

# Sheffield Hallam University

*Holistic perspectives on learning and knowledge : An awarding body perspective.*

ALLAN, Paul.

Available from the Sheffield Hallam University Research Archive (SHURA) at:

<http://shura.shu.ac.uk/19248/>

## A Sheffield Hallam University thesis

This thesis is protected by copyright which belongs to the author.

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the author.

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given.

Please visit <http://shura.shu.ac.uk/19248/> and <http://shura.shu.ac.uk/information.html> for further details about copyright and re-use permissions.

Learning and Information Services  
Adsetts Centre, City Campus  
Sheffield S1 1WD

200

102 048 303 2



Sheffield Hallam University  
Learning and Information Services  
Adsetts Centre, City Campus  
Sheffield S1 1WD

**REFERENCE**

ProQuest Number: 10694128

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



ProQuest 10694128

Published by ProQuest LLC (2017). Copyright of the Dissertation is held by the Author.

All rights reserved.

This work is protected against unauthorized copying under Title 17, United States Code  
Microform Edition © ProQuest LLC.

ProQuest LLC.  
789 East Eisenhower Parkway  
P.O. Box 1346  
Ann Arbor, MI 48106 – 1346

# **Holistic Perspectives on Learning and Knowledge: An Awarding Body Perspective**

Paul Allan

A thesis submitted in partial fulfilment of the requirements of  
Sheffield Hallam University for the degree of Doctorate of  
Business Administration

October 2013

© Paul Allan. All Rights Reserved

## **Acknowledgement**

It goes without saying that a considerable amount of people have guided and supported me during the undertaking of this research.

Firstly, I would like to thank Dr Daniel M. O'Hare for his valuable guidance, comments and endless support throughout the course and development of this thesis. He has made enormous contributions, going beyond that of an advisor; his great guidance, inspiration and support have been invaluable, not only intellectually but also emotionally. I consider myself extremely fortunate to find someone who has such a kind heart who has continually supported me during my journey. Without his support and our frank discussions I would not have been able to finish this thesis in a timely manner. He will never be forgotten and I will be indebted to him for the rest of my life.

I would also like to record my appreciation to the following individuals:

Dr Murray Clark

Professor Bob Garvey

Dr Luiz Montanheiro

Dr Pawel Capik

Special thanks go to my friends and colleagues at Sheffield Business School at Sheffield Hallam University for all their kindness, support and encouragement during this long journey.

Hearty thanks go to Michelle for all her love, support, patience and kindness over the years.

## **Dedication**

I would like to dedicate my work to all those who have battled cancer.

I would particularly like to dedicate my work to Michelle who never wavered in her physical and emotional support through my own battle. Your love, support, kindness and prayers will never be forgotten.

**Abstract**

This study took a grounded theory approach with the aim of developing a more holistic approach to learning and knowledge. There has been a lot written about learning and knowledge but very little has been written looking at the complex entanglement of the two.

The research was very much grounded in the data whilst remaining sensitive to the theory of complexity. This study wanted to reject the simplistic and often mechanistic views of learning and knowledge and wanted to explore the more complex entanglement. This was done by taking data from three focus groups each consisting of 4-6 individuals. In addition a sense making workshop consisting of 5 individuals then helped to code and cluster the data which helped support the researcher's findings. At the time the research environment was going through a climate of change faced with huge financial pressures due to the economic downturn whilst still carrying the scars from previous litigation.

The findings suggest that learning and knowledge is a very complex entanglement which is far more elaborate and complex than the theory immediately implies. These insights are discussed with reference to academic theory and a number of implications for business were identified.

Overall the study supports a more integrated consideration of organisational learning and knowledge which should be applied in practice. If implemented effectively, should provide a more unique and sustainable competitive advantage, through a more effective workforce.

**Table of contents**

Acknowledgement.....	ii
Dedication.....	iii
Abstract.....	iv
Table of contents.....	v
<b>Chapter 1.....</b>	<b>1</b>
<b>1.1 Background of the organisation .....</b>	<b>1</b>
1.2 Problem.....	2
1.3 Background of study .....	3
1.4 Organisational learning.....	4
1.5 Knowledge Management.....	5
1.6 Complexity theory.....	6
1.7 Purpose of study .....	8
1.8 The aim of the research .....	9
1.9 Contribution to knowledge .....	10
1.10 Structure of thesis.....	11
<b>Chapter 2.....</b>	<b>13</b>
<b>2.1 Literature review .....</b>	<b>13</b>
2.2 Grounded theory and the literature .....	13
2.3 Knowledge management (KM) .....	14
2.3.1 KM/IT or HR.....	15
2.3.2 Differing views on KM and OL.....	19

2.3.3 Organisational learning.....	21
Figure 2.1: Convergent themes of organisational learning and knowledge management (Adapted from Vera and Crossan, 2003) .....	22
2.4 Can KM increase business efficiency?.....	25
2.4.1 Eastern and Western perspectives .....	26
2.4.2 Strategic resource .....	28
2.5 Different definitions and perspectives .....	29
2.6 Business application.....	32
2.6.1 Literature suggestions.....	34
2.6.2 Complexity theory.....	35
2.7 Chapter conclusion .....	36
<b>Chapter 3.....</b>	<b>39</b>
<b>3.1 Grounded theory methodology.....</b>	<b>39</b>
3.1.1 Grounded theory overview.....	39
3.1.2 Data collection and analysis.....	40
Figure 3.1: Steps in developing grounded theory (Adolph Hall and Kruchten, 2011) .....	41
3.1.3 Coding focus groups as part of the analytical process.....	42
3.1.4 Developing categories.....	43
3.2 Use of grounded theory in this study .....	44
Table 3.2: Data collection and analysis phase .....	46
Table 3.3: Data collection outcomes .....	47
3.2.1 Substantive and formal theory .....	49
3.2.2 Writing memos.....	49

3.2.3 Grounded theory criteria .....	50
3.2.4 Objectivist and constructivist approach .....	51
3.2.5 Grounded theory limitations .....	52
3.2.6 Ethical considerations .....	53
3.3 Chapter conclusion .....	53
<b>Chapter 4.....</b>	<b>56</b>
<b>4.1 Methods.....</b>	<b>56</b>
4.1.1 Overview of method .....	56
Table 4.1 Data collection and analysis.....	57
Phase 1.....	58
4.2 Focus groups .....	58
Phase 2.....	59
4.2.1 Sense making and category development (Group) .....	59
Table 4.1 Codes developed in workshop .....	61
Phase 3.....	63
4.2.2 Grouping codes .....	63
Loose Clusters .....	64
Phase 4.....	65
4.2.3 Category saturation and theoretical sampling .....	65
Phase 5.....	66
4.3 Chapter conclusion (Grounding the theory).....	66
<b>Chapter 5.....</b>	<b>67</b>

<b>5.1 Introduction to findings .....</b>	<b>67</b>
5.2 Learning.....	68
5.2.1 Workplace training.....	70
5.2.2 Organisational learning.....	71
5.2.3 Knowledge.....	71
5.2.4 Collective knowledge .....	73
5.2.5 Organisational knowledge .....	73
5.2.6 Knowledge flow.....	74
5.2.7 Learning and knowledge constructions .....	75
5.2.8 Categories .....	76
5.3 Overview of the three findings categories.....	77
5.3.1 Collectives .....	77
Table 5.1 Categories and properties of Collectives .....	78
5.3.2 Nonlinear.....	79
Table 5.2 Categories and properties of Nonlinear activities .....	81
5.3.3 Diversity .....	82
Table 5.3 Categories and properties of Diversity.....	83
5.4 Chapter conclusion .....	83
<b>Chapter 6.....</b>	<b>84</b>
<b>6.1 Collectives .....</b>	<b>84</b>
6.2 Findings.....	84
6.3 Support.....	85

6.3.1 Motivation.....	87
6.3.2 Conflict .....	88
6.4 Trust .....	89
6.4.1 Fitness .....	91
6.4.2 Commitment .....	92
6.4.3 Initiative .....	93
6.4.4 Fear of change.....	95
6.5 Chapter conclusion .....	97
<b>Chapter 7.....</b>	<b>99</b>
<b>7.1 Nonlinear.....</b>	<b>99</b>
7.2 Experience.....	99
7.2.1 Adaptive .....	100
7.2.2 Procedures .....	102
7.2.3 Clarity .....	104
7.3 Realistic .....	107
7.3.1 Consistency .....	108
7.3.2 Hierarchy.....	112
7.3.3 Management style .....	114
7.3.4 Exposure.....	116
7.3.5 Risk.....	117
7.3.6 Blame culture .....	118
7.3.7 Rhetoric.....	121

7.4 Recognise .....	122
7.4.1 Structure .....	124
7.4.2 Behaviours .....	126
7.4.3 Flow of information .....	128
7.5 Chapter conclusion .....	130
<b>Chapter 8.....</b>	<b>131</b>
<b>8.1 Diversity .....</b>	<b>131</b>
8.1.1 Culture.....	134
8.1.2 Balance.....	136
8.1.3 Acceptance.....	138
8.1.4 Empathy .....	140
8.1.5 Audience .....	141
8.2 Chapter conclusion .....	141
<b>Chapter 9.....</b>	<b>143</b>
<b>9.1 Discussions and implications .....</b>	<b>143</b>
9.2 Workplace experience .....	144
9.2.1 Individual and collective learning .....	144
9.2.2 Individual and local collectives .....	145
9.2.3 Localisation and shared experiences .....	146
9.2.4 Individual, collective learning and knowledge.....	147
9.2.5 The collectives self-organise .....	149
9.2.6 Collectives self-protection .....	150

---

9.3 Complex knowledge.....	151
9.3.1 Learning through work.....	152
9.3.2 Nonlinear learning .....	152
9.3.3 Structures and collectives .....	153
9.4 Diversity and learning .....	155
9.4.1 Learning and innovation .....	156
9.5 Learning and knowledge.....	157
9.5.1 Workplace learning.....	159
9.6 Learning and organisational knowledge.....	159
9.6.1 Individual learning and the collective .....	160
9.6.2 Autonomy and consistency.....	161
9.6.3 Learning through work.....	162
9.6.4 Learning through work/organisational knowledge .....	163
9.7 Chapter conclusions.....	165
<b>Chapter 10.....</b>	<b>167</b>
<b>10.1 Conclusion.....</b>	<b>167</b>
10.2 Individual and collective learning .....	168
10.2.1 Emergence .....	168
10.2.2 Autonomy .....	169
10.2.3 Interaction.....	169
10.2.4 Flexibility .....	170
10.2.5 Diversity .....	172

---

10.2.6 Innovation .....	173
10.2.7 Complexity (Implications for business).....	173
10.2.8 Power and politics.....	173
10.2.9 Hierarchy.....	174
Figure 10.1: Current challenges faced at company XXXX .....	176
Figure 10.2: Potential improvements that could be made at company XXXX.....	177
10.3 Findings and summary .....	178
10.4 Contributions to study .....	180
10.5 Further research .....	182
<b>Bibliography .....</b>	<b>183</b>
<b>Appendix A .....</b>	<b>217</b>
<b>Participants' information.....</b>	<b>217</b>
<b>Appendix B .....</b>	<b>219</b>
<b>Grounded Theory-Open Coding.....</b>	<b>219</b>

## Chapter 1

### 1.1 Background of the organisation

Whilst conducting this research the researcher was a senior manager of a leading Awarding Body in the UK which produced qualifications and courses for thousands of colleges and educational institutions. The researcher was brought into the organisation (head office) in 2007/2008 with a view of overseeing all the human resource activities which comprised of 11 regions. Part of the researchers remit was to reduce employment tribunal litigation along with overseeing all learning and development activities and to improve the overall knowledge of the organisation.

The coalition government (Conservative-Liberal Democrats) of 2010 took immediate plans to cut the current deficit of the British economy. As a consequence many funding streams for education were being cut and a new focus was being placed on academic qualifications. This was presented in the Department of Education schools White Paper, '*The Importance of Teaching (2010)*', that sets out a radical reform programme for schools and colleges. The proposals put forward in the white paper was having a devastating impact on this Awarding Body as many of the qualifications they produced and sold were vocational qualifications. On January 28<sup>th</sup> 2013 the Guardian reported that, "60% of schools were either planning to cut provision of vocational qualifications or have already done so" (Guardian Online). The customer base of this organisation was in the region of 4-6 million people with thousands of college and other education institutions. It almost goes without saying that the expensive litigation and the economic downturn were having a devastating impact on this organisations finances and business operations. As a consequence this organisation needed to rethink many of its current business activities and learn and behave differently and share its knowledge across the entire network more effectively to remain competitive in one of the worst economic downturns the UK has ever seen.

Unfortunately the researcher was forced to sign a Compromise Agreement which prevents the disclosure of what could be seen as 'sensitive' or 'confidential' information. The compromise agreement was finalised by Russell Jones and Walker Solicitors, 2011.

## **1.2 Problem**

The current understanding of learning and knowledge within this organisation must be questioned as there appears to be a separation of practices and how the organisation perceives learning and knowledge across the 11 regions. The literature often supports this argument that learning and knowledge are deeply entwined through workplace experience interaction (Stacey, 2003a, Fenwick 2003, Mullins, 2010). What seems surprising is that in practice, organisations still focus on more formalised training programmes and information/communication based knowledge management systems which are often separated from each other and seem relatively distant from the informing theory.

The training which is provided in most organisations, including this organisation, focuses on the transfer of individualised skills, knowledge and the required attitudes from the expert and then passed down to the novice (Malhotra, 2005). In practice learning and knowledge are very discreet which contradicts the coming together in theory. The complexity of learning and knowledge and its sophistication and the reductionist perspective is what divides business practice. Converging theories point to the coming together of learning and knowledge and promote the importance of integration. Yet whilst in business and professional practice we often see a clear separation of the two. It is this disconnection which highlights the importance of organisations to pursue a more effective learning and knowledge outcome.

### 1.3 Background of study

What most people might (or might not) find surprising is that learning and knowledge functions are often dealt with separately in business through human/technical systems. It is often treated in a disjointed fashion and then placed in separate systems, structures and teams often with disconnected frameworks, policies and practices.

This research wanted to reject the simplistic and often mechanistic views of learning and knowledge within business. Instead it wanted to investigate the more complex entanglement with each other, collectively and individually and in the context of their appearance.

This thesis offers a particular evaluation on workplace experiences of learning and knowledge and acknowledges some of the complexities that surround this entanglement in practical terms. The aim of this research is to obtain a greater understanding into how people learn at work and how this learning then interacts with organisational knowledge. Within this study, learning can only be understood when applied to a context where knowledge emerges from such engagement which is positioned, active and social.

It would be fair to say that the thrust of this research was a desire to discover whole experiences which provide a much greater understanding than some of the more observational research that is conducted within organisations (Bernard, 2006). This approach will provide a greater understanding on learning and knowledge facilitation and the interaction with one another. Hopefully by taking this approach it will lead to a much more satisfying workplace experience and enhanced organisational knowledge achievements.

