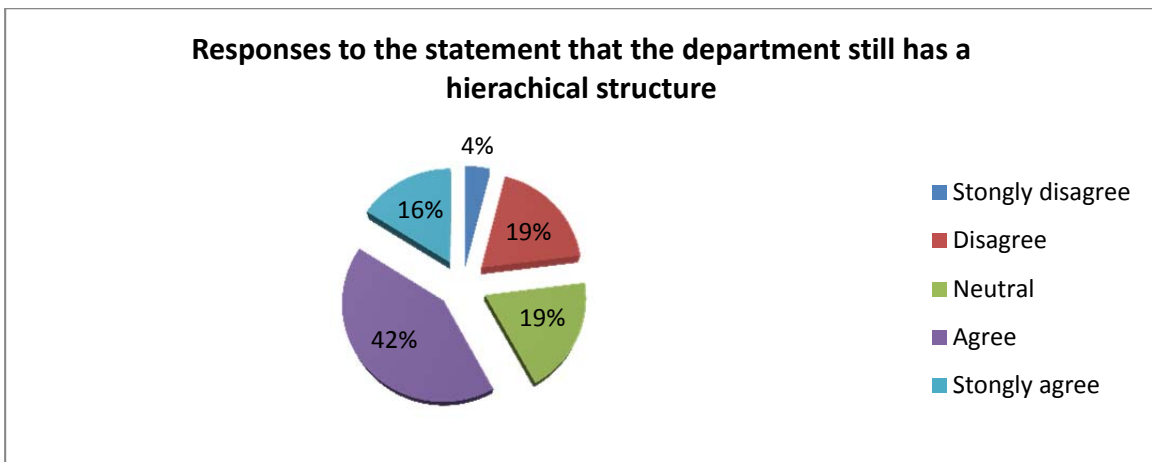
Forty two per cent disagree that the Department fosters dialogue while the same percentage agree.

FIGURE 4.4.5



Forty two per cent disagree and twelve per cent strongly disagree that the department has structures that facilitate team learning.

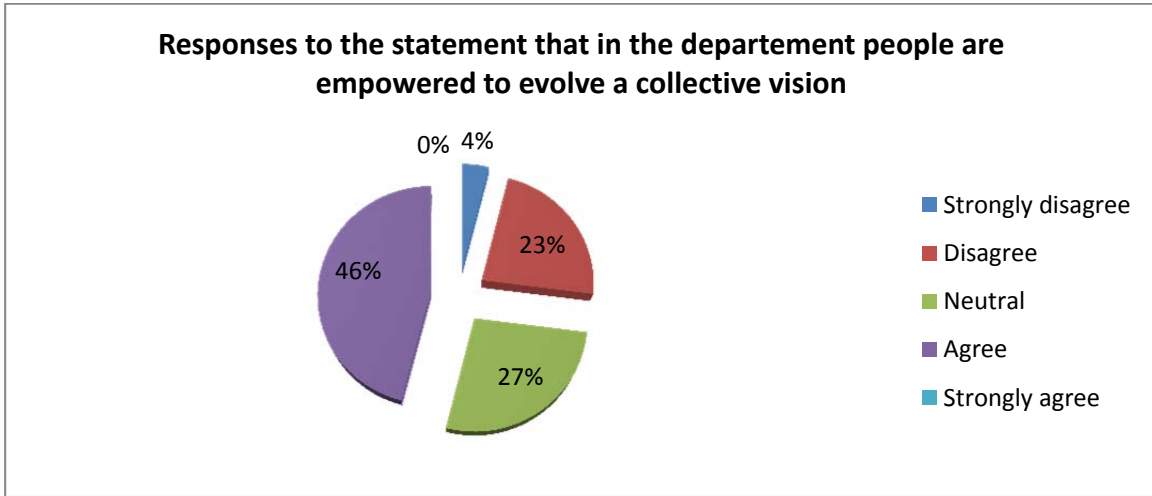
FIGURE 4.4.6



That is supported by the fact that about sixteen per cent strongly agree and forty two per cent

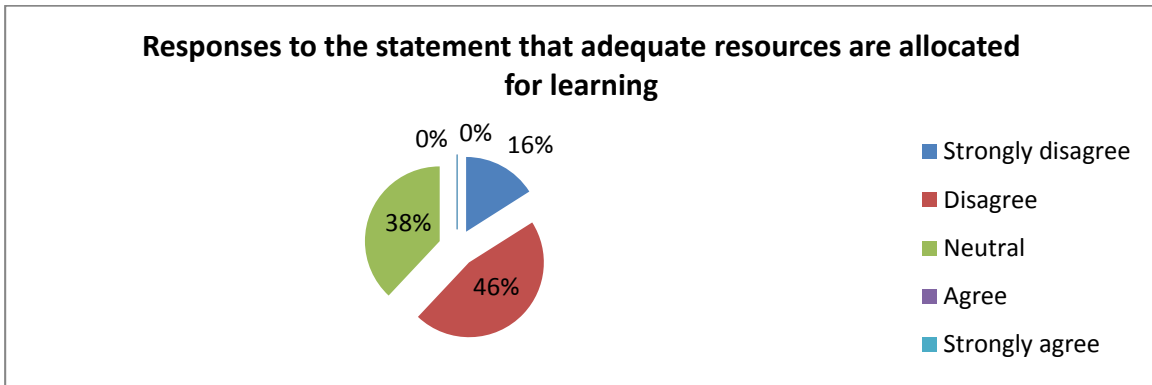
agree that the Department still has a traditional hierarchical structure.

FIGURE 4.4.7



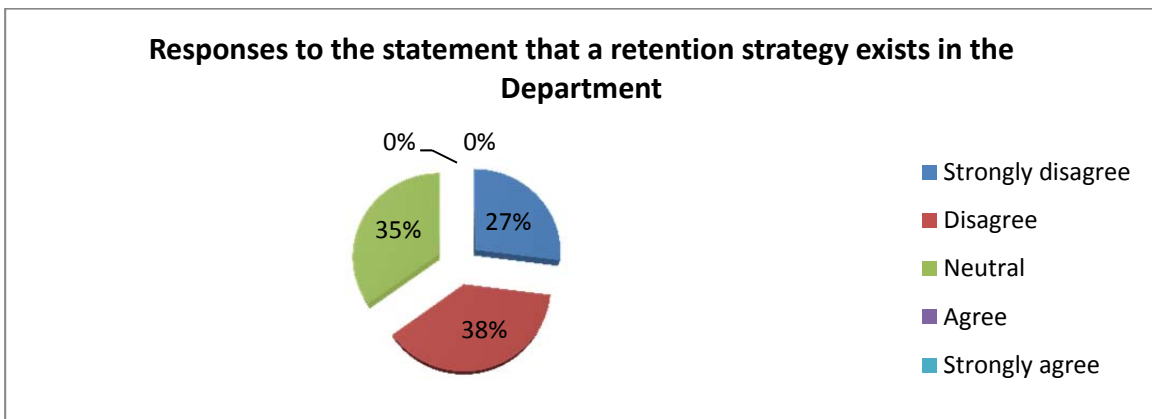
Forty six per cent agree that people are empowered to evolve a collective vision in the Department.

FIGURE 4.4.8



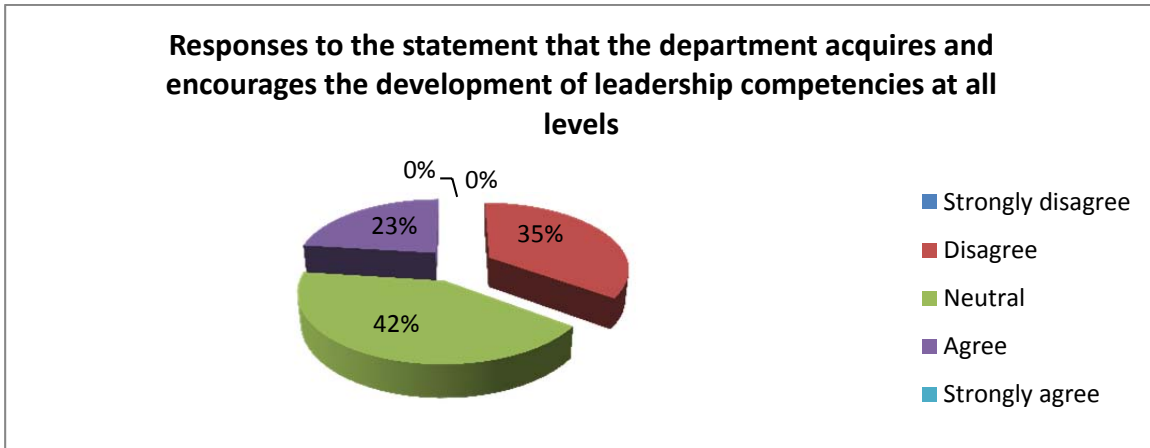
Forty six per cent disagrees and about sixteen per cent strongly disagree that adequate resources are allocated for learning in the department.

FIGURE 4.4.9



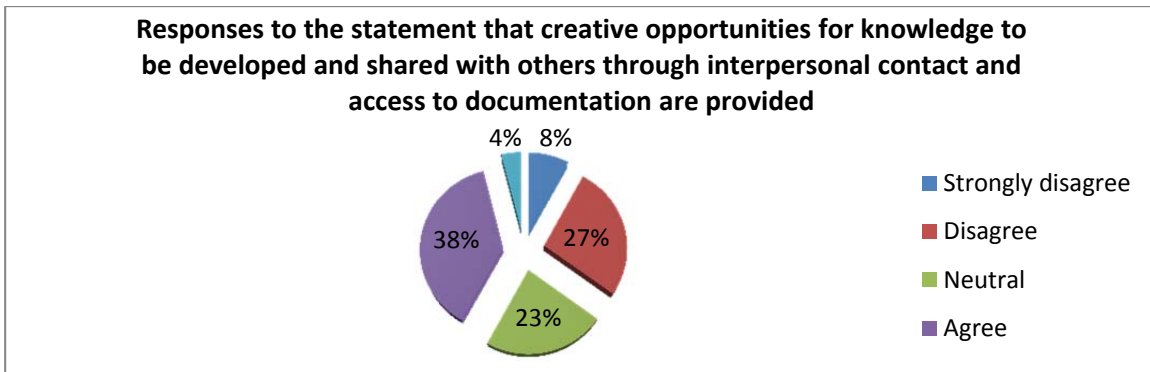
Thirty five per cent of the respondents were neutral while thirty eight per cent disagreed and twenty seven per cent strongly disagreed that a retention strategy exists in the Department.