There is little doubt that there are pressures on businesses to learn at a much faster pace and to manage their knowledge better (Loermans, 2002). Few would argue that the speed of change in this unstable time has made the way we operate in organisations far more turbulent and discontinuous. In the past there has been a substantial amount of literature written that has made

reference to the 'speed of change' and the 'frequency of change' especially when relating to the 'global market' which has in all fairness diminished the reference in recent years (Richards, 2012). However, with the depth of the global economic crisis there is an argument to suggest that we should once again consider the importance of learning and knowledge in organisations (OECD, 2009).

Advances in technology and communications have all contributed to the speed of globalisation and writers such as Prusak, (2008) highlight the importance of focusing on knowledge in organisations. In addition, the abrupt changes in consumer tastes, non-traditional competitors, technology gaps and regulatory upheavals have all impacted on the organisations success (Hamel and Valikangas, 2003). Having a much greater understanding of the complexities surrounding work and learning (Burns, 2002) as well as organisational knowledge which is often said to be very complex and elusive (Malhotra, 2002) will help (if a greater knowledge is achieved) provide a more effective way of working in organisations (Stacey, 2009, Stacey 2010). Peter Drucker says that knowledge has power because it controls access to opportunity and advancement (Drucker, 1993).

Reviewing the literature in this field seems to suggest a lack of empirical research which explicitly explores the interaction between workplace learning and organisation knowledge. This study aims to explore this relationship in much more detail.

#### **1.4 Organisational learning**

Organisational learning is often seen as a reflection of the organisation to acknowledge its learning as a new form of labour and to promote the development of the individual and the organisation knowledge (Zuboff, 1991). This acknowledgement is often said to reflect the pace of change and its prevalence. The debate on organisational learning has been around for some time and the issues of whether an organisation can truly learn, especially the

relationship between the individual, organisation and organisations knowledge (Senge, 2006). Increasingly, some of the theories around education have contributed to a very complex understanding of learning, organisational learning and knowledge; particularly, the understanding of what constitutes knowledge and how it emerges individually and collectively and how this connects with the organisations learning literatures (Loermans, 2002; Scott, 2005).

The literature often suggests the importance of HR in promoting learning at work and how this links to organisational learning and then utilising this knowledge as a competitive advantage (Mullins, 2010). There is some importance between these domains and how it makes reference to complexity and education theories. All too often we see learning placed at the feet of HR and they are asked to distribute organisational certified information which is often done by some sort of formal training.

You often find that workplace learning strategies have to conform to an accepted set of standards and principles which aims to promote knowledge which provides consistent skills and aims to standardise individual's competencies. This approach goes against the notions of organisational learning which focuses on flexibility and change with an aim of promoting new ways of thinking, epistemologically (Earl, 2001).

### **1.5 Knowledge Management**

Knowledge management in a more traditional setting sits within the information systems of an organisation and often focuses on the dissemination of explicit knowledge around the organisation (Vera and Crossan, 2003). Knowledge management appeared from an anxiety to promote organisational knowledge but has been fixated with the principles of information in an attempt to disseminate across the organisation to increase performance through electronic channels (Malhotra, 2002).

In the 1990's knowledge management often reflected the ideas that knowledge and learning were simplistic and uncomplicated which took positivist notions

(Spender, 1996). As a consequence there were very little investigations of the epistemology underpinnings (Blackman and Henderson, 2005). So therefore, practice stayed the same and was informed by constructions of knowledge which focused on extraction and dissemination. Learning was seen as the transfer of knowledge between the expert and the novice which aimed at standardisation and consistency (Blackman and Henderson, 2005). These approaches were unlinked to the theoretical discussions in the literature and mainly centred on information and communication technologies. The development of theory in learning and knowledge management challenged this traditional viewpoint and highlighted convergence themes across the discourse.

There have been some advances in knowledge management theory which attempt to pay a closer consideration to the epistemology debate. Having a clearer separation between the various dimensions on data-wisdom and having a greater awareness of the differences between knowledge bases will contribute to improved knowledge strategies. These advances will provide a greater recognition of the complexities surrounding knowledge, experiences and this entanglement with people (Earl, 2001).

### **1.6 Complexity theory**

Complexity theory often argues that there is very little that takes a clear and linear path of action and effect (Anderson, 1999).

Organisation theory and complexity theory are being used more frequently in an attempt to obtain a more holistic view towards observations and organisational experiences. There is a growing body of literature that attempts to integrate discourse across different areas of interest and complexity theory metaphors provide interdisciplinary opportunities (McElroy, 2000, Kennedy, 2005). Complexity theories focus on the dynamics of interaction, self-organisation, connection, holism and emergence. A complexivist view shifts focus from assumptions of clear and linear relationships between action and effect, reductionism and direction to the emergent outcomes of nonlinear interaction.

Complexity theory is seen as the new way of thinking and Hawkins (2000) predicts that this century will be the century of complexity. Newtonian sciences once dominated organisations (scientific management) and were put into operation by the likes of Taylor but now organisational theorists are looking for new ways of thinking in an attempt to gain greater insights into organisations and their processes (Capra, 1983). Complexity theory offers a way of integrating learning and knowledge management and allows an investigation of how learning occurs in organisations and how that learning is then interacted with the knowledge of the same.

## **1.7 Purpose of study**

There is very little empirical research that considers the relationship between workplace learning and organisation knowledge and its complex entanglement.

The purpose of this study was to explore this interaction from an employee's perspective in more detail. The question that needs to be considered in this research is, '*what are the relationships between workplace learning experiences and organisation knowledge?*' The aim of this research is to provide a more holistic perspective on learning and knowledge through workplace experiences than separate investigations into these areas. In short this study will take a grounded theory approach that is sensitive to complexity theory to provide a deeper understanding of how the two occur in a complex network of interactions.

This study will also provide a deeper understanding on learning and knowledge facilitation in organisations which will help improve business practices and performance by providing a more informed range of learning and knowledge facilitation strategies.

## **1.8 The aim of the research**

The aim of this research is to provide a more holistic perspective on learning and knowledge in organisations from employees and their working experiences.

### **Approach**

This research took a grounded theory approach but wanted to remain sensitive to complexity theory. The aim of this study was to reject the simplification and often mechanistic views of learning and knowledge and wanted to explore the complex entanglement. Complexity theory helps provide a new and innovative perspective through its theoretical and empirical integration.

This research considers some important areas in the literature and avoids the simplification and general assumptions of knowledge and research. Complexity and some of the ideas that surround this theory are noticeable in this study which allows participants responses to self-organise which also allows the emergence of new and novel perspectives. In addition, this approach allows the data to be richly interconnected which recognises the logical and interactive nature of knowledge which highly values the experiences of the participants and how this relates to their work.

The decision to use a leading Awarding Body in the UK as a case study was prompted by the disconnection with learning and knowledge management, tensions of having a bureaucratic structure, increased litigation and the tensions between policy or 'organisational' knowledge and the applied training or 'local' knowledge and learning. This thesis intends to provide a much better understanding on learning and knowledge and some of the convergent themes and how this interrelates.

## **1.9 Contribution to knowledge**

There is very little research that has been done which examines the relationship between learning and knowledge in organisations whilst considering complexity theory. Although suggested in the literature, there is very little empirical research.

This research begins to fill this gap directly and contributes in the following ways:

(a) Focuses on individual and collective learning experiences and the broader context of organisation learning and the management of emergent knowledge which adds empirical weight to the theoretical discourse.

(b) Provides significant empirical support towards the development of practice which shows an appreciation of the problematic nature of knowledge and the complex interactions to characterise organisational behaviour. The findings demonstrate the interaction and entanglement of learning and knowledge in organisations and point to the possible implications.

(c) Takes a unique and innovative approach which considers complexity theory as part of its development.

(d) Adds convergent themes and offers a novel perspective on organisational learning and knowledge management and their integration.

Finally, but not least the research will draw some conclusions about business application and how this study will help improve business practice and performance.

## **1.10 Structure of thesis**

### **Introduction** (Chapter 1)

This research has taken a grounded theory approach whilst considering complexity theory looking at 'whole' perspectives on learning and knowledge in organisations. Chapter 1 gives an introduction and considerations to this thesis.

### **Literature review** (Chapter 2)

The literature review looks at some of the complex discussions on learning and knowledge and the many different views, cultures and perspectives on this very subject. It provides the reader with an understanding as to why this was not an easy subject to research.

### **Philosophical considerations and research methodologies** (Chapter 3)

Philosophical considerations and research methodologies consider some of the main debates in philosophy before considering why I chose the grounded theory approach that was sensitive to complexity theory for this research.

### **Methods** (Chapter 4)

This chapter provides the aims and objectives of the research and the processes involved in the methods and the selection of the population and organisation. This chapter also explains some of the tools and the technique used in the selection.

### **Introduction to findings** (Chapter 5)

The aim of this chapter is presented to start identifying how the participants make sense of terms which precedes the research findings.

### **Findings (Chapter 6, 7 and 8)**

Chapter 6, 7 and 8 present detailed findings of the relationships and the complex entanglement of organisation learning and knowledge and how organisational members self-organise in an attempt to be successful within their local environments.

### **Discussions and implications (Chapter 9)**

This chapter starts to draw in the findings and compares and contrasts this with the academic literature and previous research on workplace learning. The experiences of the organisational members precede some of the discussions around learning and knowledge which co-emerges through the various interactions.

### **Conclusion and business application (Chapter 10)**

This chapter draws in the arguments of the findings further and how effective learning and knowledge facilitation might help improve business practice and performance.

## Chapter 2

### 2.1 Literature review

The body of literature that deals with Knowledge Management (KM) and learning in organisations is immense. This survey introduces how grounded theory fits into the literature review discussions and will then critique some of the major themes and dominant paradigms and debates over the history of the subject areas. This chapter will also introduce some discussions surrounding complexity theory and how it has had an influence on this study.

### 2.2 Grounded theory and the literature

It is important to note at this stage that a quantitative study aim of the literature review would be to refine the overall research question or questions and then identify gaps in previous research to then find a suitable design, data collection and a planned method of study. However, qualitative research in the literature review is seen as a far more ambiguous character. Grounded theory is one qualitative method amongst many which is often described as a “general inductive method possessed by no discipline or perspective or data type” (Glaser, 2005, p141). Therefore, a grounded theory concept or concepts are generated from the empirical data in the study rather than from the existing literatures. The grounded theory researcher strives to identify and explain the main concerns of the participants in a particular context to resolve or process this main concern. The results which emerge are either presented as a hypothesis, model or as an abstract conceptual theory. The whole idea of this approach is that the theory is built up of categories and related categories (explained further in Chapter 3, Grounded theory methodology and Chapter 4, Methods). Glaser states that the entire aim of grounded theory is to “generate a theory that accounts for a pattern of behaviour which is relevant and for those involved” (Glaser, 1978, p93). The classical views of the literature and how this fits into grounded view is summed up nicely by Glaser when he states that

grounded theory researchers should “just get on and do it” and encouraged to ignore exiting literature (Glaser, 1978, p93).

The literature review in this study is to put the study into some kind of context and consider some of the dominant paradigms. These views are supported by Glaser (1998) when he advocates that grounded theory researchers should do some preliminary reading to put the study into context. These views are also supported by the work of Charmaz when she argues that the researcher should do an initial literature review whether or not they “...support your grounded theory and show points of divergence as well as convergence” (Charmaz, 2006, p168).

### **2.3 Knowledge management (KM)**

In 1597 when Sir Francis Bacon stated that knowledge was power he could not have foreseen the everlasting echo of his saying (Faulkner, 1993). Indeed, nothing haunts the post-bureaucratic organisation like the dilemma of knowledge (Heckscher and Donnellson, 1994). Yet businesses still seem puzzled about what it is, and how it should be employed practically.

The term KM seems to have started in the literature around 1986 and from 1986-1996 the term occurs very briefly. Since 1996 the term KM increased dramatically (Boras, 2002). However, when you look more carefully there seems to be a wide variation of subjects represented under the heading 'KM'. In 1988, Drucker identified knowledge as the source of competitive advantage and economic growth. From then on, the resource-based view of the firm (Barney, 1991) and the capability-based view of the firm (Prahalad and Hamel, 1997) take into account intangibles as key assets, evolving into a knowledge-based view of the firm (Grant, 1996; Spender, 1996). The age when knowledge existed inside the organisation, but the organisation, not its knowledge, was managed, is progressively replaced by the managerial focus on knowledge as such (Easterby-Smith and Lyles, 2003).

Yet, whilst I have been working in business for over 22 years I ask myself, what is it we still really manage? What is the connection between workplace learning experience and organisational knowledge? Knowledge was considered to be the fourth factor of production (Jameson, 2001), a dynamic and relational one, whose complexity, according to Schneider (2007), makes it as difficult to define as life, or culture.

Despite these complexities some writers see knowledge as the most strategically important resource of the firm (Drucker, 1988; Grant, 1996). Although there is value in explicit knowledge entrenched in processes, practices and patent, more strategic value lies in tacit knowledge (Polyani, 1983) and dynamic capabilities (Teece et al., 1997) necessary for strategic change and innovation.

KM strategies are often seen as a natural partner to Human Resources (HR) (Davenport and Prusak, 2000, Senge, 2006, Boxall and Macky, 2009, Mullins, 2010) especially as the term human capital has become more popular with its emphasis on firm-wide knowledge sharing and organisational learning. As HR professionals we are often told that an effective KM and learning programme 'could/should/will' give any business a competitive advantage if implemented effectively (Mullins, 2010). With the 'could/should/will' in mind, a more detailed critical look is required at the literature surrounding this topic and hopefully helps identify how learning and knowledge are entwined.

### **2.3.1 KM/IT or HR**

If you follow Drucker (1988) and Grants (1996) way of thinking and consider that knowledge is the principle economic resource that businesses have to tender their clients, then knowledge spreads through every aspect of the firm, and a KM programme can encompass many differing aspects of knowledge. There are many definitions of what knowledge itself is and how it differs from data and information. However, in practice it is important to consider all

pertinent forms of knowledge, know-how and information that enhance the firm's business (Nonaka and Takeuchi, 1995).

When thinking about setting up a Knowledge Management System (KMS), firms often focus on Information Technology (IT), but many dispute this as only a conduit for accommodating and disseminating the knowledge around the firm. Those setting up the system need to recognise the type of knowledge the firm should distribute to benefit its business. With this in mind and some of the confusion about what constitutes knowledge, Knowledge Management (KM), Intellectual Capital (IC), Learning Organisation (LO) (to name a few) it is important to appreciate and understand the discussions around this subject in more detail.

KM implementation can be separated into IT based KM and HR related KM, as well as process based approaches (Tidd, Bessant and Pavitt, 2001). IT based or supply driven KM emphasises the need for (easy) access to active knowledge stored in databases or elsewhere (Swan et al., 1999). In contrast to that, the demand-driven approach is more vexed with facilitating interactive knowledge sharing and creation (Swan et al., 1999).