FIGURE 4.4.10



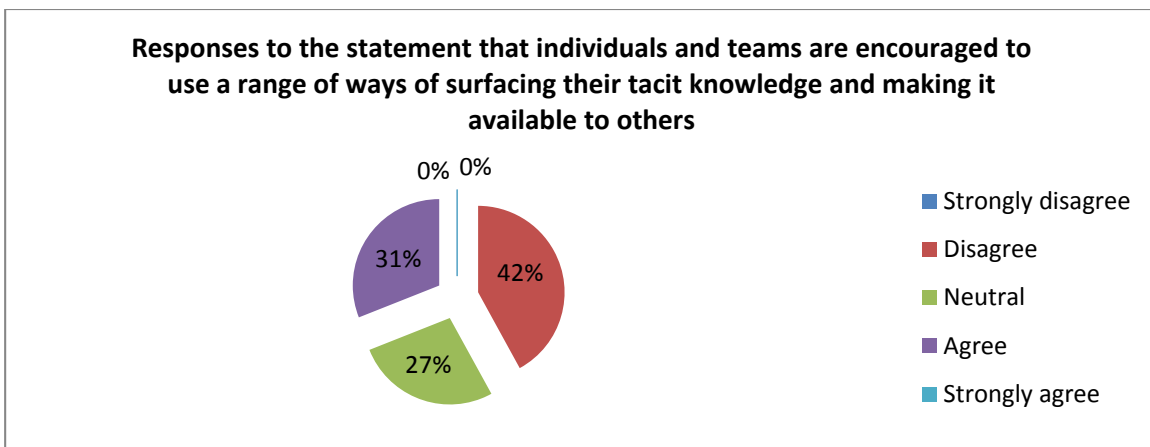
Thirty five per cent disagree that the Department acquires and encourages the development of leadership competencies at all levels while twenty three per cent agree.

FIGURE 4.4.11



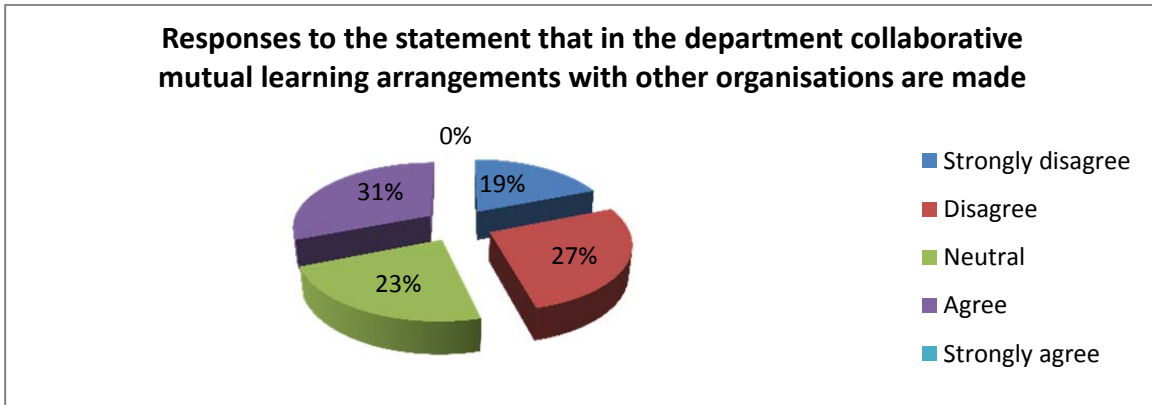
While four per cent strongly agree and thirty eight per cent agree, eight per cent strongly disagree and twenty seven per cent disagree.

FIGURE 4.4.12



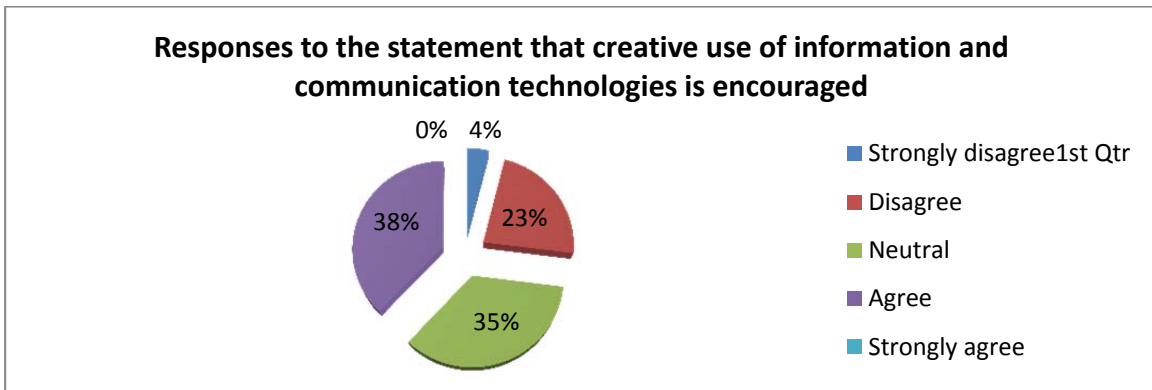
Forty two per cent disagree that individuals and teams are encouraged to use a range of ways of surfacing their tacit knowledge and making it available to others while thirty one per cent agrees.

FIGURE 4.4.13



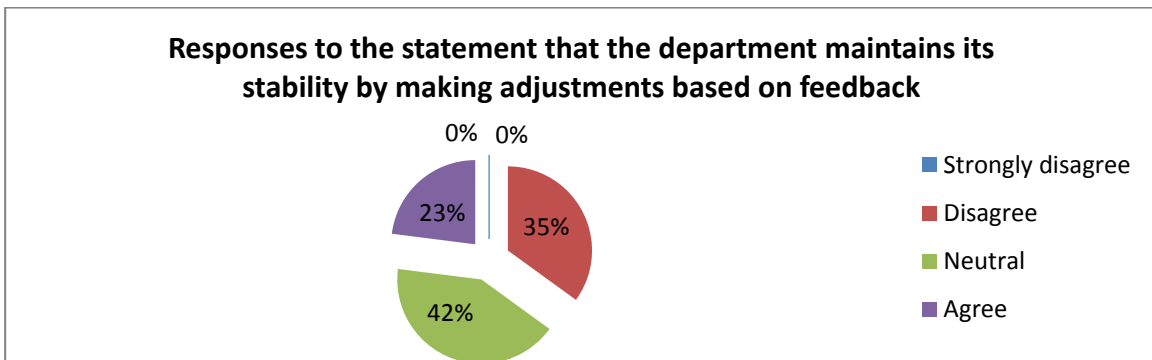
The response rate of nineteen per cent that strongly disagree and twenty seven per cent that disagree against thirty one per cent that agree that in the department collaborative mutual learning arrangements with other organizations are made supports this

FIGURE 4.4.14



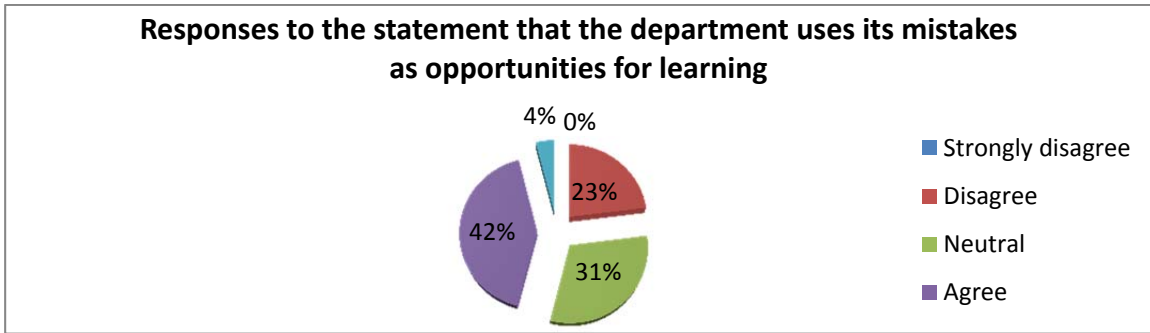
However this is contrasted by the response rate of thirty one per cent that agrees that creative use of information and communication technologies is encouraged while only four per cent strongly disagree and twenty three per cent disagree.

FIGURE 4.4.15



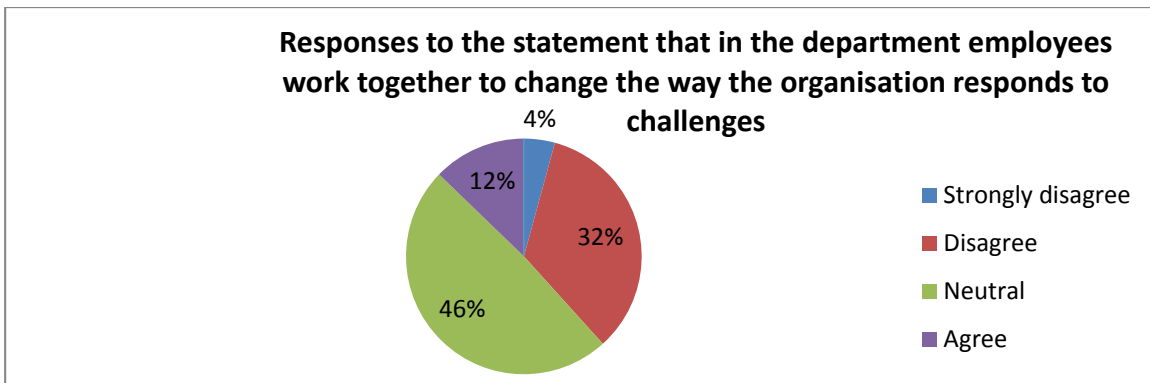
A response rate of twenty three per cent agrees while thirty five per cent disagree that the Department maintains its stability by making adjustments based on feedback.