Numerous definitions and conceptions of KM exist (Alavi and Leidner, 2001; Coombs and Hull, 1998; Davenport and Prusak, 1998; Nonaka and Takeuchi, 1995). These different approaches to KM focus on the creation, diffusion, storage and application of either existing or new knowledge (Coombs and Hull, 1998). Wiig (1997) puts his emphasis on the management of existing knowledge and argues that the function of KM is to maximize the enterprise's knowledge-related efficiency and returns from its knowledge assets and to renew them continuously. Davenport and Prusak (1996) stress that KM consists of making knowledge noticeable and creating a knowledge intensive culture. Several studies recognise acquisition, identification, development, diffusion, usage and repository of knowledge as core KM processes (Collinson and Parcell, 2004; Alavi and Leidner, 2001). Swan et al, (1999) argue that knowledge exploration and utilisation are the core objectives of KM.

Nonaka and Takeuchi (1995) argue that innovation and KM are intimately linked. According to Senge (2006), innovation is the result of a recombination of conceptual and physical materials that were formerly in existence. In other words, innovation is the combination of a firm's existing knowledge resources to create new knowledge. The primary task of the innovating firm is therefore to reconfigure existing knowledge assets and resources and to discover new knowledge (Galunic and Rodan, 1998; Grant, 1996; Nonaka and Takeuchi, 1995). Both exploration and exploitation of knowledge have been revealed to contribute to the innovativeness of firms and to its competitive advantage (Swan et al., 1999; Hall and Andriani, 2002; Levinthal and March, 1993; March, 1991). Various studies focus on the role of KM in the innovation process. The results found by Senge (1990) substantiate the vital role which KM has for the knowledge dispensation capability and in turn, on speed and activity of innovation. Huergo (2006) supports the positive role technology management plays for the likelihood and success of firm innovations. Yang (2005) provides a very different approach. He hypothesises that knowledge incorporation and knowledge innovation improve new product performance, via the moderating effects of marketing and manufacturing competencies, knowledge acquisition, and knowledge dissemination. This seems to be supported by Brockman and Morgan, (2003). They argue that the KM tools 'use of innovative information', 'efficient information gathering' and 'shared interpretation' improve the performance and innovativeness of new commodities.

Drucker (1993) believes that we have entered a new knowledge era and a time when the monetary value of knowledge has become superior to the value of physical products. It is not accidental that the stock market worth of a number of companies far exceeds the visible assets of their balance sheet (Senge, 2006). This disparity accounts for a company's 'Intellectual Capital' or more specifically its 'Knowledge Assets' (i.e. everything the venture knows and learns). In a market characterised by global competitiveness and continuously shifting markets, these knowledge assets can provide today's companies with the economic advantage they are looking for (Drucker, 1993). After the successes

and failures of preceding managerial trends like TQM and BPR, some managers are in conflict that the last untapped resource is the knowledge of the employees and of the organisation as a whole. Drucker (1993) argues that in the new market, knowledge is not just another resource beside the traditional factors of production labour, capital and land but the only significant resource today. As a result, KM, i.e. utilising efficient management principles which will help to improve the performance of persons and organisations by maintaining and leveraging the worth of knowledge assets, has emerged into an executive megatrend.

A large amount of the literature on KM and organisational learning is developed by, and aimed at, industrial businesses and firms. Many organisations in the corporate sector look to KM as an answer to the new challenges of the information age. Knowledge and information are becoming vital core assets for businesses, who have to learn to handle these assets in new and creative ways. Conventional accounting and monitoring systems designed to deal with tangible inputs and outputs are no longer sufficient (Drucker, 1993). Instead, organisations now find that they have to share information internally more economically and learn to adapt more quickly to peripheral circumstances in order to retain their economic advantage. In response to this situation, the 'first generation' of KM strategies aimed to advance knowledge sharing within organisations (McElroy, 2000).

The first generation of KM strategies was very purposeful on information technology and systems; technical tools were used to bring together and codify existing knowledge in order to make the organisation run more efficiently. A 'second generation' of KM strategies has now emerged, which focuses more on organisational processes and the formation of new knowledge to keep the organisation one step ahead of its competition. For example, the most flourishing organisations are shifting from strategies based on forecasts to strategies based on anticipation of surprises (Levitt and March, 1998). They are moving away from management based on obedience to management based on

self-control and self-organisation. They are also moving from utilisation of already recognised knowledge to the creation of new knowledge, from pure 'technology' KM applications to also include 'process' applications (Binney, 2001).

At what time and how these shifts should be undertaken often depends on the type of organisation in question. Accenture's (2002) presentation of a typology of work settings distinguishes between four different types of organisations 'process', 'systems', 'network' and 'competence' based on the diverse levels of interdependence and complexity that are necessary in different work situations. The 'competence' model describes a place of work that is highly dependent on individual expertise (low level of interdependence) in order to carry out assessment and judgement-oriented work (high level of interpretation). The 'network' model denotes a place of work that depends on a fluid operation of flexible teams (high level of interdependence) in order to devise and meet new challenges as they occur (high level of interpretation). Different work settings need different ways of handling and processing information to create the essential knowledge.

### **2.3.2 Differing views on KM and OL**

In the literature the most important and regularly cited authors on KM and learning are Nonaka and Takeuchi (1995), Levitt and March (1988), March (1991), Argyris (1992), and Schein (1992). They all seem to place themselves within the second generation of KM strategies and work within the corporate world. While Senge (1990) and Argyris (1992) predominantly base their ideas on experiences as management consultants for large Western companies, Nonaka and Takeuchi (1995) draw on their experiences from predominantly Japanese businesses. Many of their recommendations are alike, especially as they all centre on the importance of thinking about processes and associations. Senge (2006) focuses more on 'systems thinking'. He argues that organisational learning will flourish when it is based on an understanding of how the whole organisational system is linked, rather than a focus on individual

parts. Argyris (1992) looks at the idea of learning by considering the differences between single and double loop learning. The purpose of single loop learning is to bring organisational action back on track. This is no doubt significant, but does not promote organisational innovation. Whereas, double loop learning is the ability of the organisation's members to think critically and imaginatively about the underlying structure.

Levitt and March (1988) take a slightly different and less positive approach about the ability of organisations to manage knowledge efficiently and to learn from previous experiences and underline instead the considerable limitations that hold back organisational learning. These embrace the complexity of organisational experiences, human habits, hierarchical structures, routines, and differing interpretations by diverse sub-groups within an organisation. Schein (1992) considers many of the same issues as Levitt and March (1998), but in a more positive manner. He believes that the limits to learning within an organisation can be defeated through good leadership. By good leadership Schein means the capability of the leader to guide the organisation through various stages of a change process, to contain nervousness, and manipulate the organisational culture in a constructive way throughout this development.

Malhotra (2001) views the role of management in relation to learning and believes that the most important learning processes within an organisation are precisely those that cannot be managed. He draws on the chaos theory to describe 'semi-confusing information systems' and 'nonlinear feedback networks'. He goes on and states that innovation often takes place in informal 'shadow' networks of individuals concerned with the same issues. In order to support and fortify this creativity, Malhotra often argues that organisations should permit staff room to act on incomplete information, trust their own judgement, and feed input from informal into formal structures.

### **2.3.3 Organisational learning**

The meaning of the word 'learning' is very ambiguous in academic literature. Even the discussions on 'organisational learning' is very difficult to define which is unlinked to "educational theory and simplistically mechanical" (Spender, 1996, p64). In many ways learning is often seen as simplistic and a diffusion of uncontested knowledge which is transferred from the expert to the learner. Huzzard (2004) argues that knowledge is often seen as unproblematic and transferred from a definitive source to a receptive individual. Vera and Crossan (2003) attempted to highlight some of the convergent themes and the boundaries relating to organisational learning, knowledge management and workplace learning and this has been adapted to include theories of complexity-illustrated below (Figure 2.1). This will be discussed in more detail later in the chapter.

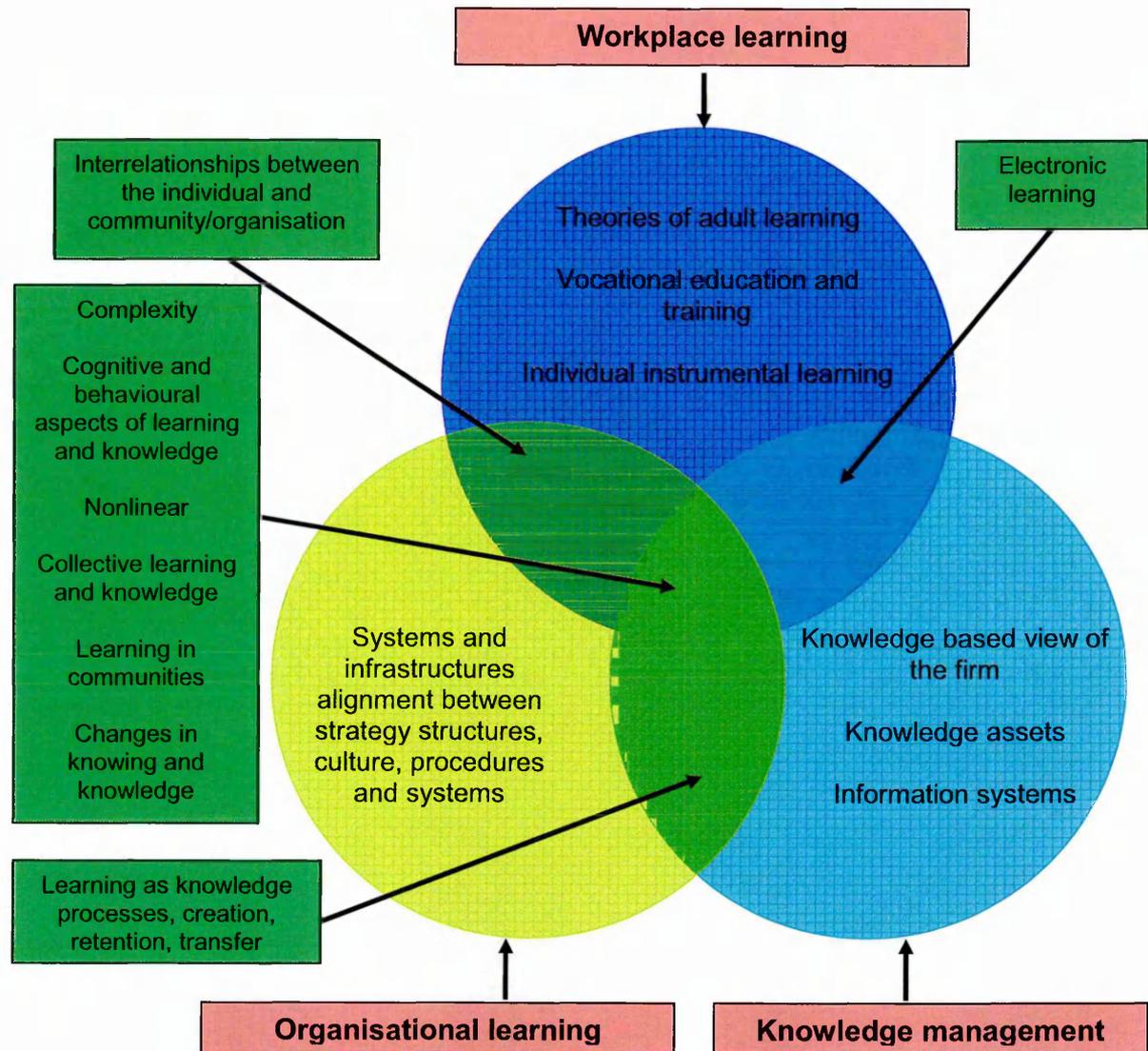


Figure 2.1: Convergent themes of organisational learning and knowledge management (Adapted from Vera and Crossan, 2003)

There has been critical attention paid to the over simplification about cognitive and behavioural perspectives relating to organisational behaviour and organisational learning in the past. Fiol and Lyles state that you "...must separate behavioural and cognitive development from each other if a theory of organisational learning theory is to be developed" (Fiol and Lyles, 1991, p811). This definition is particularly rooted in behaviour and that organisational learning is very much about the process "...of improving actions through better knowledge and understanding" (Fiol and Lyles, 1985, p803).

Cognitivism is very much built on the assumption which was developed from individual learning theories based on individual speech and motor skills, particularly when it became difficult to provide insights into organisational learning revolving around experience which was seen as "...unique and non-repetitive..." (Fiol and Lyles, 1985, p804). Seely-Brown articulate, "learning is a social or community phenomenon. Understanding the process through which groups learn, how they combine individual knowledge and beliefs into shared cognitive structures, and take co-ordinated action is important. Indeed a sense of community, the desire to belong, may be one of the fundamental motivations for learning" (Seeley-Brown, 1993, p94).

There are other theorists who move away from the cognitivist preoccupation with organisation learning theory and consider more about the community and how it is situated. Lave and Wenger (1991, 2000) and Brown and Duguid, (2000) refer more to the practical nature of learning and how it is embedded in everyday human action. Elkjaer articulates that "learning is a practical, rather than a cognitive process and cannot be separated from the creation of professional identity" (Elkjaer, 2004, p422).

There are many authors over the years who have attempted to identify with the complex nature of learning and many who draw on the educational representation such as, Dewey (1859-1952), Vygotsky (1886-1934), and Piaget (1896-1980) which have all been referenced more recently in the literature. For

example Mirvis (1996) referenced Piaget, Spender (1996) referenced Vygotsky, Elkjaer (2004) referenced Dewey and Ghosh (2004) also made reference to Vygotsky.

Educational theory has helped enrich discussions and the roles of experience, participation, situatedness, constructions, critical thinking and the cultural process which relate to learning. The discourse around organisational learning theory makes reference to the unavoidable parts of human activity and its complex nature. These definitions go beyond the individual learner and highlight the collective learner and the context. Backstrom highlights a very interesting area when describing learning as "...enduring changes in a collective as a result of interaction between the collective and its context" (Backstrom, 2004, p471).

Stacey seems to go further and moves away from the simple and mechanistic views of learning and its transmission when he articulates, "learning is the activity of interdependent people and can only be understood in terms of self-organisation communicative interactions and power relating in which identities are potentially transformed. Individuals cannot learn in isolation and organisations can never learn (Stacey, 2003a, p331). Senge also has an interesting perspective when he states, "the discipline of team learning starts with 'dialogue', the capacity of members of a team to suspend assumptions and enter into genuine 'thinking together'. To the Greeks dia-logos meant free flowing of meaning through a group, allowing the group to discover insights not attainable individually" (Senge, 2006, p10).

Crossan, Lane et al, provide some very interesting insights and tensions between the exploration and assimilations "...organisational learning is a dynamic process. Not only does learning occur over time and across levels, but it also creates tensions between assimilating new learning and exploiting what has already been learned" (Crossan, Lane et al, 1999, p352).

Emotions are also discussed and the problematic nature of organisational learning "...a unique combination of skills and knowledge acquisition and participation in communities of practice and institution and emotions are important triggers for the development of experience and knowledge in organisations" (Elkjaer, 2004, p430).