FIGURE 4.4.16



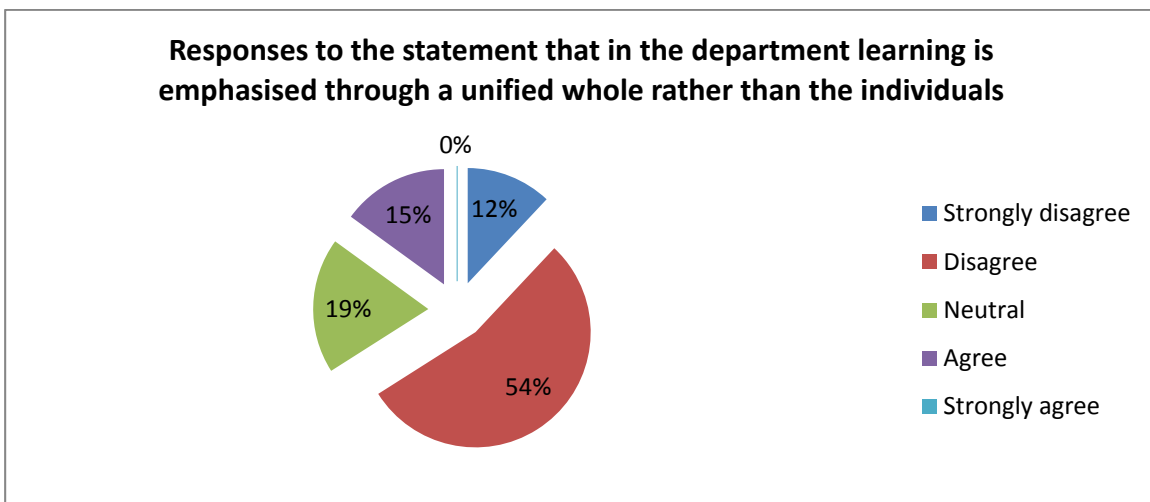
In contrast to this, four per cent strongly agree and forty two per cent agree that the department uses its mistakes as opportunities for learning when only twenty three per cent disagree.

FIGURE 4.4.17



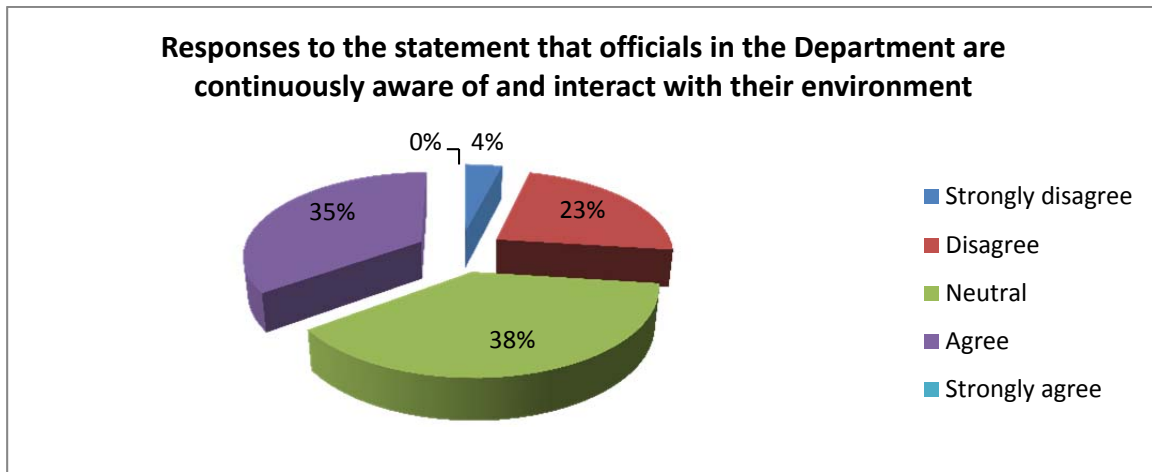
Four per cent of the respondents strongly disagree and thirty eight per cent disagree that in the Department employees work together to change the way the organization responds to challenges while twelve per cent strongly disagree.

FIGURE 4.4.18



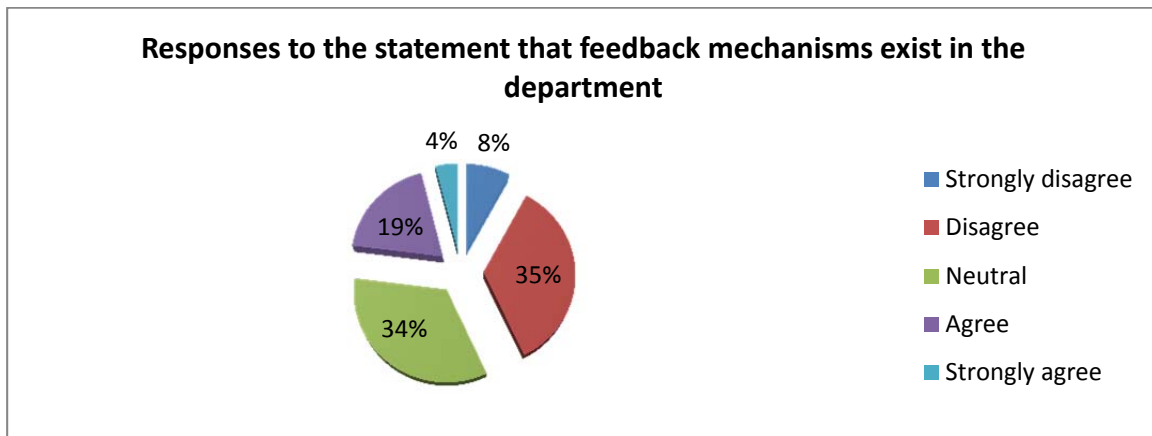
This is supported by a twelve per cent strongly disagree and a fifty four per cent disagree responses to the statement that in the Department learning is emphasised through a unified whole rather than the individuals while only fifteen per cent agree.

FIGURE 4.4.19



Thirty five per cent of the respondents agree that officials in the Department are continuously aware of and interact with their environment while eight per cent strongly disagree.

FIGURE 4.4.20



Thirty five per cent disagree that feedback mechanisms exist in the Department against four per cent that strongly agree and nineteen that agree.

4.3 INDIVIDUAL REMARKS

Respondents were also afforded opportunity to respond to two questions and provide additional remarks. Questions they were asked are listed below, each followed by responses to it.

1. What in their views has contributed towards organizational learning in the department?
 - a) Formal and informal learning contribute towards OL in the Department. Capacity building workshops and training also contribute to OL.
 - b) The nature of the mandate of the Department affords learning as its employees need to know policies and legislation of other departments such as Land Affairs and Environmental Affairs.

- c) Sharing of information happens in the Department through meetings, workshops and training of officials
2. If organizational learning does not exist in the department, why not? Responses to this question were that OL does not exist due to:
- a) lack of institutional mechanism to coordinate learning and innovation within the Department
 - b) information not centrally stored for easy access
 - c) Lack of communication
 - d) Financial constraints,
 - e) Institution of austerity measures,
 - f) Working in silos,
 - g) Lack of follow up and feedback,
 - h) The fact that the department is new,
 - i) Trial and error,
 - j) Word of mouth,
 - k) Lack of personal initiative to acquire and share knowledge,
 - l) Organizational culture which is not conducive for OL impede OL in the Department
 - m) The Department lacks OL because the public sector as whole does not have resource centres.
3. Additional remarks were as follows:
- a) OL exists in the Department, however it is not structured therefore needs to be institutionalised and also need leadership.
 - b) Although sharing of information happens in the Department through meetings and workshops and training of officials however, still needs to be improved
 - c) The department needs to improve the way of documenting operational practices so as to improve knowledge sharing.
 - d) A system of reporting by officials who attend conferences, seminars etc is needed
 - e) Programmes in the Department need to work as a collective and collaborate on matters of OL and Service delivery.
 - f) There is a need to create systems that will ensure that people at all levels, individually and collectively are continuously capacitated and need for teambuilding; need to appreciate innovation; policy and or procedure needs to be developed; sessions that encourage OL need to be convened in order to encourage implementation of OL

- g) The Research Unit is in place and is an investigator, examiner and facilitator of integrating evidence on the work of the Department. However, the challenge is that there are no clear information and knowledge management processes and infrastructure to serve as a repository of knowledge.

4.4 FINDINGS

The responses to the questionnaire lead to the following findings:

4.1 High staff turnover and lack of intuitional continuity

Respondents were requested to indicate duration of their service in the Department and were also asked to indicate duration of holding positions they were holding. There was a startling revelation that very few respondents had been with the Department for long. An overwhelming percentage²⁷⁸ of thirty per cent “neutral” might be linked to the fact that the majority of the respondents are relatively new in the Department.

Among other things, this casts a shadow over the veracity of observations by members of the department. It will be remarked later on that a discrepancy was found by the researcher between choices made in the questionnaire and actual remarks provided by the same respondent.

It could not be ascertained whether the high staff turnover was a localised occurrence, but form anecdotal evidence it would seem to be a problem in the public sector in SA as a whole. It is obvious that such a situation cancels out any meaningful organizational memory building.

As this is unlikely to change soon, it is a factor that has to be built in into any framework for public sector organizational learning.

4.2 Low level of organizational cohesion

The second finding is no surprise in light of point 4.1.

As was shown in chapter 2, one of characteristics of a LO is that teams become more aligned, a commonality of direction emerges, and individuals’ energies harmonise. However, the highest percentage of respondents disagreed with the statement that the Department has structures that facilitate team cohesion. A large number of respondents disagreed that the

²⁷⁸ The overall responses to all statements show that six per cent strongly disagreed, thirty three per cent disagreed, thirty per cent answered neutral, twenty eight per cent agreed and three per cent strongly agreed

Department fosters dialogue²⁷⁹.

Respondents even remarked that people in the Department are working in silos. This is the opposite of the fact that learning organizations are characterised by total employee involvement in a process of collaboratively conducted, collectively accountable change directed towards shared values or principles as shown in the literature discussed.

Empirical responses refuted the statement that creative opportunities for knowledge to be developed and shared with others through interpersonal contact and access to documentation are provided, contrary to what is suggested by Marsick and Watkins in Chapter 1 that a learning organization must capture, share, and use knowledge so its members can work together to change the way the organization responds to challenges. This is supported by comments that information is not centrally stored for easy access.

4.3 Institutional infrastructure – strongly hierarchical

As was shown in the literature review two factors are critical for OL. These are: the way in which an organization structures its routines, and the way in which leadership is exercised. Together they form the institutional infrastructure of the organization.

The answer to the statement that “...the Department still has a traditional hierarchical structure”, delivered a very clear response. Sixteen per cent strongly agreed and forty two per cent agreed. Close to seventy per cent, therefore, confirm what is anecdotally known about the public sector in SA, and most likely elsewhere in the world. This is a significant barrier to OL, and it must be assumed it will not change soon. This too must be taken onto account when a framework is proposed.

From Antal, Lenhardt, & Rosenbrock as discussed in Chapter 2 it is clear that the culture of an organization can act as a powerful barrier to learning and that if this barrier is not grappled with explicitly, attempts to develop new ideas or behaviours will not take hold. Lack of leadership in this respect is clearly a serious problem in the Department. The responses show this to be the case in various forms: absence of support from top management; too strong a lead from outside the organization without a strong counterpart inside the organization; and individual, unconnected initiatives from lower levels in the hierarchy.

The majority of respondents disagreed that individuals and teams are encouraged to use a

²⁷⁹ See Kerka in chapter 2 who sees a LO as fostering inquiry and dialogue, making it safe for people to share openly and take risks.

range of ways of surfacing their tacit knowledge and making it available to others. Compare this with the position of Leuci according to whom shared learning needs to be supported in building an organizational culture in which learning and innovation can occur.

Contrary to what is suggested by Marsick and Watkins in Chapter 2 (that learning must take place and be supported in teams and larger groups, where individuals can mutually create new knowledge) respondents disagreed that collaborative mutual learning arrangements with other organizations are made in the Department.

It is clear that the institutional infrastructure for organizational learning does not exist from the perspective of the respondents.

4.4 Inadequate retention systems and mechanisms

McKnabb in Chapter 2 defines an LO as one that is inherently agile: one that is quick to identify, digest and apply the lessons learned in its interactions with its environments. To do so good and functioning retention and distribution systems have to be in place. Responses identified lack of communication as one of the barriers. These responses provide evidence that the barriers that were revealed by the literature study really do exist. For example, Cummings in Chapter 3 states that while communication of knowledge is important, it is the processes through which knowledge is shared that determine whether organizational learning occurs and, therefore, whether a knowledge-sharing process was a success.

From the framework of Becerra-Fernandez et al it is clear that such systems must be divided into two types. The first type is human systems which include: employee rotation across departments, initiation conferences, brainstorming retreats, cooperative projects for socialization; and memoranda, manuals, letters, presentations for exchange. The second type is technical systems which include: video-conferencing, electronic discussion groups, e-mail for socialization; and team collaboration tools, best practices databases, lessons learnt systems, and expertise locator systems, repositories of information databases, web-based access to data for exchange. In today's organization it is not possible to separate the two, but without a good technical base real OL will not be possible.

The responses clearly indicate that situational learning (learning which occurs but is forgotten or not codified for later use) takes place, but that no co-ordinated mechanism exists to synthesise and store the lessons learnt. At best there is fragmented learning where one actor or unit learns but the whole does not.

In this respect there is strong evidence that adequate technical systems do not exist due to

financial constraints. There may be other reasons for the lack of sound technical systems (such as a low skills level when it comes to IT), but financial constraints is certainly a factor.

4.5 Inadequate Systems Thinking

Wolstenholme in Chapter 2 suggests that successful systems thinking is about being able to see the whole or context of a situation and its interconnections to its environment; and such a perspective enables unintended consequences of well-intended actions to be pre-empted and minimised. When the importance of a systems view is understood, double loop en deutero learning is easily practiced. The majority of respondents disagree that the Department maintains its stability by making adjustments based on feedback, which is against what is suggested above.

Despite the fact that when relating to the learning organization, Senge in Chapter 2 sees systems theory as able to understand the whole and to observe the relationship between multiple parts, respondents disagreed that in the Department learning is emphasised through a unified whole rather than the individuals.

There are remarks that there is lack of follow up and feedback in the Department accompanied by large number of respondents who disagreed and strongly disagreed that feedback mechanisms exist in the Department while Senge in Chapter 2 highlights the importance of feedback in the organization and explains why delays and feedback loops are so important.

One reason for the inability to think in terms of systems may be the institutional structure of a public sector organization where most of the time the command structure is only top down. In formulating a framework for public sector organizations one of the challenges is to create a system that will foster double loop thinking.

4.5 SUMMARY

Based on literature reviews and empirical responses the following barriers to OL have been in the Department.

1. Barriers to Systems Thinking

- a) Failure to see the whole picture, incomplete view of a given situation;
- b) Failure to learn from mistakes; and
- c) Failure to apply the lessons learned in its interactions with its environments.

2. Barriers to Learning

- a) The Departmental structure does not facilitate team learning;
- b) Culture in the Department does not encourage OL;
- c) Programmes and individuals work in silos and unconnected initiatives;
- d) Lack of leadership with respect to OL;
- e) Financial constraints;
- f) Lack of institutional mechanisms to coordinate learning;
- g) Non-existence of retention strategy;
- h) Traditional hierarchical structure;
- i) OL in the Department is not structured;
- j) Creative opportunities for knowledge are not developed and shared;
- k) Information is not centrally stored ; and
- l) Lack of Knowledge Sharing Systems

CHAPTER 5

Towards a Framework for Organizational Learning

5.1 INTRODUCTION

In the previous chapter the findings of an opinion probe in the Department were reported. Generalisation cannot be drawn based on the sample, but it can be stated that it is an indicator of organizational learning capability tendencies in public sector organizations. The significance lies in the fact that the sample consisted of only senior and general managers in the Department. In that sense the probe is representative of the official levels of understanding in the Department.

It is likely that if opinions could have been elicited from employees lower than this level in the hierarchy different perspectives could have been expressed. However it is unlikely that the picture with respect to OL would have improved.

As was shown in Chapter 4, most of the findings correlated with predictions derived from literature, and in most cases showed practices opposed to a culture in which OL can flourish. However, it was pointed out that two factors need special attention.

It seems to be typical for a public sector organization in SA that a high turnover of staff takes place at all levels. This disrupts continuous flows of work and certainly impedes the establishment of good institutional memory.

Secondly it seems that the very rigid hierarchical structure is stronger than in comparative cases as seen from literature. This further impedes the ability for OL in a department.

In constructing a framework for OL in a public sector department it will be important to ensure that the above concerns are addressed. It will be argued in this chapter that two special problems can be addressed if a framework is created which centres on a Lessons Learnt system. It will further be argued that such a system has to be ingrained into the public service

manual as a standard operating procedure and be made a mandatory merit assessment aspect.

5.2 COMPARISON OF FRAMEWORKS

Four frameworks have been discussed at length in chapter 3. These are the frameworks of Becerra-Fernandez et al, the complex adaptive systems theory (CAS), the OADI-SMM framework; and Senge's learning organization framework.

It is argued in this thesis that an appropriate framework for public sector organizations cannot be built on one of the frameworks alone but that a synthesis between them will provide a useful framework.

With that objective in mind, we start with comparing the different frameworks.

5.2.1 The framework of Becerra-Fernandez et al – the Need for KM Technologies

It is evident that a foundation is needed for KM to survive in an organization. This includes a strong technical base. When there is no KM technologies and mechanisms KM becomes ineffective is short lived.

The researcher therefore disagrees with McElroy²⁸⁰ who stresses the shedding of a preoccupation with information technology as the stock response to all KM needs. He argues that KM now regards OL as its new best friend and the researcher's argument is that based on literature and the empirical research; there is no harm in integrating all of these towards achieving an improved product. According to the U.S. Department of Commerce²⁸¹, an Information Technology (IT) Architecture is a blueprint that is developed, implemented, maintained, and used to explain and guide how an organization's IT and information management elements work together to efficiently accomplish the mission of the organization. An IT Architecture addresses business activities and processes; data sets and information flows; applications and software; and technology²⁸²

In the business context it is the most important "tool" to link computer technology, decision-making and investments with the organization's business strategy and the appropriate, supporting, business information²⁸³ Business strategy is a set of activities and decisions firms make that determine products and services firms produce; industries in which the firms

²⁸⁰ McElroy 2000:199

²⁸¹ U.S. Department of Commerce: <http://ocio.os.doc.gov>

²⁸² See <http://ocio.os.doc.gov>

²⁸³ www.bizforum.org/Journal/www_journalSH002.htm

compete; competitors, suppliers, and customers of the firm; and long-term goals of the firm²⁸⁴. Laudon and Laudon further explain that information systems and technologies play a crucial role in corporate strategy, and strategic planning. In this respect there is no difference between business organizations and public sector organizations.