There is much optimism that surrounds many of the arguments and discussions that organisational learning is a precursor for organisational accomplishment. However, there are occasional references made that organisational learning can have a negative effect over time (Fiol and Lyles, 1985 and Wang and Ahmed, 2003). "Entities can incorrectly learn, and they can correctly learn that which is incorrect" (Huber, 1991, p89). This reveals a consideration of learning and complex human activity which deviates from some of the dominant learning discussions.

It is the problematic nature of organisational learning which has helped propel this study to consider and explore the experiences of learning in organisations and how this links to the knowledge held within the organisation. It is for these reasons a reflection of some of the dominant literature paradigms over time which is important to help fit a contemporary discussion.

#### **2.4 Can KM increase business efficiency?**

A major anxiety for many organisations is the need to confirm that KM actually adds any value to production processes. At first, traditional accounting and measurement systems were drawn on to exhibit the increased efficiency that followed from KM applications. However, there were some important problems attached to these conventional systems. Most importantly, they related to tangible inputs and outputs, and were not capable of dealing with knowledge as an intangible asset. In addition, conventional measurement systems tended to emphasise costs (to the company's production figures) rather than use or added value (to the company's strategy) (Ahmed, Lim and Zairi, 1999). More recently, therefore, a few businesses have been moving towards accounting and

measurement systems that capture not only potential increases in production derived from KM, but also increases in intangible assets and strategic advantage (Ahmed, Lim and Zairi, 1999). One of the companies that seem to be at the forefront of such thinking is Skandia, which has appointed a Director of Intellectual Capital who assembles and presents metric indicators of the company's intellectual capital in the annual figures (Marchand, 1998).

Both the conventional measurement systems and the later, more strategically oriented measurement models are focused on evaluating KM through metrics. Performance measurement even when dealing with intellectual capital, as in Skandia is defined as "the systematic assignment of numbers to entities" (Ahmed, Lim and Zairi, 1999, p258). This makes it possible to change uncertain processes into a scale that measures more certain figures of assets, competencies, efficiency, and profit and loss. Such models of performance measurement foster 'single loop learning' i.e. they allow managers to take immediate remedial action if and when processes are seen to become inefficient but they leave little room for 'double loop learning' (Argyris, 1992).

#### **2.4.1 Eastern and Western perspectives**

Two Japanese academics, Ikujiro Nonaka and Hirotaka Takeuchi, published the 'Knowledge-Creating Company' (Nonaka and Takeuchi, 1995), which was a pioneering study of knowledge generation and use in Japanese firms. Nonaka and Takeuchi argue that the conventional western view of organisations as an instrument that processes external information in order to adjust to new situations, does not explain innovation. In its place they propose a theory of 'Organisational Knowledge Creation', which they argue as 'the capability of a company as a whole to produce new knowledge, distribute it through the organisation, and embody it in products, services, and systems'. More specifically, Nonaka and Takeuchi pull on Polyani's distinction between 'tacit knowledge' and 'explicit knowledge'. A distinction that has become the keystone of most theories and frameworks for KM. Tacit knowledge is personal, context-specific, and therefore hard to formalise and converse. It is often highly

embedded into action. It is the knowledge that although allows us to ride a bicycle, we find it difficult to express effectively. Explicit knowledge on the other hand, is knowledge that we can confine and converse in terms of reports, articles, manuals, blueprints etc. Tacit and explicit knowledge account for one of the dimensions of a two-dimensional knowledge creating space. The second dimension of this space comprises the levels of knowledge creating entities (individual, group, organisational and inter-organisational) (Nonaka and Takeuchi, 1995).

Nonaka and Takeuchi's (1995) fundamental claim is that knowledge creation takes place in this two-dimensional space 'through the social interaction between tacit and explicit knowledge' and takes the form of a spiral that starts at the individual level and expands to larger communities of interaction (higher level entities). They distinguish four modes of interaction or 'knowledge conversion', between tacit and explicit knowledge. 'Socialisation' (from tacit to tacit) creates new tacit knowledge through the sharing of experiences. Socialisation describes the type of learning performed by an apprentice when he observes his master in order to obtain his skills and technical know-how. It is learning by partaking experience. The simple transfer of information will often make little sense, if it is separate from associated emotions and specific context in which shared experiences are entrenched. 'Externalisation' (from tacit to explicit) creates original explicit knowledge by delineating tacit knowledge in terms of more explicit structures like metaphors, analogies, concepts, hypotheses or models. Nonaka and Takeuchi (1995) argue that this is the most significant of the four modes of knowledge conversion in terms of knowledge conception. New explicit knowledge is shaped and can then be communicated effectively. 'Combination' (from explicit to explicit) creates new explicit knowledge by bringing together explicit knowledge entities into larger and more expressive knowledge systems. Individuals trade and combine explicit knowledge when communicating and especially when working together. The importance of working together for KM is also considered by Levitt and March (1998). 'Internalisation' (from explicit to tacit) is the process of making tangible

explicit knowledge into tacit knowledge. This mode of knowledge discussion is closely related to 'learning by doing' and made easier when the explicit knowledge is diagrammed or verbalised into documents, manuals, or oral stories.

There is little doubt that none of the above knowledge exchange modes can maintain knowledge creation by itself. Nonaka's and Takeuchi's theory attributes organisational knowledge creation to the interaction between tacit and explicit knowledge by bringing together the above knowledge conversion modes. The result is an increasing spiral that starts with the formation of new tacit knowledge by socialisation, its externalisation to explicit knowledge, its mixture with other explicit knowledge and ultimately back to internalisation as individual tacit knowledge. Clearly, tacit knowledge of individuals is the basis of knowledge creation. This is obviously where the spiral starts as an organisation cannot create knowledge by itself. Nonaka and Takeuchi recognise the importance of the tacit knowledge of individuals, but they do seem to focus their studies at higher levels in the organisation, often obtaining feedback from middle and higher level managers.

#### **2.4.2 Strategic resource**

Few would argue that knowledge within the organisation (organisational knowledge) is considered a key strategic resource. The emerging 'knowledge based view' suggests that tacit knowledge, in particular, can play a key role in creating a sustainable competitive advantage. Tacit knowledge has the characteristics of 'rare' strategic resource context specificity; low 'ability' for transferability or imitation, and causal vagueness which suggests it has huge potential and a significant source of competitive advantage for any organisation. Nonaka and Takeuchi (1995) argue that tacit knowledge represents a significant component of organisational knowledge or 'know how'. The concept of 'activities' or a normal activity provides a way of helping to identify organisational knowledge so that it can be researched and managed. Teece

(2000, p36) describes organisational knowledge as “embedded...in organisational processes, procedures routines and structures.”

There are many authors who choose to avoid the epistemological debate on the meaning of knowledge by making the comparison between knowledge, information and data (Alavi and Leidner, 2001). A commonly held observation is that data is raw numbers and facts, information is processed data and knowledge is genuine information (Dreske, 1981; Machlup and Mansfield, 1983). The belief of hierarchy from data to information to knowledge with each varying along some dimension such as context, usefulness or interpretability is inaccurate (Alavi and Leidner, 2001). They go further and state that the most useful and distinctive feature between information and knowledge is not found in the structure, content, usefulness or interpretability, but rather knowledge is information held in the minds of individuals and it is personalised information (which may be unique, useful, new, or accurate) connected to procedures, concepts, facts, ideas, interpretations, judgements, and observations. Likewise, Dahlbom and Mathiassen (1995) argue that data, information, knowledge and competence correspond to different levels or forms of human action. They argue that data is a formalised depiction of information, and that information is fundamentally a charting of knowledge within a shared practice. This is only possible by relying on shared practices and experiences of situations. “Think of what a cookbook for a true novice would look like. Every recipe would begin: “Turn on the light in the kitchen” (Dahlbom and Mathiassen 1995, p56).

## **2.5 Different definitions and perspectives**

Examining the literature on KM reveals many different definitions and perspectives on knowledge and KM. Knowledge, as defined by Plato and accepted by most Western philosophers, is ‘justified true belief.’ Information is a closely associated term and is generally believed to be data that is of potential value in judgment making. According to Brown and Duguid (2000), there are at least three significant distinctions between information and knowledge: knowledge entails a knower; knowledge is much harder to separate, transfer,

and share than information; and knowledge is much harder to incorporate and comprehend than information. Nonaka and Takeuchi (1995) go further and portray differences in how Westerners and Japanese frequently view knowledge. They advocate that Japanese view knowledge as being mainly tacit, something not easily observed or expressible. Western culture has a much stronger focus on explicit knowledge, which can be expressed more easily in words and numbers and is far simpler to communicate than tacit knowledge. They explain the contrast between these perceptions on knowledge as being entrenched in culture. They suggest that in the Western culture; there has been a long history of untying knowledge from the knower, which is different in the Japanese culture. Nonaka and Takeuchi (1995) adopt a more conventional definition of knowledge as 'justified personal belief'. Belief is important to this idea of knowledge because it is closely fixed to an individual's, or groups, values and beliefs. From this perspective knowledge originates, from in the minds and bodies of individuals. Extremely important to the concept of knowledge is that of knowing. Knowing and learning detain the dynamic aspects of knowledge. A knower, one who knows, can be said to have 'actionable knowledge'. Miller and Morris (1999) put forward that knowledge is gained when theory, information, and experience are incorporated. Cook and Brown (1999) argue that innovation comes about from a generative dance between knowledge and knowing.

There are some writers who go further and argue that culture plays a significant part in the development of KM and no organisation can effectively implement KM without first altering the culture of the organisation (Pan and Scarborough, 1998). Nonaka and Takeuchi (1995) continuously remind us that KM is not just about IT solutions in the business activity. In KM people, are themselves considered as part of the organisation's overall capability and people are the vital differentiators in business achievement (Palmer, 1998). KM requires an environment where an individual's knowledge is appreciated and compensated (Santosus and Surmacz, 2001). The organisation's culture must offer a climate of continuity and trust (Pan and Scarbrough, 1998). Trust is necessary and you

must trust your employees. Employees must trust that sharing heightens employment status and does not weaken the business's need for them. Employees must know that experimentation and well-intentioned failure are acceptable. There must be no such thing as failure; every supposed failure should be turned into an achievement, by allowing the organisation to learn from it. Senior members of staff should set the tone and show support. Day-to-day strengthening must come from mid-level managers (Senge, 2006). Success depends on the readiness and aptitude of the entire senior executive group to tackle not just their individual function or divisional responsibilities, but also their collective responsibility for the company as a whole (Palmer, 1998). It should never be forgotten that double-loop learning occurs when error is identified and addressed in ways that involve the alteration of an organisation's underlying norms, policies and objectives (Smith, 2002). For KM to thrive within any organisation the senior members of staff must help create a culture that allows its policies and norms to be questioned by everyone and they should be willing to change these policies and well-known guidelines in response to any inquiries.

As briefly mentioned many discussions and definitions of knowledge in the literature (but not all) distinguish between two types of knowledge: tacit and explicit. Explicit knowledge is knowledge that can be codified. It is more formal and systematic and is often found in books, policies, reports, databases, and computer programmes. Tacit knowledge, which is highly personal, is difficult to articulate and is rooted above all in our related experiences. The description of tacit knowledge originated with Polanyi's (1966) concept of tacit knowing. In Polanyi's debate of human knowledge, he argued, 'we know more than we can tell' and gives examples of face recognition to illustrate this. While a person can identify a face it can be very difficult to articulate how we do it. Nonaka and Takeuchi (1995) build on this idea of tacit knowledge and describe tacit knowledge as consisting in part of technical skills and also as having a cognitive dimension that resides in mental models, beliefs, and ingrained perspectives.

## 2.6 Business application

The literature around OL and KM is often complex and contradictory, however, we could argue that the implementation of an effective programme could provide the capability to understand the market, correctly assess the customers' needs, and turn them into products and services by integrating organisational resources. KM incorporates the process of detection, formation, dissemination, and utilisation of knowledge. For successful execution of KM programmes, managers need to recognise the various organisational elements including organisational structure, culture and HR. Particularly, HR as this could be (arguably) one of the essential factors for driving an effective KM programme. Organisational knowledge should be created based on each employee's knowledge. That is, organisational knowledge is personal and construction of organisational knowledge is unimaginable without employees (Lesser and Storck, 2001). The literature suggests a proactive HR element to KM is the key to implementing a successful KM programme (Frenkel and Sanders, 2007, Beltran-Martin and Roca-Puig et al, 2008). The literature has acknowledged several key variables for the success of KM. The findings from the literature can help identify important success factors of KM. The literature does suggest the importance of training (formal and informal) should offer employees and managers the skills and information to accomplish their responsibilities. One of the reasons for the failure in effective work behaviours would be insufficient training to sustain these principles. Well designed training initiatives help to preserve knowledge within the organisation. (Acton and Golden, 2003, Ahmed, Lim and Zairi, 1999). Employee participation describes how all employees can contribute successfully to meeting the organisation's objectives. Employee engagement is one of the key factors in successful KM operations because the nature of knowledge formation and sharing is unthinkable without employee participation (Collinson and Parcell, 2004).

The change to a knowledge-based organisation requires peer-to-peer partnership. That is, teamwork is a vital source of the knowledge generation process. Creating teams permits organisations to apply different skills and

experiences towards its processes and problem-solving. Organisation's members must always work collectively and build on each other's ideas and strengths. Any person who has knowledge and interest in a problem should be included on the team (Greengard, 1998). Empowering your employees will also be a key factor for KM success because true empowerment can give the employees a sense of belonging and ownership in the overall aim of the organisational KM system. Employers can and should value their employees' expertise through empowerment (Martinez, 2011). Furthermore, employers can tap into employees' knowledge and support them to communicate their knowledge by creating ways to detain, organise, and share knowledge.

For a successful KM programme, the visible leadership and commitment of top management must be constant throughout a KM effort because effective knowledge formation is not possible unless leaders empower employees and show a strong commitment to the organisation. Management must always be willing to communicate with their employees to make knowledge realistic and help organise the KM process (Dess and Picken, 2000). The literature suggests using their leadership and commitment in implementing a KM project management must have: (1) Adequate knowledge; (2) Sensible expectation of KM results; (3) Ability to converse with employees; and (4) Capability to coordinate the different interests of functional units involved in the KM implementation process (Collinson and Parcell, 2009).

The literature suggests that HR can make a significant contribution to KM simply because knowledge is shared amongst people (Mullins, 2010); it is not just a matter of capturing explicit knowledge through the use of IT. The role of HR is to make sure that the organisation has the intellectual capital it desires. The resource-based view of the firm emphasises, in the words of Cappelli and Crocker-Hefter (1996, p22), that "distinctive human resource practices help to create unique competencies that differentiate products and services and, in turn, drive competitiveness".

### 2.6.1 Literature suggestions

HR professionals are often pushed to the forefront to promote learning and knowledge creation within an organisation. The literature supports some of these arguments where HR are expected help promote behaviours to promote organisational performance (Podsakoff, Mackenzie, Paine and Bachrach, 2000) and to promote employee involvement (Boxall and Macky, 2009) and to provide an interactive and vibrant work structure (Frenkel and Sanders, 2007) with greater flexibility and commitment across the organisation (Beltran-Martin and Roca-Puig et al, 2008).

Of course the literature is not suggesting this can only be done by HR but does suggest HR could contribute in the following ways: (1) Help to expand an open culture in which the values and norms emphasises the importance of sharing knowledge. (2) Promote a climate of dedication and trust. (3) Advise on the design and development of organisations which make possible knowledge sharing through networks and communities of practice (groups of people who share common concerns about aspects of their work), and teamwork. (4) Advise on resourcing policies and provide resourcing services which make certain that valued employees who can contribute to knowledge creation and sharing are attracted and retained. (5) Advise on methods of motivating people to share knowledge and rewarding those who do so. (6) Help in the creation of performance management processes which focus on the expansion and sharing of knowledge. (7) Develop processes of organisational and individual learning which will produce and assist in disseminating knowledge. (8) Set up and arrange workshops, conferences, seminars which enable knowledge to be shared on a person to person basis. (9) Promote the cause of KM with senior managers to support them to exert leadership and support KM initiatives (to name a few) (Armstrong, 2002).

However, it does need mentioning that some have questioned the effectiveness of KM and its sturdiness and sustainability as an organisational process (Browning, 1999). Having experienced BPR and TQM the unconvinced

and sceptical have declared KM to be another float in the parade of ideas to rejuvenate workers and the place of work. Thomas Stewart (1998, 2001) explains that although reengineering and quality management are not the coin of the business world today, these big ideas did change American and Japanese businesses dramatically.

Of course there are sceptics out there who believe that KM has been developed to replace the waning re-engineering movement. Possibly the majority of the sceptics take this view. However, I disagree with this view slightly because with increased speed of globalisation and the complexity of global trade and the deterioration of central economies has created a frantic atmosphere within firms which feel obliged to bring new products and services to larger markets much more quickly. This mixture of global reach and speed forces organisations to ask themselves, what we know, who knows it and what do we not know that should be known (Prusak, 2001).

### **2.6.2 Complexity theory**

There is great value in applying new sciences when understanding organisations, although, this can cause considerable resistance when faced with traditional ways of thinking about research design and methods. Chaos theory, self-organising systems, nonlinear systems and complexity theory are all being used to apply a different way of thinking relating to organisations and learning. Organisations have been dominated by a strict view on how to manage organisations and people for 100 years which often takes an engineered approach. "Complexity sciences help provide parallels with human actions which can be very dynamic" (Stacey 2003b, p360). More frequently now, it is accepted that organisations are complex and nonlinear, a view held by Frank and Fahrback, (1999), Wheatley, (1999), McElroy, (2000), Kurtz and Snowden, (2003) and Stacey (2003b). Morel and Ramanujam state that organisations are "dynamic systems of adaption and evolution that contain multiple parts which interact with one another and the environment" (Morel and Ramanujam, 1999, p278).

The complex nature of organisations are fairly frequent in the literature but the dominant paradigm of control still oversees a lot of the management discourse in practice. This dominance is attributed to the preference of simple and to some degree linear mechanisms of control which are perceived as easier to implement and dominate organisational dynamics (Dooley and Van de Ven, 1999). In essence this linear behaviour is being constantly reinforced as organisations are built very linear to support linear behaviour.

Complexity theory is very evasive as a whole in academic literature and the concept is often dismissed as abstract or "...there are a variety of interpretations" (Cohen, 1999, p373) or that "one unified theory does not exist..." (Anderson, 1999, p217). The general understanding of complexity is that it provides a greater focus on nonlinear interactions of a diverse set of agents through various feedback loops which helps provide greater focus on collective behaviours and unanticipated behaviours.

Complexity theory offers an insight into some of the more illogical behaviours of learning which provides a more reflexive approach and offers a robust and penetrating challenge to the theories which are often based on clear linear or mechanistic assumption about human behaviour. "Reflexivity is a *stance* of being able to locate oneself in the picture, to appreciate how one's own self influences [actions]. Reflexivity is potentially more complex than being reflective, in that the potential for understanding the myriad ways in which one's own presence and perspective influence the knowledge and actions which are created is potentially more problematic than the simple searching for implicit theory" (Fook 2002, p43).

## **2.7 Chapter conclusion**

The literature often suggests that organisational learning, knowledge management and workplace learning is based on relationships between the individual and the organisation and how the development of knowledge is situated and sometimes elusive in its creation, action and interaction.

Complexity theory helps provide a fresh perspective on organisations and helps provide researchers and practitioners with a new and novel way to "...understand learning, teaching and education from nonlinear perspectives, drawing on the emphasis complexity places on variations as a source of outcome thinking and the important role of interaction, diversity and redundancy on processes of cognition" (Davis and Phelps, 2004, p3).

Whilst conducting this research I was a senior manager working in a knowledge intensive organisation (Awarding Body) and was personally responsible for overseeing all HR activities. In my role I witnessed first-hand the endless mistakes made and the huge financial costs (often through litigation) associated with these mistakes. I struggled to understand why members of staff were not learning and sharing knowledge effectively and I wanted to investigate this matter further. The literature does suggest that the benefits of having a more effective KM programme could include a more efficient and accelerated decision-making process, reduced product development (for example, qualification development and research), improved academic, administrative and student services by means of eliminating outmoded processes and streamlining operations, reducing costs could lead to superior efficiency. The education environment is a place where knowledge is acquired, generated, disseminated, shared, applied, leveraged and stored and these involve a lot of activities.

However, this organisation is not unique as most professional organisations today are the same or at least similar. The literature seems to suggest that most organisations could benefit from an effective KM programme and should be supported by all. "Organisations work the way they do because of how we work, how we think and interact: the changes required ahead are not only in our organisations but in ourselves as well" (Senge, 1990, pxvi).

There does, however, seem to be a lack of empirical research between learning and knowledge in organisations and their entanglement with each other, collectively and individually and the context of their appearance. Hopefully, by

taking a more novel approach in my research this will help address some of these gaps in the literature.

## Chapter 3

### 3.1 Grounded theory methodology

This chapter will explain in greater detail the different approaches to grounded theory methodology (GTM) and how it guided the data collection, analysis and the development of theory. The subsequent sections will start to describe the data collection phases for this study which consisted of three focus groups, a sense making workshop and a connection making workshop. The chapter will conclude by explaining the reasoning of this approach and how it helped in the analysis.

#### 3.1.1 Grounded theory overview

Strauss and Corbin (1998b) provide useful guidance about when it is best to use GTM for any research project and state “if someone wanted to know whether one drug is more effective than another, then a double blind clinical trial would be more appropriate than grounded theory study. However, if someone wanted to know what it was like to be a participant in a drug study then he or she might sensibly engage in grounded theory project or some type of qualitative study” (Strauss and Corbin, 1998b, p40). The GTM provides some very useful tools if one wanted to look at an individual’s feelings or perceptions regarding a specific subject area. On the other hand quantitative data would probably be more useful if one wanted to measure the attitudes across a large sample. GTM provides a very powerful framework if the aim of the study is to learn about individual perceptions.

GTM shares certain characteristics with other qualitative methods which shares parallels with this study:

- Focuses on everyday life experiences
- Places value on participant perspectives
- Interactive process between researcher and respondents
- Primarily descriptive and reliant on people’s words

(Marshall and Rossman, 1999)

GTM and its methods, which are often thought of as the procedures, are still very influential when carrying out qualitative research when the researcher wants to generate a theory. This form of qualitative research has evolved from its original use by sociologists to many other social researcher fields such as education, accounting, business management, nursing, social working and public health. This clearly demonstrates the desire for various theoretical explanations and the growing use of qualitative materials and how these are analysed. There are a variety of sources researchers can use when considering grounded theory and these may include some of the following; 'The Discovery of Grounded Theory' (Glaser and Strauss, 1967), 'Theoretical Sensitivity' (Strauss, 1987) 'Basics of Qualitative Research' (Strauss and Corbin, 1990, 1998a, 1998b) 'Handbook of Qualitative Research' (Denzin and Lincoln, 1994) and 'Constructing Grounded Theory' (Charmaz, 2006) .

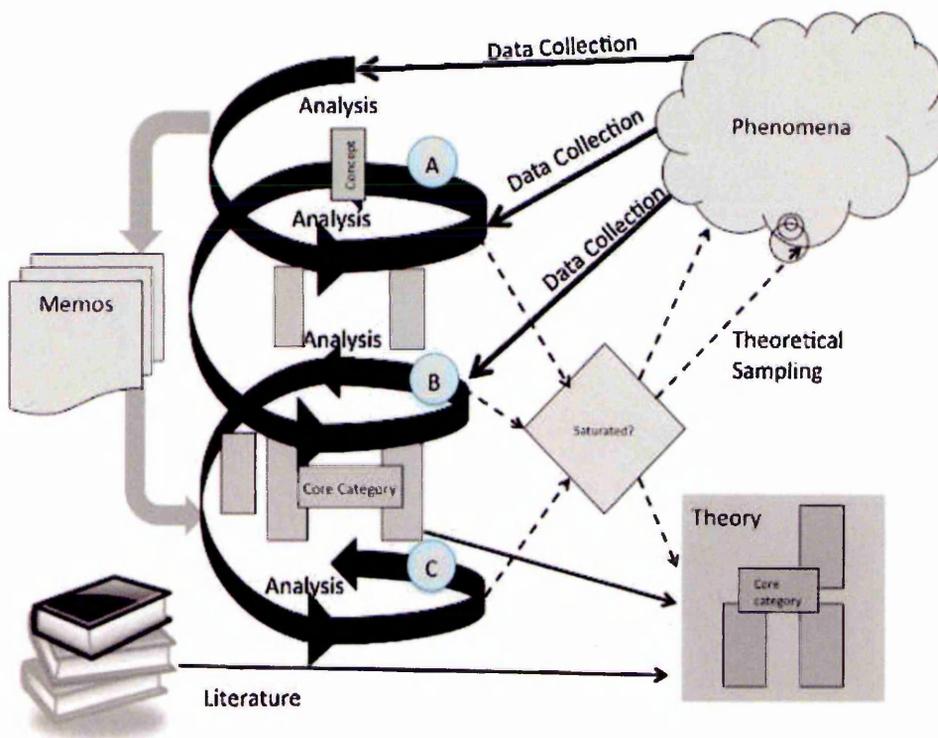
'The Discovery of Grounded Theory' (Glaser and Strauss, 1967) articulates the authors overall research strategy when studying patients dying in hospitals. Their studies were often seen as a response to the dominant quantitative research paradigms of the time.

GTM does not seek to obtain statistical generalisability and its overall aim is to explain and/or predict phenomena based on empirical data. The data collection can use a variety of sources such as interviews, focus groups and observations. However, it can also include other sources such as existing research literature and quantitative data. GTM provides useful guidelines on data collection, analysis (consisting of coding), comparisons between data and how to write memos and theoretical sampling.

### **3.1.2 Data collection and analysis**

GTM allows the use of theoretical sampling where the researcher can explore early on the initial findings. This early analysis allows the development of on-going theories. This allows the data collection and analysis to take place in an

alternating sequence (see Figure 3.1). This is also described as a cycle between induction and deduction which consists of collecting data and the comparisons between the results and new findings which guide further data collection (Strauss and Corbin, 1990). As a consequence the overall development and identification of variables does not take place before the data collection but happens as part of the overall data collection process. Therefore the participants within the study initiate the variables and concepts which are then developed further by the sense making workshop and the researcher and then conceptualised. Data is collected until saturation is achieved and no new relevant data emerges regarding the categories and their relationships (Strauss and Corbin, 1998b).



**Figure 3.1: Steps in developing grounded theory (Adolph Hall and Kruchten, 2011)**

Focus groups and interviews (if chosen) should give as little guidance as possible to allow the participants to talk about what is important to them regarding the chosen context. The researcher should then extract the significant

phenomena and experiences by assigning a particular code (or label) and then grouped into more abstract categories which will form the basis of developing a theory.

### **3.1.3 Coding focus groups as part of the analytical process**

Focus group coding is used to capture what is in the focus group data to make sense of their experiences and then act on them. The coding is the first step of the analysis which then helps move away from specific statements to a more abstract interpretation (Charmaz, 2006).

GTM advocates using several different coding procedures/techniques to help examine the participants accounts at different levels. 'Open coding' which is also known as line by line coding helps provide a very good starting point and helps identify initial phenomena which provides a list of themes which are considered important. Labels are then attached to almost every line in the transcripts to capture the key areas discussed. These labels are very close to the discussion context and when taken from the participants own words are known as 'in vivo codes'. Codes are then assigned to the participants own words and statements which then become the start of the analytical process.

This detailed and meticulous process of line by line coding helps open up the text which allows a greater interpretation of the transcribes in a new and unfamiliar way which helps test the researchers overall assumptions. Strauss and Corbin (1998b) provide further guidance on how this could be done and suggest that the researcher could use sensitising questions to help them identify what the data might be indicating. Questions such as "Who are the actors involved?", "What are the actors definitions of these phenomena or situation?" (Strauss and Corbin, 1998b, p77-78).

The next coding phase is called 'focused coding' or sometimes called 'selective coding'. Focus coding is often applied to several lines or paragraphs in the transcripts where the researcher applies the most telling code to represent the participant's voice or discussion. Open codes are often the starting point and

then focused codes help verify the adequacy of the initial concepts developed and therefore 'tested'.

Another phase of coding is called 'axial coding' where Strauss and Corbin state this is "the act of relating categories to subcategories along the lines of their properties and dimensions" (Strauss and Corbin, 1998b, p123). Axial coding aims are to add depth and structure to existing categories. Charmaz (2006) argues that axial coding helps reassemble data which has been broken up by line by line coding. Strauss and Corbin (1998b) argue that 'axial coding' helps them investigate condition and or situations described in the focus groups or in the interview, their actions and consequences. Charmaz (2006) believes that axial coding is far too rigid and recommends a far less formal approach is needed which involves reflecting on categories and sub categories and establishing links to make sense of the data. Theoretical coding is one of the most abstract forms of coding which explores the relationships established between the categories. Glaser (1978) puts forward several rules on analytic coding families to help develop advanced analysis of the subject matter.

#### **3.1.4 Developing categories**

The general process of how to code and develop a theory can be seen in Figure 3.1 above. Once several transcripts have been coded the researcher can identify issues which seem important to the participants. These issues which are often called phenomena are given a code (or label) or as Strauss and Corbin (1998b) might say a 'concept'. These codes or concepts can then be pulled together into abstract categories or which can interlink and build the basis for a theory.

The central categories which sit at the heart of the developed theory will summarise what is happening. The major categories should all relate in some capacity and appear frequently in the data (Strauss and Corbin, 1998b). The development of the codes into clusters in this study are described in more detail in Chapters 4 (Methods) and how 3 dominant areas had been identified in

Chapter 6 (Findings). Charmaz (2006) argues that the codes are the critical link when developing a theory from the data as this connects the empirical reality and the researcher's views. Strauss and Corbin (1998b) argue that codes and categories can have enormous power over the researcher and call this 'analytical power'. It is therefore vital that the researcher does a constant comparison between collected data, codes, categories to help crystallise the ideas of an emerging theory.