Reasons why the Department should adopt a clear IT architecture policy and practice is that by adopting and implementing an IT architecture the Department can address increasing complexity; and ease implementation.

1) Address Increasing Complexity

The solutions required reflect the need to integrate business processes at a variety of different levels from applications and data, and finally across (and within) organizations in a way that embraces all possible sources of complexity²⁸⁵. Pressure ranges from the acceleration of technological changes to increased and intensified competition. For example, building and maintaining qualified IT staff has become difficult due the shortage of trained professionals and the constant requirement to train the staff on changing technology. To understand the newly emerging global digital economy, you need a basic understanding of the information technologies upon which it is built²⁸⁶.

2) Ease of Implementation

The longer an organization waits, the more complex the business and technology environments become, and the more difficult it becomes to implement the structure, organization, and processes required by architecture. In supporting this view Papazoglou and Ribbers point out that, before enterprises become successful users of the techniques, they need to address several fundamental business and technology challenges which include aligning business organizations with a flexible IT architecture.

It can be deduced that the information economy's business environment places more and more pressure upon organizations. To manage this pressure, organizations need to adopt IT architecture. It is evident that organizations do so because of the benefits the architecture brings to them.

Benefits that the Department may realise from adopting and implementing IT Architecture

²⁸⁴ Laudon and Laudon 2004:90

²⁸⁵ Papazoglou and Ribbers, 2006: 11

²⁸⁶ Laudon and Traver, 2003:40

are as follows:

1. can be an effective tool for reviewing the overall current state of IT and to develop a vision of where the organization needs to or wants to go with IT in the future
2. is a tool to allow the organization to identify and distribute certain principles that should guide IT behaviour in the organization
3. helps an organization to analyze its current IT and identify areas where changes could lead to cost savings
4. helps to lay out complex situations in a clear and accessible manner, making planning easier and less prone to errors
5. can help lay out the business processes as the primary drivers and refocus thinking along business lines
6. is an effective analytical tool for examining what systems need to communicate and exchange data, and planning any changes necessary to ensure these needs are met
7. is an effective tool to help get an overview of data and work flow and how IT might enable new and more efficient ways of doing business and
8. can help to clearly show the connection between IT systems and requirements and the organization's business processes and needs U.S. Department of Commerce

From the above exposition, it can therefore be concluded that IT architecture supports innovation. The right balance is enabled between business effectiveness and efficiency of the organization. This balance occurs by the creation of an appropriate set of technology standards. When technology investment is integrated to organizational goals and strategies, proactive technology decisions become possible. The organization therefore is able to anticipate emerging trends of technology requirements even before the actual need arises.

5.2.2 Complex Adaptive Systems Perspectives (CAS)

Complexity theory is one of the Type A systems approaches that aim to assist managers improve goal seeking and viability. Complexity theory is different from other Type A systems approaches in that it is associated with unpredictability and disorder²⁸⁷.

Complexity theory is traced back to Edward Lorenz who is the pioneer in the development of chaos theory. He was a meteorologist who showed that weather is chaotic and ultimately unpredictable. Lorenz coined the term butterfly effect which refers to the sensitive

²⁸⁷ Jackson 2008:25

dependence on initial conditions. According to Jackson²⁸⁸; Lorenz discovered that the nature of patterns in complex systems exhibits remarkable regularities while accurate prediction is impossible.

The Santa Fe Institute conducted further research into complexity theory. When this institute was established, the term chaos theory which was limited to natural systems, was giving way to complexity theory which was applicable to complex social systems as well. Social systems are seen as complex evolving systems that can change the rules of their development as they evolve over time²⁸⁹, not just complex adaptive systems bound by fixed rules of interaction of their parts. As complexity theory embraces complex evolving systems as well as complex adaptive systems, new applications are continuously being found for complexity theory, including management²⁹⁰.

Parts of the systems can be understood in terms of their relationships with each other and with the whole. It is the pattern of relationships that determine what the system does. Systems are constantly changing due to the interaction of their parts as they seek to process a continuous flow of matter, energy and information from their environments; hence they are best understood as being in constant flux. Order is an emergent property of disorder and it comes about through self-organising process operating from within the system itself. Systems are seen as being in an intimate relationship and as constantly conducting exchange with their environments. According to this thinking, systems do not simply adapt to their environments. However, they co-evolve with them. Systems and environments change in response to one another and evolve together. In relation to this notion Gaia Hypothesis makes an example of life and Earth that became involved together creating the conditions that support life²⁹¹.

Earlier frameworks of organization emphasised order and regularity at the expense of erratic and discontinuous when complexity theory focuses attention on disorder, irregularity and randomness, accepting instability, change and unpredictability and offering appropriate advice on how to act²⁹². It provides help where it is not expected to be available; hence Lorenz postulated that there was a good deal of order underlying chaos. A new type of order is achieved where order seems to arise spontaneously out of chaos. Complexity theory is a

²⁸⁸ Jackson 2008:114

²⁸⁹ Jackson 2008:115

²⁹⁰ Jackson 2008:115

²⁹¹ Jackson 2008:115-116

²⁹² Jackson 2008:114

holistic rather than systematic approach and emphasises creativity and change rather than stability. When organizations are pushed far from equilibrium, self-organising processes occur naturally and they become capable of generating more variety and responding more flexibly to their environments.

Complexity theory is also functionalist, however in a more structuralist manner²⁹³, in the sense that it allows the analyst to determine at a deeper level as to what is going wrong with the present functioning of the system and to learn how to manipulate key design features so that the system can survive and be effective over time by continually regulating itself, and self-organising, as it adapts to internally and externally generated turbulences. The key structural aspect of complexity theory is the strange attractors and the variables that have to be adjusted to ensure that an edge of chaos state is achieved²⁹⁴.

It can therefore be deduced that there are six key theoretical notions in complexity theory. Those are: sensitive dependence on initial conditions; strange attractors; self-similarity; self-organization; and edge of chaos²⁹⁵. What these notions denote is that, small variations of the initial condition of a dynamical system may produce large variations in the long term behaviour of the system. Complex systems are governed by strange attractors, meaning that although they never repeat exactly the same behaviour, what they do remains within certain limits. Parts of the whole are similar in shape to the whole. At the narrow transition zone between order and chaos (the edge of chaos) spontaneous processes of self-organization occur and innovative patterns of behaviour emerge. The concept of Fitness Landscape is central towards the determination of complexity of a given system.

The fact that the department is currently battling to accomplish its goals and its ability to survive is decreasing by day is reason enough to believe that complexity theory fits best in the Department. There is a need for efficient utilisation of resources in achieving goals. Management decisions need to be taken in a manner that will produce desired effect. This is not the right time to emphasise order and regularity.

According to Jackson²⁹⁶, advocates of this theory insist that their approach demands a complete mind shift from managers if they want to secure business success. Managers need

²⁹³ Jackson 2008:40

²⁹⁴ Jackson 2008:21-22

²⁹⁵ Jackson 2008:116

²⁹⁶ Jackson 2008:119

to accept that the long-term future of their organizations is inherently unknowable. Organizations and their environments are characterised by non-linear feedback loops, which make them sensitive to small differences in initial conditions and ensure that their behaviour is unpredictable. Long-term planning and elaborate rules that accompany it is positively dangerous. Managers are advised to accept and delight in chaos. The absence of strict hierarchy and tight control does not mean that things will fall apart. Managers can trust in chaos and allow their organizations to evolve, remembering that continuous transformation and emergent order is a natural state of affairs. The burden of trying to plan, organise and control everything can be laid aside.

Based on the above explanation it can therefore be concluded that the Eastern Cape Department of Human Settlements as a complex social system, needs to foster learning, view instability in a positive way and seek the edge of chaos. The traditional management approaches that are being applied are ineffective. The Department should be allowed to display its potential for creativity and innovation. Management needs to understand that there is no way of knowing what the future holds, which means long term planning becomes inappropriate. For the Department to be able to successfully co-evolve with its environment, it needs to be a learning organization. The Department will perform best when it is allowed to operate naturally, emerge and co-evolve with its environment.

Regarding CAS, Firestone²⁹⁷ states the following:

Human organizations exhibit CAS behaviour. Knowledge management in such organizations must adapt itself to this behaviour, if it is to be successful. Without such adaptation, or alternatively, the complete restructuring of the organization, KM initiatives are bound to fail. It is at the nexus of knowledge management, CAS and organization theory that the means to success in knowledge management will be found. Knowledge and Innovation is the only Knowledge Management periodical that has this nexus as its focus.

KM is about what we do to manage the swirl of problem solving, knowledge production, innovation, and knowledge integration, in our organizations. Knowledge sharing is part of that process, electronic search and retrieval, document management, and a hundred other activities are also part of it. The trick is not to look at activities in

²⁹⁷ Firestone 2000:5

isolation but to analyze them in their broader CAS organizational context. We see Knowledge and Innovation as a forum for doing that sort of systems analysis.

When discussing the various frameworks in chapter 4, it was noted that Senge omitted the fact that the key to creating learning organizations can be found in complexity theory. It was also mentioned that complexity theory is a missing link between KM and OL. For these reasons therefore CAS will be incorporated into the framework proposed in this thesis.

5.2.3 The OADI-SMM Framework

In Chapter 3 McElroy compared the Complex Adaptive Systems framework and Kim's OADI/SMM framework and concluded that while the mapping is far from precise, the functional similarities between certain elements of the two frameworks are striking. Therefore the OADI/SMM framework will not be incorporated into this framework as the CAS has already played that role.

5.3 THE CONSOLIDATED FRAMEWORK

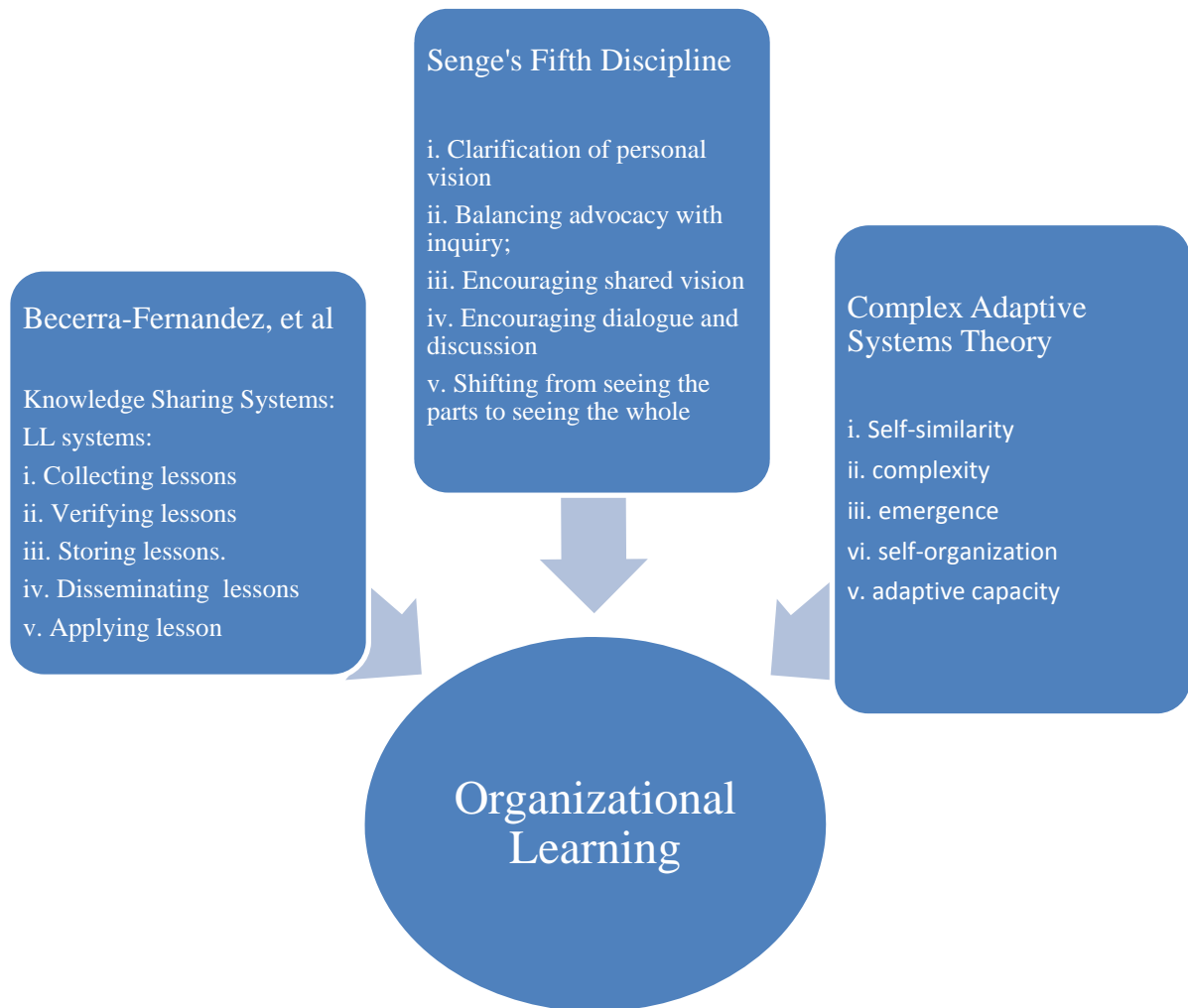
This section formulates a framework that will facilitate organizational learning in the a public sector department based on the exposé on organizational learning frameworks in chapter 3. It has been suggested in Chapter 3 that no single framework meets all the requirements of the LO. This section will therefore integrate elements from different frameworks that may complement one another towards converting the Department into an LO. It will be shown how the Senge, Becerra-Fernandez and Complex Adaptive Systems frameworks come together.

In light of the theoretical work one in the thesis and the feedback from the empirical work it is clear that a framework must be built around the focus on a Lessons Learned System to support organizational processes. Ingraining such a system into the standard operating procedures is how the department can change into a learning organization.

It is therefore proposed that the integrative framework of OL that a department should be adopting is composed of Senge's five disciplines; the knowledge technological systems advocated by Becerra-Fernandez et al; and the complex adaptive systems theory (CAS). This framework therefore possesses all the identified notions.

How these various frameworks fit together and support each other, is depicted in the graph below:

Figure 5.1: The Proposed Organizational Learning Framework for Public Sector organizations



5.3.1 Description of the Framework

The above framework is proposed for all public sector organizations – at least in SA.

To make the proposed framework practical and to show what it implies in the context of a real organization, it will be unfolded by applying it to the Department of Human Settlements in the Eastern Cape. As was stated in chapter 1, this Department functions as the canvas for this thesis.

The Department should have a Lessons Learned Systems in place in order to support

organizational processes so that service delivery can improve. This is how the department will turn into a learning organization. Senge's disciplines will inspire leadership to build a learning organization.

When Senge's philosophy is integrated into the culture of the Department, it will become easy for the Department to learn effectively as it is important that it turns into a learning organization first. The disciplines will also provide a point of departure for those employees who need to be guided towards personal development. These disciplines will show how the Department can be free from learning disabilities that threaten its effectiveness in delivering services. Mechanisms where creativity will be appreciated; and team work and continuous learning encouraged, will be devised and maintained. This of course will be attained through integrating KM into the Departmental culture and routines.

Establishing a technical platform will also deliver when integrated into this framework. It has been shown that there is a lack of foundations for KM in the department which means it will be hard to for the Department to turn into an LO. The Department needs to possess a KM infrastructure which will in turn be benefiting KM technologies and mechanisms so that attributes such as common language and vocabulary; recognition of individual Knowledge domains, common cognitive schema, shared norms and elements of specialised Knowledge are strengthened.

The Department needs to develop a KM Systems which will accommodate KM mechanisms such as employee rotation across departments, initiation conferences, brainstorming retreats, cooperative projects as KM technologies such as lessons learnt systems. This system should be based on organizational culture that understands value of KM practices; manages support for KM at all levels; reward knowledge sharing; encourages interaction for creation and sharing of K.

By integrating the approach of Becerra-Fernandez et al, the above-mentioned concerns will be addressed. But it does not end there. The Departmental structure will allow decentralisation; emphasise leadership rather than management; communities of practice; and specialised structures and roles e.g. chief Knowledge Officer and a KM Unit.

As argued above information technology infrastructure will also be strengthened. Common knowledge; individual Knowledge domains, common cognitive schemata, shared norms, and elements of specialised Knowledge that are common across individuals will be recognised. It will be ensured that the physical environment is conducive for Knowledge Sharing, including

the design of building (offices, meetings rooms, hallways); and that Spaces are specifically designed to facilitate informal knowledge sharing (coffee rooms, cafeterias, water coolers).

Above it has been shown that complexity theory is key to creating a LO. The CAS approach stresses that the Department is adaptive in that its individual and collective behaviour changes as a result of experience. The Department as a CAS is composed of many diverse and autonomous programmes which are interrelated, interdependent, linked through many interconnections, and behave as a unified whole in learning from experience and in adjusting to changes in the environment. Each programme is itself a CAS within a larger CAS, the Department, which is a CAS in a still larger CAS, the government.

Each programme maintains itself in an environment which it creates through its interactions with other programmes. The Department is characterised by diffused and not centralised control and changes in response to the feedback received from its environment to survive and thrive in new situations. As the Department exhibit CAS behaviour KM in the Department will adapt itself to such behaviour so that knowledge management initiatives succeed.

5.3.2 Practical Application of the Framework

Based on the consolidated framework above; and responses from the participants in the survey, the following Lessons Learned System is proposed. Methods for collecting lessons (AARs and Peer Assists) that are proposed in this system have been adopted from the SDC Knowledge Management Toolkit. On top of the generative learning (double-loop learning) element derived from Senge's framework, the application incorporates KM Infrastructure; and effects inside the Department itself and/or externally, the results of which are fed back into the Department for immediate and future reference. The Department also has to continuously fit itself to its environment by determining how well lessons work for it and by choosing its future behaviours accordingly.

STEP 1 - ESTABLISHMENT OF A KM INFRASTRUCTURE

The Department needs to establish a Knowledge Management Unit where all the lessons will be integrated, analysed and disseminated. The four programmes of the department: (Administration; Housing Needs, Research and Planning; Housing Development; and Housing Asset Management and Property Management) need to have their KM representatives.

Therefore the Department needs to review its structure; improve organizational culture, IT infrastructure, and physical environment; and acknowledge individual knowledge domains.

To ingrain this in the Department, a new organogram that accommodates a knowledge management function will have to be approved by the MEC. These form part of the much needed KM foundation as pointed out above.

STEP 2 - COLLECTION OF LESSONS LEARNED

Collection of lessons learned should be done through After Action Reviews (AAR's) and Peer Assists. Representatives should be responsible for identifying and collecting lessons learned within their programmes. Programmes will indicate on their operational plans, which are drawn every financial year, as to how many AARs and Peer Assists they will conduct.

2.1 After Action Reviews

KM representatives will facilitate in their programmes discussions on projects and activities that enables the individuals involved to learn for themselves what happened, why it happened, what went well, what needs improvement and what lessons can be learned from the experience. Both Formal and informal AARs will be conducted. Peter Senge's theory emphasises that the most important ingredient for organizations to thrive is their ability to benefit from their own past experiences. Senge highlights the importance of feedback in the organization and explains why delays and feedback loops are so important. In section 2.9.3, it has been mentioned that Senge sees double-loop learning as generative learning. Double-loop learning occurs when error is detected and corrected in ways that involve the modification of an organization's underlying norms, policies and objectives.

2.1.1 Methods of conducting After Action Reviews

Formal AARs are simple activities that will be conducted at the end of a major project or event (learning after doing). They may take place over a couple of hours or a couple of days, depending on the magnitude of the project.