### **3.2 Use of grounded theory in this study**

The data collection and analysis in this study followed a cyclical cycle which is very typical in GTM by utilising early findings to help steer on going data collection and analysis (See Figure 3.1).

Phase 1, The data collection phases involved 3 focus groups comprising of 4-6 individuals who were all volunteers that discussed their experiences of learning and knowledge (See Appendix A, Participants Information). Each focus group was recorded using a Dictaphone in preparation for further analysis and summary. Selective transcribes were then produced (removing sensitive and or personal information) to produce meta-narratives ready for Phase 2. The researcher briefly sampled the transcripts in preparation for an evolving theory.

Phase 2, Involved a sense making workshop which comprised of 5 individuals who were all volunteers from the original 3 focus groups who helped make sense of the experiences of the focus groups using the meta-narrative. The sense making workshop helped identify 134 raw codes following guidance from the researcher (See Appendix B, Grounded Theory Open Coding).

Phase 3, Involved a group of 5 individuals who helped produce 7 loose conceptual clusters. Once again this was recorded using a Dictaphone and transcribed ready for the researcher to further develop categories.

Phase 4, The researcher kept exploring the transcripts until no new categories emerged.

Phase 5, Finally the researcher grounded the emergent theory where 3 dominant properties were identified through work engagement. The properties were 'Collectives', 'Nonlinear' and 'Diversity'. However, there were no clear defining lines and each impacted on the other. The general process has been simplified in Figure 3.2 and 3.3 below.

Table 3.2: Data collection and analysis phase

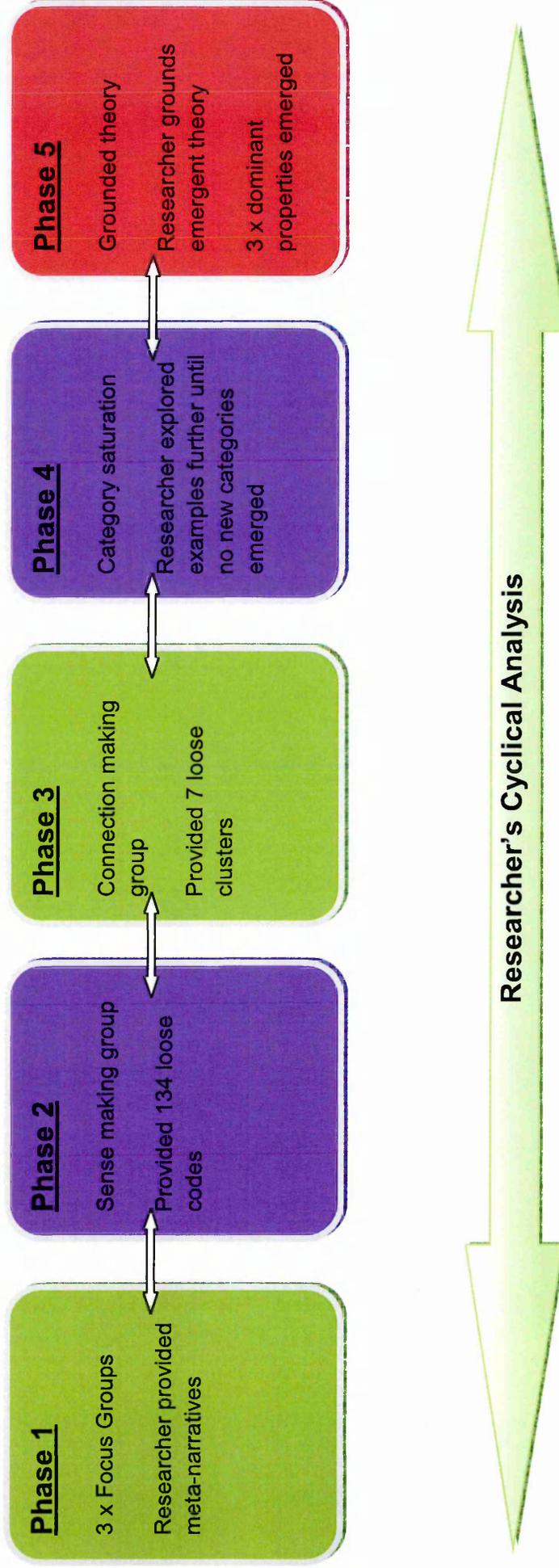
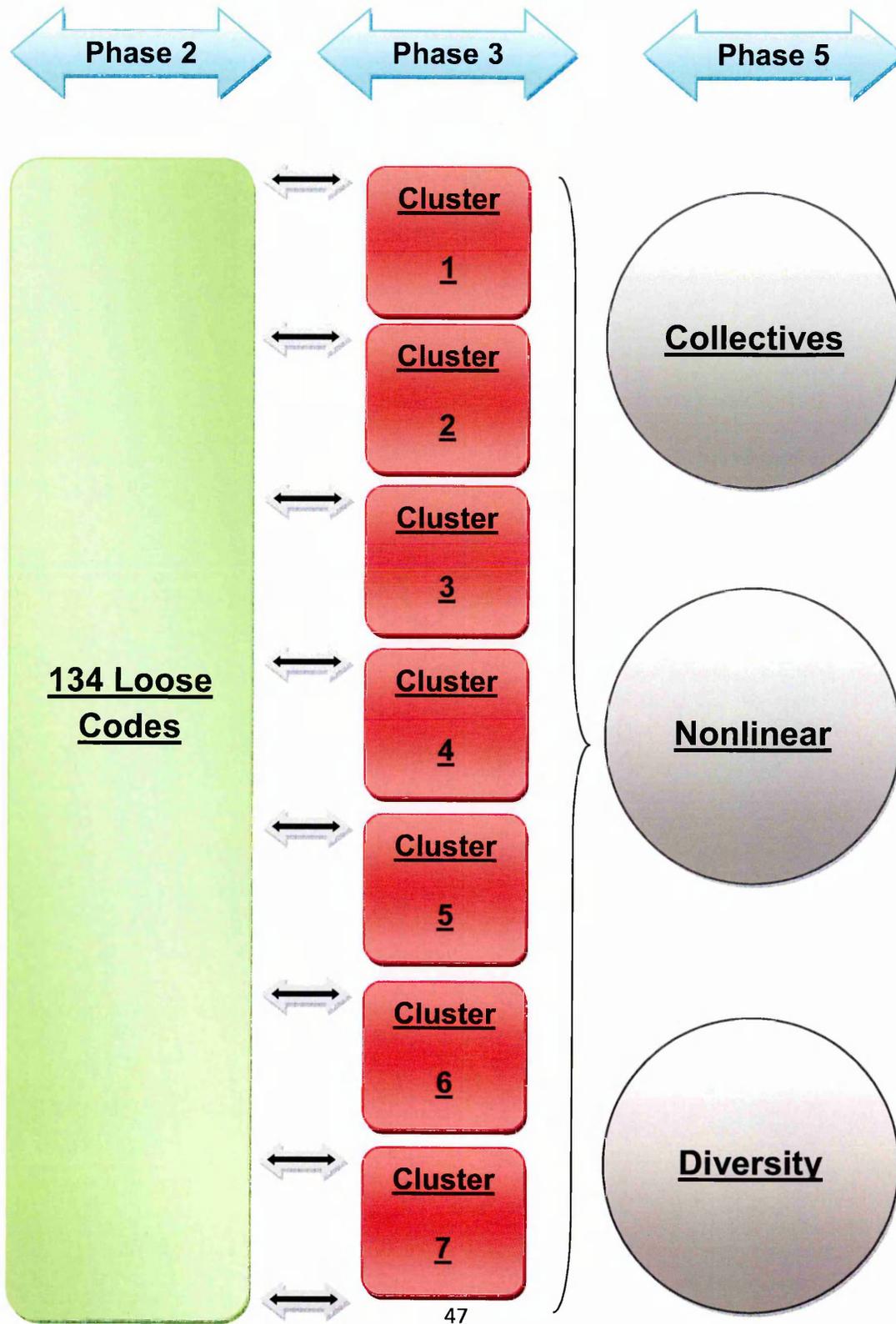


Table 3.3: Data collection outcomes



The researcher's decision to use GTM was done after working within the same organisation researched as a Human Resource Manager overseeing all HR activities for many years. The researcher wanted to dismiss existing theoretical models and ideas and wanted to explore the subject through the participant's eyes. The decision to use GTM was further supported by the lack of existing empirical data regarding the relationship between learning and knowledge in organisations.

Scholars have different views about when is the most suitable time to review the literature. Glaser (1978) argues that the literature should be accessed after the findings have been concluded so as not to influence the researcher's preconceived ideas. However, others argue that this is not possible. This study, however, followed the advice of Charmaz (2006) who states one should carry out an initial review and "...engage the leading works whether or not they support your grounded theory and show points of divergence as well as convergence. Think about showing how your work transcends specific work later in the conclusions" (Charmaz, 2006, p168).

Whilst it is clearly important to satisfy university research requirements, it is also important when contributing to new knowledge to push the boundaries and consider new ways of thinking. This research applied GTM and Complexity Theory to allow a unique approach to data collection and its analysis with a view of moving away from some of the more mechanistic ways of thinking. Once again Charmaz (2006) sums these ideas up nicely, which is applicable to this research, when she states, "think beyond the immediate substantive area to make connections with other areas. Make the most of your innovative analytical contributions. Also take the opportunity to contribute to a fresh topic, study a new group of research participants, or create new innovative methods" (Charmaz, 2006, p168).

### **3.2.1 Substantive and formal theory**

Grounded theory is directly related to the data which has been generated and is therefore grounded in the data. However, there are two types of theory which are substantive and formal. Substantive theories aim to provide a theoretical interpretation of a particular area. This could be a type of theory which aims to explain and manage a problem or problems within a specific setting. Formal theories are more abstract and deal with more generic issues which can be applied to a wide range of concerns and/or problems (Strauss and Corbin, 1998b). A good example of this is where a substantive theory might deal with a very limited area such as family relationships or professional education; whereas a formal theory might look at a culture and its construction and the development of ideologies (Glaser, 1994, Charmaz, 2006). However, a formal theory can cut across or even relate to substantive theories and Charmaz (2006) argues that most grounded theories are substantive as they will focus on a particular area or problem in a specific setting or substantive area.

It would be fair to say that this study developed a substantive theory as the collection of the data and how this has been interpreted focuses on a particular area. However, at the same time some might argue that many of the areas discussed are fairly abstract and provide a more theoretical dealing of generic issues faced by organisations today.

### **3.2.2 Writing memos**

The entire process of developing codes and categories was supported by the writing of memos. In short memos are notes which help the researcher have a record of thoughts and ideas. These notes help the researcher reflect on the collected data and codes. The initial thinking is often thought of as high relevance and that is why it is important to write the memo immediately when reading and coding the focus groups. At later stages in the research these initial thoughts are then recorded and can be revisited and reflected upon for the analysis. In addition these memos can be used to add deeper meaning from the

relevant statements to help compare, philosophise between each other and the literature.

### 3.2.3 Grounded theory criteria

Charmaz (2006, p182) provides some very useful information on what grounded theory studies should aim for:

- Credibility
  - Are there strong links between gathered data and arguments?
  - Are data sufficient to meet claims?
  - Do categories offer a wide range of empirical observations?
  - Has the research provided enough evidence for the researchers claims to allow the reader to for an independent assessment?
- Originality
  - Do categories offer new insights?
  - What is the social and theoretical significance of this work?
  - How does grounded theory extend or refine current ideas and practices?
- Resonance
  - Do categories portray fullness of the studied experience?
  - Does grounded theory make sense to participants?
  - Does analysis offer them deeper insights about their lives and worlds?
- Usefulness
  - Can the analysis help further research in other areas?
  - How does the work contribute to knowledge?
  - Does the analysis offer interpretations that people can use in the everyday lives?

Chapter 9 (Discussions and implications) and Chapter 10 (Conclusion) discuss these areas in greater detail and how it has implications for business which is

more specific for this study, a Doctorate in Business Administration (DBA) rather than that of a Philosophy Doctorate (PHD).

### **3.2.4 Objectivist and constructivist approach**

Since the 1960's GTM has evolved, particularly the writings of Glaser (1967, 1978), Strauss and Corbin (1990, 1998a, 1998b) and Charmaz (2000, 2006) who have all been very influential in the development of GTM. The original work of Glaser and Strauss in 1967 'The Discovery of Grounded Theory' argue that the researcher should start the research with a blank mind or without reviewing the existing literature so the research is truly inductive. As a consequence the theories are built from observations and based that the theory is within the data and needs to be dug up or discovered. Following this perception it assumes that everyone will see and understand the data from the same point of view making the same observation and coming to the same or very similar conclusions. The researcher is expected to take a very passive stance and allow the data to emerge which can be a characteristic of an objectivist or positivist paradigm (Bryant and Charmaz, 2010). The alternative view is called the constructivist or interpretivist view. Kathy Charmaz is an advocate of constructivist grounded theory methodology particularly in her book called 'Constructed Grounded Theory' (Charmaz, 2006). This approach highlights the research participant's experiences and how they construct their views of reality. Therefore, knowledge and grounded theory are constructed by the researcher and the researched with an aim of interpreting the empirical evidence within a specific research context.

The disagreement between the two authors of 'The Discovery of Grounded Theory' occurred in the 1980's where Glaser (1992) proposed his understanding of grounded theory methodology. Strauss and Corbin developed a different view on grounded theory (Corbin and Strauss, 1990 and Strauss and Corbin, 1998b). The major differences are that Glaser argues that 'data emerges' and forms the same factual picture to every researcher in the form of objective truth. Strauss on the other hand argues that the researcher has to actively pursue theory from the data. Therefore the researcher will probably

focus on different areas of the collected data depending on their background, beliefs and values.

Charmaz (2000) argues that both Glaser and Strauss take a very positivistic approach to GTM as they both assume an objective external reality. Charmaz argues that her constructivist approach to GTM assumes numerous social realities. She goes on and states that theories are not discovered and believes that the studied world needs to be depicted in an interpretive way as the interviewee and researcher are embarking on a construction of reality (Charmaz, 2006).

This study has been inspired by many different writers but in particular by the work of Strauss and Corbin and Charmaz interpretation of grounded theory. Glaser's stance of an objective reality that is neutral is rejected by this researcher particularly regarding the intangible and personal subjects areas.

### **3.2.5 Grounded theory limitations**

As with any research methodology grounded theory has its limitations. There are some who state that grounded theory is very complex and time consuming and the process of coding and memo writing are very tedious as part of the analysis (Bartlett and Payne, 2001). This study used the sense making workshop to help with some of the coding in Phase 2 of the methods. Some criticism of grounded theory is that the entire process is very subjective and relies on the researcher's ability. In an attempt to address such criticism the sense making workshop was used to help identify a consensus on the raw codes that emerged and then clustered. This study followed the work of Charmaz (2006) and Strauss and Corbin (1990, 1998a and 1998b) to help gather and analyse the focus groups data. In addition the researcher used initial findings when transcripts were briefly sampled (Phase 1) to help strengthen the findings to fulfil the GTM as described earlier.