The following steps are proposed in conducting formal AARs:

- i. Meetings will be called as soon as possible right people will be invited**

AARs will be held soon after the event while memories are still fresh; participants are available; and where appropriate, learning can be applied immediately. This will be done while the project manager and the key project team members are also available. Other key people that will be invited are the end-user and the project sponsor; and members of any project teams who are about to embark on a similar project. A general warning is that inviting external stakeholders jeopardises the process.

ii. **A suitable climate will be created**

A climate of trust, openness and commitment to learning will have to be created as these sessions avoid criticising but encourage learning. Therefore they will not be treated as performance evaluation sessions. There will be no hierarchies. Everyone will be regarded equally so that participants feel free to comment on the actions of senior members. It will be made clear that the purpose of the session is to help future projects run more smoothly by identifying the learning points from this project.

iii. **A facilitator will be appointed**

An objective person who has not been part of the project will be identified to facilitate the session. This is done for purposes of helping the team to learn by drawing out answers, insights and previously unspoken issues; to ensure that everyone has an opportunity to contribute; and to help create the right climate and ensure that blame is not brought in.

iv. **Objectives and deliverables of the project will be revisited**

Questions such as ‘what was the planned output?’; and ‘what has been the actual achievement?’. This is the stage where the original project plan might be revisited. A decision to construct a flow chart of what happened might also be taken, identifying tasks, deliverables and decision points. This will assist in identifying parts of the project that were particularly effective or ineffective.

v. **Question ‘what went well’ and a ‘why’ will be asked, in order to share learning advices for the future**

These sessions will always start with the positive points as the purpose of holding them is to build on best practice as well as learning from mistakes. For each point that is made about what went well, the question ‘why?’ will always be asked allowing the participants to get to the root of the reason. Information will then be elicited from participants for specific, repeatable advice that others could apply in similar situations.

vi. **The question ‘what could have gone better?’ will follow to find out what the problems were, and again share learning advice for the future**

As the session is not necessarily looking for what went wrong more than it is looking for what could have gone better, it will be learnt not only from mistakes, but also from

any aspects of the project that inhibited delivery and even more. It is not focussing on failure, but on improvement. Although nothing might have gone wrong, there might be room for improvement. With this step as well the Why questions will be asked for each point made; and information will then be elicited from participants for specific, repeatable advice that others could apply in similar situations.

vii. **It will be ensured that everyone feels fully heard before leaving the meeting**

It will be ensured that all participants satisfied that their contributions were taken into consideration and were afforded opportunity to say all that needed to be said. A technique that will be utilised is to request them to, looking back rate the project numerically. They will indicate how satisfied they are with the project awarding marks out of ten. Those who indicate that the project was fine, however still scoring it for example eight will then be asked what would have made it a ten.

viii. **AARs will be recorded**

Accounts will be developed for each ARR conducted. These will serve as reminders to those who were part of the process and promote effective sharing of that learning with others. Aspects that will be included are: lessons and guidelines for the future; some background information about the project to help put these guidelines into a meaningful context; the names of the people involved for future reference; and any key documents such as project plans or reports. The purpose of these accounts is that future project leaders who will use them benefit from them and lessons contained in them.

ix. **The learning will be shared**

When the distribution of the account of the AAR is done, other people who might benefit from it will be considered. For example, an AAR might have been conducted by one regional team when another regional team is about to embark on a similar project. The learning will be made widely available to enable people who will be working on similar projects in the future to benefit. Documents will therefore be where they will easily be accessed by everyone who might benefit from it.

Informal AARs will be conducted after smaller events such as a meetings and presentations or specific events during wider projects or activities. It takes an open and honest meeting, usually no longer than half an hour to conduct them. Questions that will be responded to are as follows:

- What was supposed to happen?
- What actually happened?
- Why were there differences?
- What did we learn?

2.2 Peer Assists

KM representatives will facilitate a process where teams of people who are working on projects or activities in their programmes call meetings or workshops to seek knowledge and insights from people in other teams. Depending on whether explicit or tacit knowledge is shared, exchange or socialisation processes are used. Socialisation facilitates the sharing of tacit knowledge in cases in which new tacit knowledge is created as well as when new tacit knowledge is not created. Exchange focuses on the sharing of explicit. It is used to communicate or transfer explicit knowledge between individuals groups and organizations. The following method for conducting these is proposed:

a) Clarification of the purpose

Peer assists work well when the purpose is clear and you communicate that purpose to participants. Define the specific problem you are seeking help with, and be sure that your aim in calling a peer assist is to learn something (rather than seeking endorsement for a decision you have already made).

b) Check if a similar problem has been solved in the past

Research will be done to find out a similar problem has been resolved before. Plans for peer assists will be widely shared as there might be other teams who are also attempting to resolve a similar problem, who therefore might benefit from participating in the peer assist.

c) Facilitation of Peer Assists

A facilitator for each Peer Assist will be found from outside the team, to make sure the meeting participants reach their desired outcome. The facilitator will record the event.

d) Peer Assists will be held during early stages of the project

Dates for peer assists will be identified early enough during the projects cycle so that inputs received are implemented timely and something different done based on what has been learned. Length of peer assists will differ depending on the complexity of the problem. They will vary between half a day and two days long.

e) Selection of participants

After the purpose has been made clear participants who have the diversity of knowledge,

skills and experiences needed for the peer assist will be selected. Peer Assists will be composed of eight people. People will be identified across the department rather than up it. As indicated above hierarchies can hamper the free exchange of knowledge whereas peers tend to be much more open with each other and can challenge without feeling threatened. It will be avoided to select the same experts for peer assists again and again as doing so will limit a number of fresh ideas and perspectives available. Experts will also be invited from outside the department.

f) Expected deliverables will be clearly defined

What is hoped to be achieved during the peer assist will be clearly defined from the onset. Time for the achievement of such deliverables will be planned. The deliverables will comprise options and insights rather than providing an answer. It will be up to the team who called the peer assist to make the relevant decisions, based on what is learned. Participants will be provided with any briefing materials in advance so that they have adequate time to prepare.

g) Socialising will be allowed

There will be items in the agenda where teams will be allowed to get to know one another. This will be a dinner the night before and time for coffee at the start of the day. Rapport will always be built so that the group can work openly together.

h) Purpose will be defined ground rules will be set

At the start of the meeting, it will be ensured that everyone is clear about the purpose of the peer assist and their roles within it. The role of the host team will be to listen in order to understand and learn. The role of the visiting team is to share knowledge and experience to help resolve the challenge without adding to the workload. It will be agreed that where there are areas of contention, focus will be on the activity rather than the individual people involved.

i) Information and context will be shared

The meeting time will be divided into four equal parts. During the first quarter, the host team will present the context, history and their future plans regarding the problem or challenge in question. This part of the meeting will be kept short and to the point, only saying enough to get the visiting team started in the right direction hence the purpose of the peer assist is to learn rather than tell.

j) Visitors will always be encouraged to ask questions and give feedback

The second part of the meeting the visiting team will consider what they have heard, and then

begin by discussing what they have heard that has surprised them, and what they expected to hear but haven't. The host team will take a back seat at this stage and simply listen; in some cases they may even opt to leave the room. The visitors then consider what else they need to know to address the problem and where might they find that knowledge. It may be that they want to make some telephone calls and talk to some other people, or request some data or reports. It will always be remembered that they are not seeking to solve the problem but to offer some options and insights based on their own knowledge and experience.

k) What have been learned will be analysed

During the third quarter of the meeting visitors will analyse and reflect on what they have learned and to examine options. The hosting team remains largely in the back seat. One or two members of the host team will be involved provided that they continue to listen and learn rather than close off options or seek to draw conclusions too early.

l) Feedback and actions agreed upon will be presented

In the final part of the meeting the visitors will present feedback to the host and entertain any questions that might arise. The presentation will cover areas such as: what have been learned; what options are seen; and what has worked elsewhere. This session will start at a positive note, with for example questions such as: what has been done well, and then what options there are to do things differently. When presenting what has worked elsewhere, presenters will simply tell the story rather than prescribing.

Contributions of the visiting team will be acknowledged by the person who called the peer assist. He or she will also commit as to when he or she will get back with an action list of what the team are going to do differently.

In concluding the session the visiting team will then be invited to reflect on what they have learned and what they will take away and apply.

This is how Senge's philosophy will assist in devising and maintaining mechanisms where creativity will be appreciated; and team work and continuous learning encouraged as stated above. Again, as explained previously, the CAS approach stresses that the Department is adaptive in that its individual and collective behaviour changes as a result of experience. The Department as a CAS is composed of many diverse and autonomous programmes which are interrelated, interdependent, linked through many interconnections, and behave as a unified whole in learning from experience and in adjusting to changes in the environment. These are: Administration; Housing Needs, Research and Planning; Housing Development; and Housing

Asset Management and Property Management. Each programme is itself a CAS within a larger CAS, the Department, which is a CAS in a still larger CAS, the government.

STEP 3 - VERIFICATION OF LESSONS

The unit will also verify lessons learnt. It will check whether lessons submitted are correct, and applicable. This is where recognising individual domains will assist, as experts will be brought in, in order to establish the relevance of the lesson for the particular Knowledge domain in the Department.

STEP 4 - STORAGE OF LESSONS

Lessons will be documented and stored electronically so that they can be easily accessed by everyone in the department. The responsible unit will record an account of the AAR and its learning points for the purposes of effectively sharing the lesson and reminding those who were part of it. An electronic database will be utilised for storing the lessons.

A knowledge base (KB), a special kind of database for knowledge management, which will provide the means for the computerised collection, organization, and retrieval of knowledge, will be established. This will be a human-readable knowledge base designed to allow people to retrieve and use the knowledge they contain. It will be used to for sharing information among employees within the Department. Users will browse through a classification scheme. It will be closed information repository. It will also be a text based system that will include groups of documents including hyperlinks between them which is known as Hypertext Systems.