### **3.2.6 Ethical considerations**

The participants within this study were all volunteers and this was done due to the sensitive nature of the discussions. The chosen organisation researched was one that was going through significant changes due to the current financial restraints being placed on Awarding Bodies. Prior to the research being conducted the researcher held the position of Senior HR Manager and where strong respectful and confidential bonds had been established. The study was guided by the ethical principles of Sheffield Hallam University (2011-13) and at no time was confidential and/or sensitive information placed in the transcripts or the finished thesis.

Chapter 4 (Methods) provides the processes involved and the selection of the population in more detail.

### **3.3 Chapter conclusion**

The methodology which was developed for this research has a mixture of recognised methodologies. Although, complexity theory did not play a large part in this methodology, the researcher wanted to remain flexible to allow the emergence of new phenomena.

Grounded theory is a methodology which aims to construct a theory about issues of importance in peoples' lives (Glaser & Strauss, 1967; Strauss & Corbin, 1998a). It does this by collecting data which is often described as inductive in nature (Morse, 2001), where the researcher has no ideas to prove or disprove. Instead any issues which are considered important to the participants will emerge out of the stories they talk about of interest and share with the researcher.

As briefly discussed earlier grounded theory is very much grounded in the data that is collected rather than a theory which is generated from logical deduction (Strauss and Corbin, 1998a, Charmaz, 2006). It is often argued that this approach provides more useful hypotheses to take place rather than inductively

developed hypotheses. However, others argue against this approach and state, it is “impossible to start with pure observation, that is, without anything in the nature of a theory” (Sturman, 1999, p104). “It is impossible to do research in a conceptual vacuum” (Ragin, 1992, p5). However, Strauss and Corbin (1998a, p178) suggest that adaptation of grounded theory will/could include its combination with other methodologies.

Grounded theory allows the researcher to interact with the data and allow the emergence of phenomena. It also allows the interaction between data and themes that emerge from the study and then allows the interaction between these themes and other data. These complex interactions and the developing theories which emerge from the constant checking and rechecking result in a complex web of interlinking concepts all informed by each other.

Complexity theory focuses on the emergence of new phenomena from the interactivity of agents, which seems to suggest a similarity with grounded theory. There is little doubt that complexity theory throws out a teleological approach which has discreet and defined steps for a definite outcome. In its place complexity demands that the researcher should always look at the connections within these interactive systems which focuses on the emergence of phenomena from the interconnections of these components. The fundamental principles relating to complexity are also accepted in a grounded approach to research. In this research there is little doubt that complexity has had an influence in the research design, although on a much lesser scale than GTM.

Discussions on Grounded theory often highlight the importance of following the early work from Glaser and Strauss (1967). However, this is often the more purists' view of grounded theory which promotes stringent prescriptions for qualitative research. However, a more modern perspective of grounded theory frames grounded theory as a “way of thinking about and studying social reality” (Strauss and Corbin, 1998b, p4). This helps many researchers as this allows “...much latitude for ingenuity” rather than having a strict set of rules which must

be followed. However, what is not so flexible and arguably essential when having a grounded approach is that "...procedures of making comparisons, asking questions, and sampling based on evolving theoretical concepts" (Strauss and Corbin, 1998b, p46). The constructionist stance of this research is similar to the ideas of Charmaz (2000, p53) grounded theory methodology which fosters that the "...development of qualitative traditions through experiences of the people who actually live it". It is these ideas and ways of thinking which has inspired the research to have a slightly hybrid approach in my methodology which allows the researcher to have a more emergent set of findings as the study progresses. The research that has been undertaken is designed to allow the data to be collected in its natural setting and to get "...in deep" (Schostak, 2002, p75) and allow solid interpretations from "lived experiences" (Denzin and Lincoln, 1998, p91).

It is not uncommon for researchers to share an affinity with different philosophical perspectives and the grounded theory approach that is sensitive to complexity theory will be applied in this research. What is important is the emergence of phenomena and that grounded theory should be used as "way of thinking about and studying social reality". This leans towards a more relativist ontology where there is no absolute truth or validity, having only relative, subjective value according to differences and perception (Strauss and Corbin, 1998b, p4).

## Chapter 4

### 4.1 Methods

This chapter aims to provide some of the aims and objectives of this research and the processes involved in the methods and the selection of the population and organisation. The chapter will also explain some of the tools and techniques used and justify the selection. It will progress and explain the actual processes of gathering and making sense of experiences through the narrative. In addition, the flexibility of the entire process and how it responds to developments in the research as it gradually unfolds will be highlighted.

#### 4.1.1 Overview of method

20 Individuals from a leading Awarding Body in the UK worked in 3 focus groups and shared their experiences around learning and knowledge (See Appendix A, Participants Information). Following that, 5 participants who were involved in the original focus groups worked with the researcher to help analyse the main themes that emerged from their stories (See Appendix B, Grounded Theory Open Coding).

The table below helps to summarise the method.

**Table 4.1 Data collection and analysis**

Activity	Phase 1 Focus groups x 3	Phase 2 Sense making and category development (Group)	Phase 3 Connection making (Group)	Phase 4 Category saturation and theoretical sampling	Phase 5 Grounding the theory
Participant involvement	Three groups of four to six individuals help share their stories relating to experiences of learning and knowledge in their organisation	A group of five volunteers who were in the original three groups, use meta-narratives to make sense of experiences drawn out of the focus groups. The researcher helps facilitate the discussions to help draw out some of the main themes in group and develop categories	A group of five then cluster categories into conceptual clusters		
Researchers tasks	Recordings were made using a Dictaphone of their interaction in preparation for further analysis and summary  Transcribes (selectively) the narrative for analysis and from these records meta-narrative for group in phase 2  Briefly sample transcripts in preparation of developing an evolving theory	Recordings were made using a Dictaphone for further analysis and summary  Transcribes (selectively) group discussion for analysis in phase 3	Recordings were made using a Dictaphone for further analysis and summary  Identifies comparables between group categories and their complexities. Develops definitions of these properties and categories  Group memos were then added to those collected through open coding  Further selects narratives to test and further develop categories for phase 4	Keeps exploring examples in the transcripts until no new categories emerge	The researcher finally grounds emergent theory through validation against the text

## Phase 1

### 4.2 Focus groups

The three workshops consisting of one to two hours and were conducted between July 2011 and August 2011. The researcher made contact with the organisation through the Office Manager and the HR Officer who made available the individuals in work time. The individuals were all volunteers and were all very excited about taking part in this research.

Before each workshop, volunteers were given an information sheet explaining the purpose of the research and their role as a participant (See Appendix A, Participants Information). All volunteers had the researchers personal contact details and were promised full anonymity before each workshop. Each group discussed any ethical considerations that may occur before full agreement was obtained and before proceeding any further.

Each workshop had between four and six individuals and each session was recorded using a Dictaphone. The researcher took very few notes in the workshops and focused on the interaction of the group and their stories.

At the beginning of each workshop the participants were reminded of the purpose and process of the research. The researcher then explained that the words used in the research questions should be interpreted in the broadest sense. The researcher referred to notes to make sure the participants were using terms such as 'learning' and 'organisational knowledge' in the broadest sense and reminded the participants that they should not feel limited with their understanding of the term or terms in their discussions.

This allowed the participants to use their own interpretations and not be fixed to any particular context. This approach allowed the participants to construct a socially mediated understanding through their own stories and discussions which helped them apply word meanings (this is discussed further in the findings).

During the workshops the researcher helped probe the participants in sharing their stories and experiences and how these might relate to one and another. The researcher did not share his own stories or experiences in the group workshops. However, the participants very quickly started to develop stories about their experiences, where they started to find similarities and/or differences.

The researcher transcribed each workshop; however, identifying characteristics were removed (specific workplace terms and sensitive information). Once this was completed it was forwarded to an allocated representative of that workshop for their approval and accuracy.

## **Phase 2**

### **4.2.1 Sense making and category development (Group)**

The group was drawn from the three focus groups previously and included five participants and met in September 2011 to work with the meta-narratives (See Appendix A, Participants information). The group started questioning the narrative to develop emerging themes and categories which involved detailed discussions (Discussed in Chapter 3).

The aim of this phase was to start breaking down the narratives in an attempt to look closely at some of the underlying concepts to examine stories and themes. In other words this is an attempt to uncover, name and develop concepts but where at first you must open up the text and expose the thoughts and any ideas and/or meanings contained within (Strauss and Corbin, 1998b).

The researcher then gave guidance to the group on coding and the grounded theory methodology and provided them with a meta-narrative and asked them to read the document in full (See Appendix B, Grounded Theory Open Coding).

Following completion of the reading the group was asked to start coding which was facilitated by the researcher. Strauss and Corbin (1998b, p99-105) did

provide some guidance in this area and propose using a single passage of transcript to illustrate the method (which we did). As part of this exercise participants worked as a group and went through the documents line by line and word by word to develop codes, asking questions like, 'What is this person really saying here?' 'What is happening here?' 'What are the underlying concepts?' 'How does this relate to what is being discussed?' in an attempt to investigate the text. The participants were given flexibility in choosing their own words in the development of codes (Glaser and Strauss, 1967).

When these codes were being identified they were written on post it notes and placed on a wall. It was not long until the participants started producing codes and discussions such as "that is similar to the other discussion" and codes emerged such as 'pace of learning' 'supportive environment' and 'open minded'. Very quickly participants were making links between narratives and codes illustrating their iterative development.

The group continued with this exercise for many hours and with great excitement identifying numerous codes as their ideas emerged into discussions whilst the researcher continued to record codes and place these on the wall.

After working with all three workshops, the codes from the text started to slow down and at completion the group had identified 134 raw codes.

**Table 4.1 Codes developed in workshop**

- |                                       |                                  |
|---------------------------------------|----------------------------------|
| 1. 360 Degree Feedback                | 69. Ideas                        |
| 2. Acceptance                         | 70. Influence                    |
| 3. Accountability                     | 71. Informal                     |
| 4. Active participants                | 72. Initiative                   |
| 5. Adaptive                           | 73. Inspiration                  |
| 6. Ambitious                          | 74. Interested                   |
| 7. Approachable                       | 75. Language                     |
| 8. Assumptions                        | 76. Learn by doing               |
| 9. Audience                           | 77. Learning styles              |
| 10. Autonomy                          | 78. Learning through experiences |
| 11. Avoidance                         | 79. Legal/law                    |
| 12. Bad habits                        | 80. Limitation/resources         |
| 13. Balance                           | 81. Management style             |
| 14. Barriers                          | 82. Modesty                      |
| 15. Behaviours                        | 83. Momentum                     |
| 16. Beneficial                        | 84. Morals                       |
| 17. Blame culture                     | 85. Motivation                   |
| 18. Body language                     | 86. Notes                        |
| 19. Boundaries                        | 87. Observation                  |
| 20. Buddying                          | 88. Open minded                  |
| 21. Bulletin                          | 89. Pace of learning             |
| 22. Capabilities                      | 90. Passion                      |
| 23. Case studies                      | 91. People interaction           |
| 24. Challenging                       | 92. Physical space               |
| 25. Character                         | 93. Politics                     |
| 26. Clarity                           | 94. Power                        |
| 27. Coaching and mentoring            | 95. Practical application        |
| 28. Commitment                        | 96. Prejudices                   |
| 29. Communication (formal)            | 97. Pressure                     |
| 30. Communication (informal)          | 98. Proactive                    |
| 31. Communications                    | 99. Procedures                   |
| 32. Competence                        | 100. Progress                    |
| 33. Competition                       | 101. Qualifications              |
| 34. Complexity                        | 102. Quality                     |
| 35. Confidence                        | 103. Question                    |
| 36. Conflicting perspectives (hinder) | 104. Realistic                   |
| 37. Consistent                        | 105. Recognise                   |
| 38. Context                           | 106. Relevant                    |
| 39. Conversation                      | 107. Religion/belief             |
| 40. Creativity                        | 108. Repetition                  |
| 41. Culture                           | 109. Research                    |
| 42. Current                           | 110. Resistance                  |

43. Denial
44. Determination
45. Direction
46. Diversity
47. Documents
48. Duration
49. Electronic systems
50. Empathy
51. Emphasis
52. Enjoyment/humour/interactive
53. Evaluation
54. Excuses
55. Experience
56. Exposure
57. External parties
58. Fair and Transparent
59. Fear
60. Feedback
61. Feelings
62. Fitness
63. Formal training
64. Generation gap
65. Ground rules
66. Hand holding
67. Hierarchy
68. Honesty
111. Respect
112. Responsibility
113. Responsive
114. Rhetoric
115. Risk
116. Secrecy
117. Self-classification (humble)
118. Sharing
119. Sincerity
120. Standards
121. Stereotypes
122. Structure
123. Supportive environment
124. Technology
125. Theory
126. Theory/practical application
127. Thinking outside of the box
128. Time management
129. Trust
130. Understanding
131. Validate
132. Value
133. Variety of sources
134. Vigilant

### Phase 3

#### 4.2.2 Grouping codes

The participants now moved to a discussion on the relationship of these codes. They then moved to grouping the codes instead of naming the categories and the researcher worked with the participants in gathering these codes following their instructions. However, the group often disagreed on placing the codes into groups but they negotiated a consensus and continued to place the codes into relevant clusters. Gathering these clusters often involved discussions like,

Researcher	“Maybe it had something to do with that last discussion when we couldn’t agree”?
Participant 1	“Yes it is because of the bureaucracy”
Researcher	“But how does that link to learning”?
Participant 3	“That’s the point it belongs over there”
Participant 2	“Here”?
Participant 4	“No, over there”
Participant 1	“Ok here. Do we agree”?
All participants	“YES”

The participants continued this process of clustering with no intention of naming the clusters but simply placing them into loosely gathered themes and concepts into relevant groups.

Following this process seven clusters emerged which were:

## Loose Clusters

1. Practical application, Theory/practical application, Time management, Learn by doing, Experience, Qualification, Buddying, Procedures, Evaluation, Feedback, Documents, Research, Notes, Bulletin, Case Studies, Theory, Validate, Relevant, Context, Informal, Repetition, Duration, Exposure.
2. Capabilities, Management style, Coaching and mentoring, Learning styles, Limitation/resources, Formal training, Responsive, Vigilant, Technology, Language, Current, Variety of sources, Standards, Legal/law, Quality, learning through experience, Active participants, Electronic systems, People interaction, Observations, Consistent, Momentum, Emphasis, Realistic, Pace of learning.
3. Diversity, Morals, Religion/belief, Understanding, Behaviours, Feelings, Respect, Acceptance, Empathy, Prejudices, Ground rules, Character, Recognise, Balance, Audience, self-classification (humble).
4. Open minded, Sharing, Progress, Interested, Motivation, Ambitious, Ideas, Proactive, Passion, Adaptive, Creativity, Direction, Autonomy, Thinking outside of the box, Question.
5. Hierarchy, Structure, Politics, Power, Fear, Resistance, Secrecy, Clarity, Fitness, Physical Space, Communications (formal), Communications (informal), Culture, Communications, Supportive environment, Rhetoric, External parties, Enjoyment/humour/interactive.
6. Boundaries, Risk, Barriers, Denial, Excuses, Pressure, Challenging, Competition, Complexity, Assumptions, Bad habits, Conflict, Competence, Blame culture, Avoidance, Stereotypes, Generation gaps, Hand holding.
7. Trust, Sincerity, Honesty, Approachable, Fair and transparent, Modesty, Value, Inspiration, Conversation, Commitment, Responsibility,

Confidence, 360 degree feedback, Accountability, Initiative, Influence, Determination, Body language, Beneficial.