STEP 5 - DISSEMINATION OF LESSONS

The AAR accounts will be shared with everyone who would benefit from them. A - Z indexing will be utilised. Information will be stored in the form of documents which can be found through searching and be re-used.

STEP 6 - APPLICATION OF LESSONS

Lessons will be used by employees who encounter problems similar to those that they were learnt from. Teams that have been involved in projects and processes that have been reviewed will also learn from their experiences. This is double loop learning where people will go back into that process or project and re-live it a second time and in this way doing it differently. This is when the same people who have been doing the same sort of process will compare the outcome themselves with the previous outcome.

As emphasized by Peter Senge's theory, the most important ingredient for the Department to thrive is its ability to benefit from its own past experiences. Senge highlights the importance of feedback in the organization and explains why delays and feedback loops are so important. This will allow double-loop learning where error is detected and corrected in ways that involve the modification of an organization's underlying norms, policies and objectives.

STEP 7 - MONITORING AND EVALUATION OF LESSONS LEARNT

The system will have its monitoring and evaluation mechanism. Input, process, output and outcome indicators will be attached to each identified lesson. Input indicators will measure resources devoted to the system; process indicators will measure the rate at which these lessons are being produced. Output indicators will measure the rate at which the lessons are being reused; and outcome indicators will measure the broader results achieved through the implementation of the system.

STEP 8 – BUILDING DOUBLE LOOP LEARNING AND ORGANIZATIONAL MEMORY

The above measures will go a long way in changing the functioning of the Department.

However, it still does not address the special factors that we have identified, properly. These are the high rate of turnover and rigid hierarchy.

To counter that it is proposed that it becomes standard operating procedures to induct all new appointments into a "history" of Lessons Learnt. This is irrespective of any specific project.

To ensure double loop learning, at the start of any new project, a further induction is built in with respect to the nature of that project.

And finally, after a cooling off period of 6 months, after completion of a project, the staff who were involved should revisit their Lessons Learnt and revalidate the lessons. Newcomers to the Department should participate in such revalidation.

5.4 ACADEMIC IMPLICATIONS OF THE STUDY FOR ORGANIZATIONAL LEARNING IN GENERAL

Through this study it has been shown that OL cannot be divorced from KM. It has also been clear that OL and KM go hand in hand with complexity theory. However the study has shown that the argument that OL does not need technology cannot be sustained.

In Chapter 1 it has been mentioned that although organizational learning topics were widely researched it is a much more recent theme in the study of public sector organizations. It has

also been emphasised that the growing demand on services and competitions for the available funding imply that non-profit organizations needs to acquire further organizational capabilities, which indicates that it is becoming increasingly important for public sector to have an organizational learning capacity. This therefore implies that academics should research OL in the public service more.

5.5 IMPLICATIONS OF THE STUDY FOR PRACTITIONERS OF ORGANIZATIONAL LEARNING

Chapter 1 has revealed that in an attempt to strengthen leadership and management capacity in government an SMS Competency Framework was developed in order to be able to respond to the Public Service's challenge to recruit, develop and retain competent leaders and managers and to reward them for good performance, recognising excellence and innovation. This SMS Competency Framework is meant to ensure that the Public Service achieves its objective of professionalising the Public Service at the Senior Management level. The framework provides the Public Service with a description of the key skills, knowledge, behaviours and attitudes that are expected of its Senior Management cadre. KM is one of the competencies that form the framework.

As the sample of the study was composed of the senior management, the assumption was that this was a relevant group to target in the Department as they supposedly have a full understanding of the research area. The study however has proven that this is not the case which implies that the framework is not being implemented.

Again through this study it has been clear that private sector organizations are encouraged to learn from the past and to adapt to changing circumstances. It has also been proven while literature has mostly focused on private sector organizations; public sector organizations have been encountering similar challenges. This study has shown that practitioners of LO within the public sector need to institutionalise LO as well.

5.6 CONCLUSION

An examination of relevant literature showed that OL is an important practice that needs to be implemented by any organization. There were also perceptions that OL might not apply in the public service although there has been no evidence supporting that. It also became clear that learning organizations engage in learning continuously.

The importance of developing Senge's five disciplines as an ensemble was emphasised with systems thinking as a framework that is based on the impression that the abstract parts of a

system can best be understood in the context of relationships with each other and with other systems, rather than in isolation. The literature also revealed that if innovation is not encouraged in an organization, peoples' ability to acquire, apply, share, and embed new knowledge is hindered.

It became clear that levels of learning, individual learning, team learning and OL are inter-related. They complement one another. Individual learning accumulates to form team learning. Teams in turn benefit the organization through their shared knowledge and expertise. OL ultimately is attained as a result of individual and team learning.

It has been proven that lessons learned constitute one of the specific types of knowledge sharing systems. An overview of types of knowledge sharing systems has been provided. Investigation on the applicability of lessons learned systems as a knowledge sharing system to the department has been done.

Findings obtained from the analysis of empirical data have revealed that the Department is not a LO. Although it does engage in OL practices, at a small scale of course, it lacks coordination of those. It can be concluded that it is possible to convert the Department into a learning organization if Senge's five learning disciplines can be complemented with a knowledge sharing system and complexity theory and utilised in a positive manner.

A framework was formulated after reviewing available literature on frameworks of organizational learning. The fifth discipline covers aspects where in order for the Department to become an LO it needs to learn from its own past and its learning to reach its goals; collaboration and innovation. The Detailed View of Knowledge Management Solutions accommodates all the Knowledge management aspects such as allocation of adequate resources; retention strategy; creating opportunities for knowledge to be shared; creative use of information and communication technologies; and paying attention to organizational structures. The CAS caters for Complexity theory aspects such as maintaining stability by making adjustments based on feedback; using mistakes as opportunities for learning; work together to change the way the organization responds to challenges; unified whole rather than the individuals; and continuously being aware of and interacting with their environment.

Through adoption of this kind of a framework by the Department, individuals will be encouraged to learn. Although individual learning does not undertake OL, individuals need to know their status quo in order to be able to formulate a picture of where they wish to be in future.

A culture where employees notice and control their own behaviours and choices, will be instilled. A reflective intellectual posture and developing a greater understanding of the assumptions, feelings, and perceptions that influence thoughts and actions will be cultivated. This assists in identifying reasons why some concepts fail no matter how great they are.

Teams will build a shared picture of the future. This framework will guide the Department as to which policies, guidelines, practices, and shared commitments need to be established so as to work jointly towards attainment of the desired results. By allowing teams to share a vision the Department will be able to learn.

Collaborative effort on enhancement of employees' commitment to their work will be encouraged. Organizations where peoples' work complement and support one another's, achieve their goals better than those where people work individually

The Department will be able to practice system thinking. Mechanisms that systemically link activities to one another will be devised. The Department will be able to allocate enough resources to accommodate mechanisms in which KM can be facilitated (knowledge management solutions). The Department therefore will be able to develop a Lessons Learnt System in the context of its overall efforts to develop and implement an effective knowledge management program. Developing departmental LLS will assist in ensuring that knowledge is gained from past experiences and applied to future projects

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ADDENDUM

SECTION A

BIOGRAPHICAL DETAILS

1. Gender Female Male
2. Age level 20-29 30-35 36-39 40-50 51-55
3. Highest level of education High school Technical college Tertiary institution
(Specify)
4. How long have you been working in this department 1-3 yrs 4-6yrs 7-10 yrs
 10+ yrs
5. Present position _____
6. Number of years in the position _____
7. (a) What in your view has contributed towards organizational learning in the department?
(b) If organizational learning does not exist in the department, why not?
8. Additional remarks

SECTION B

LEARNING ORGANIZATION (LO)

Definition of LO

According to Senge (1990: 3) learning organizations are organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together.

LEGEND:

1. = **Strongly disagree**
2. = **Disagree**
3. = **Neutral**
4. = **Agree**
5. = **Strongly agree**

	1.	2.	3.	4.	5.
The Eastern Department is a learning organization.					
The Department uses learning to reach its goals.					

The Department links individual performance with organizational performance.					
The Department fosters dialogue.					
The Department has structures that facilitate team learning.					
The Department still has a traditional hierarchical structure.					

SETION C

ORGANIZATIONAL LEARNING (OL)

Definition of OL

McGill, Slocum and Lei (1992:5) define organizational learning as the ability of an organization to gain insight and understanding from experience through experimentation, observation, analysis, and a willingness to examine both successes and failures.

LEGEND:

- 1. = Strongly disagree
- 2. = Disagree
- 3. = Neutral
- 4. = Agree
- 5. = Strongly agree

	1.	2.	3.	4.	5.
In the Department people are empowered to evolve a collective vision.					
Adequate resources are allocated for learning.					
A retention strategy exists in the Department.					
The Department acquires and encourages the development of leadership competencies at all levels.					
Creative opportunities for knowledge to be developed and shared with others through interpersonal contact and access to documentation are provided.					
Individuals and teams are encouraged to use a range of ways of					

surfacing their tacit knowledge and making it available to others.					
Collaborative mutual learning arrangements with other organizations are made.					
Creative use of information and communication technologies is encouraged.					

SECTION D

SYSTEMS THINKING

Definition of Systems Thinking

Senge (1990:68) refers to systems thinking as a discipline for seeing wholes; and a framework for seeing interrelationships rather than things and for seeing patterns of change rather than snapshots.

LEGEND:

- 1. = Strongly disagree
- 2. = Disagree
- 3. = Neutral
- 4. = Agree
- 5. = Strongly agree

	1.	2.	3.	4.	5.
The Department maintains its stability by making adjustments based on feedback.					
The Department uses its mistakes as opportunities for learning.					
In the Department employees work together to change the way the organization responds to challenges.					
In the Department learning is emphasised through a unified whole rather than the individuals.					
Officials in the Department are continuously aware of and interact with their environment.					
Feedback mechanisms exist in the Department.					