Once again this session was recorded using a Dictaphone and transcribed to obtain the participants review and confirmation.

#### **Phase 4**

##### **4.2.3 Category saturation and theoretical sampling**

Traditionally, using the grounded theory approach the researcher would return to the site and collect additional data to refine the codes. However, the researcher did sample some of the full narrative transcripts in preparation for developing an evolving theory. The value of sampling previously collected data reveals a lot to the researcher as their sensitivity to the relevant concepts grow (Strauss and Corbin, 1998b). As a consequence the narratives gave the researcher more effective techniques and opportunities through further sampling the categories to reach saturation.

The researcher analysed the transcripts from the three focus groups and the sense making workshop transcripts and applied new codes to the sense making codes as new concepts emerged or as a number of concepts merged. During this coding process the researcher made numerous memos in the text to highlight any emergent themes and underline any new insights. In addition, the researcher made memos to any references in the literature and also made references to other stories that were in the text. All these memos were coded for future cross referencing.

The group development codes were extremely important for the researchers understanding of the narratives. The researcher reflected heavily on the participants understanding and justification of these codes which helped with further analysis especially between the codes and categories. Reflecting on the participants coding and what they were discussing when they were conducting this process has made the codes much richer. This process has given a much

deeper connection between the relevant concepts and the categories in the narrative.

The grouping which was developed in the sense making workshops which seemed to work very organically and the researcher worked with these ideas further to define their boundaries and property dimensions. The category development emerged from the stories and discussions between the participants where the researcher worked with these ideas further, identifying themes that emerged from the data. This entire process allowed the researcher to keep exploring until no more categories could emerge.

## **Phase 5**

### **4.3 Chapter conclusion (Grounding the theory)**

The entire process was never linear and the researcher continuously moved between the data coding and categorisation. As the researcher spent more time in the stories and the literature the more theories developed and adjusted in response to the data. The entire process of comparison and connection continued until connections held firm and theories emerged.

Strauss and Corbin (1990, p214) explain this nicely when they say “sampling often continues right into the writing because it is often at these times when the person discovers certain categories are not fully developed”. This research followed a very similar journey and the process of sampling data and developing new theories will no doubt continue right up to the end of this research.

## Chapter 5

### 5.1 Introduction to findings

The aim of this chapter is to introduce the findings of the research. This will be a brief introduction looking at the ways the participants have constructed meaning around the words, *learning* and *knowledge* and related phrases. The idea here is that participant's use of terms will help ground the findings and discussions, from the participants own meaning. In the introduction to findings there is some consideration to how the participants are defining terms and a brief discussion with the literature will be progressed.

Within the introduction to findings and the findings chapters the narratives and prose are presented alongside each other. The idea of this approach is to help demonstrate participant's experiences in a more coherent way.

How the participants make sense of the terms *learning* and *knowledge* is one of the most important factors in this research. At no point were the participants given definitions on *learning* and *knowledge* (as demonstrated in the Methods chapter) instead the participants were asked to use these terms in the 'broadest sense'. The aim of this research was to gain some understanding of how the groups constructed meanings around the words.

It was this representation that adds depth to the research as it allows the researcher to gain a much better insight and analysis through participant understanding of the words and connected phrases as they emerge from the narrative.

The following paragraphs identify some of the key themes that emerged in the participant discussions about learning and knowledge in their organisation. This is done with some references to the definitions in the literature and in conjunction with the participant's own definitions which help frame this study use of terms in the analysis and discussions. Although definitions varied there were strong themes that emerged and these are represented below.

## 5.2 Learning

The participants in this research seem to suggest that learning is often related to problem solving within a complex situation at work. Learning is seen as a participative exercise and emerges naturally individually and collectively.

Participants made reference to this in their discussions and used examples to illustrate how learning emerged naturally through engagement at work and the pursuit of the individual.

*1.3 "I do like having procedures if I do something new, I do like to have something I like to follow as I'm not very good... [Although] I have probably done it, I think about what I have learnt here. I have probably learnt a lot by just doing it and not even being shown on the systems and things. We have had new systems introduced by XXXXXX [referring to one of the eleven regions they oversee] we have just had to work out how to use them, as their process and their guide is not always helpful. So you do have to try and find a 'work through' yourself but I do quite like a step by step guide but I have had the experience of saying, well I'm not quite sure what this document means and you do have to work it out yourself".*

The literature makes reference to the importance of learning occurring naturally through engagement at work (Field, 2004; Fenwick and Tennant, 2004). Learning through work seems to be one of the most effective ways of learning (Oval, 2003, p7).

In addition to this, the participants talked about learning, which often involved the interaction with difficult customers and how this diversification from their normal job role has helped them learn new things.

Learning from mistakes was also discussed (briefly) as a result of trial and error and was an issue that was rarely discussed openly in the office. These issues seemed to be occurring when participants were afraid of highlighting their uncertainties in certain circumstances for fear of reprisals from the organisation.

This discussion occurred when a junior staff member (below) had to hand over a process to a senior manager.

*1.1 "...I had read through it and it all seemed fine to me. However, there were little bits that were not in there but I would only know because I am that used to doing it. It didn't appear to me when until she said I don't understand what this means and then I realised yes this was something very recent I have added in myself that nobody else would have known about and if I had left; [it out] yes, they would have picked it up and run through with it but it would have taken longer".*

The participant (above) was referring to the complex nature of her work and how her new manager wanted specific details about a procedure and she felt she had made a mistake by not making it clear enough.

The participants also discussed the importance of positive role models and how learning had progressed, working with and from others at work.

*1.2 "She was just this old woman and ready for retiring and had really old ways and I think her ways made me better at my job. She obviously didn't have any qualifications but had been there years... But the way she counted money and everything and all the time I was there the van men cashed in their money and I used to cash it in as well whilst also doing the wages. It never once didn't balance in all the years..."*

This participant (above) also highlighted a common concept in the narratives of learning that of 'cognisance learning'. The literature does suggest a relationship between learning, reflection and action and seen as very important in its development (Mezirow, 2000; Daudelin, 2000). This does seem to be the case here where learning and action are clearly tied together with little or no reflection.

This example (below) seems to suggest that learning at work is often done sub consciously which flows and a process that emerges over time.

1.2 *"When I think about how much I have learnt in this job and the job I had before and I have done no qualifications in that work. But you do seem to amass a load of knowledge and you kind of absorb it by doing the work and you kind of..."*

There seems to be little doubt that learning is being discussed often around the interaction with others and/or a particular workplace context or problem. The narratives do not seem to focus on any particular dimension be it cognitive, social, political or behavioural. How the participants construct learning seems to be a plethora of different things coming together which includes group dynamics, inspiration, freedom, energy, innovation and exploration. All these have resulted in both positive and negative outcomes for the organisation but what does occur is that this is done to help improve individual and collective performance, locally.

### **5.2.1 Workplace training**

Despite the fact that the participants were asked to share their experiences around learning and knowledge very few stories emerged around workplace training. What was surprising was when training was discussed particularly to technical skill development; participants were often critical and doubted its effectiveness in dealing with the 'real world'.

1.1 *"...I had watched him do it and picked it up. I actually learnt more that way than sat going through bullet points with somebody. That was because I had actually sat and watched him do it. So I think that learning in some ways is actually doing it rather than just being told about it".*

When the researcher prompted the participants and asked "whether you would have learnt the same or similar through a formal training session"? The participant responded by saying;

3.1 *"...I think because I was actually in the work environment and watching a colleague do it I could see how it applied straight away to that business rather than trying to apply it from*

*words. I think it helps having training/qualification but it's not the be all and end all. I think experience and watching someone doing it and then doing it is just as important".*

When the participants were using the term 'training' they seemed to reflect a much narrower and/or discrete form of learning that was often stripped down, which was often based on others interpretation of what may be needed in that working environment.

### **5.2.2 Organisational learning**

The term organisational learning was not raised directly in any of the workshops but when the sense making workshop tried to link the relationship between individual and organisational learning, they came up with the following.

*1.1 "It's like when your fore fathers did something in this way. It can be hard to explain why and how and it comes down to the thing you can and cannot explain in practice. I keep going back to the context of learning whether that is theory or practical. For me the clash came when they described more theoretical and workshops seemed more practical and they seemed to get more interaction with people" [Group agree].*

The sense making workshops were struggling with what could be described as some of the tacit and explicit elements of knowledge and its complexity.

### **5.2.3 Knowledge**

These participants often talked about knowledge through their stories which revolved around solutions, ideas and activities. This account follows Nonaka and Takeuchi's (1995) declaration that 'knowledge' revolves around human action. Polyani (1996) takes a similar view that 'knowledge' is very much related to finding a way forward and the recognition of a problem. The narratives also suggest that knowledge is more than just human problem solving, and is much more entangled with the individual, collective and the organisation.

Innovation and ideas are very important in the participants' narratives. This type of knowledge is spoken about from a very personal perspective and clearly owned by the individual.

*3.1 "I like to observe how something is done and then I try and place my own spin on it with the view of improving the idea. I see my knowledge as a combination of tacit and explicit and this comes from study and experience. When I am being innovative I look at my own experiences and skills and how I can use them effectively".*

Participants' also talk more about collectively developed knowledge and how various activities and experiences can help develop solutions.

*3.2 "...getting other peoples perspectives from my colleagues and seeing what they have done in different organisations and how that works on the ground and also consider if there could be any flaws and how they could be eliminated and how this can be improved on and made into a process in the end".*

The discussions developed around knowledge and the word knowledgeable occurred on several occasions when discussing the knowledge of the organisation. The term 'higher' and 'expertise' was used frequently. These discussions highlighted some fascinating concepts around knowledge within modern organisations.

*3.3 "It is important to have someone with higher academic knowledge who is very knowledgeable showing you a theory and then as a group it is important to work through different scenarios and applying some form of context through experiences".*

*2.2 "...It's also interesting when we have discussed the context because it adds so much meaning. Experience and qualifications are equally valid if there was more expertise in an area..."*

It seems that the knowledgeable person is someone who holds knowledge and is able uses this knowledge interactively and applies it.

#### **5.2.4 Collective knowledge**

Some of the most interesting insights to how the participants see learning and knowledge and the levels of ownership is when they discussed some of their frustrations, when knowledge is held collectively or in this case departmentally.

*2.4 "...I think the major problem in our office is that people don't know who they should be communicating with and there is just meeting going left right and centre and some people just get left out of meetings when they should have been there. Then other people get involved and they don't really, it's not part of their job and people are just getting information overload and we need to improve..."*

The discussions about consistency of knowledge and action within this organisation seemed to be related to the level of knowledge ownership. The knowledge within this organisation collectively and individually is assumed to exist and often discussed as working together, however, this individual/collective understanding is not obvious.

#### **5.2.5 Organisational knowledge**

There is no doubt that organisational knowledge is a problematic concept for these participants. Maybe this is because they have some disconnection between local and organisational knowledge. The participants find it difficult to see how knowledge held or developed locally will contribute to the overall organisational knowledge.

There were several examples in the narratives where the participants differentiated between local and organisational knowledge. The comment below provides an example how this discrimination took place.

1.5 *"...this was done in our department and clearly was nothing to do with anyone else and was not organisational knowledge..."*

This example, demonstrates that this participant sees organisational knowledge as something that is shared throughout the organisation and is different from local knowledge which is specific to a team.

The question 'what is organisational knowledge?' has been explored by writers such as Tsoukas and Vladimirou (2001). They describe this as a capability which relies on an individual's ability to make sense of something within a context, which is guided by abstract rules and heavily influenced by experiences and a shared understanding of the group. However, the participants' construction of knowledge and shared understanding of the group does not seem to link with organisational capability as there seems to be difficulties in the broader organisation.

At times the participants did speak of localised knowledge which can be dynamic and emergent. However, when discussing organisational knowledge the participants seemed to be more focused on policies and procedures.

1.3 *"I do like having procedures and if I do something new I do like to have something I like to follow..."*

### **5.2.6 Knowledge flow**

Participants talked about knowledge flow, primarily when they tried to introduce something new in the organisation or even when they wanted to escalate a problem to find shared solutions. The participants found it difficult to identify a consensus around organisational knowledge and knowledge flow; however, the constructions of knowledge flow were often tied around group boundaries and the hierarchy within the organisation.

2.2 *"Recently I have been working on my own mini project and it's only when we all come together with our mini projects that it makes sense as a bigger project and how this all links with the*

*processes and the people [staff] [who] make it work. Without those links no one really has a sense of what they should be really doing and who they should be talking to. You also would not get the appreciation from other departments work and other perspectives if..."*

This participant was highlighting the frustrations around knowledge flow horizontally but expressing their views (subtly) about the difficulties surrounding group boundaries and the hierarchy within the organisation. This participant was highlighting their attempts to facilitate a more effective knowledge flow process up and down the organisation

### **5.2.7 Learning and knowledge constructions**

This section explored how the participants constructed their meaning around the words 'learning' and 'knowledge'. This was done by their shared narratives and their discussion around organisational experiences.

The participants in this study were saying that 'learning' was very much an active process of engagement with others in an attempt to improve work performance and outcomes. The participants also suggested this was not only done for organisational members but anyone else they serve. It seems to suggest a notion which is entwined with innovation and problem solving which emerges naturally and often sub-consciously; a process which is tied to relationship performance and interaction. Participant 1.3 sums this up when she states, *"We have had new systems introduced by XXXXXX [referring to one of the eleven regions they oversee] we have just had to work out how to use them, as their process and their guide is not always helpful. So you do have to try and find a 'work through' yourself but I do quite like a step by step guide but I have had the experience of saying, well I'm not quite sure what this document means and you do have to work it out..."*

Knowledge creation displayed some very interesting themes from the participants and it's sharing in localised environments. What seemed to emerge

was the disconnection at different levels and how this knowledge was often owned locally to help resolve local, complex and often individual problems. Participant 2.3 sums this up nicely when she states, *“...I think the major problem in our office is that people don't know who they should be communicating with and there are just meeting going on left right and centre and some people just get left out of meetings when they should have been there. Then other people get involved and they don't really, it's not part of their job”*.

'Knowledge' to the participants was very much framed in trust, loyalty and effectiveness. Organisational members also highlighted the importance knowledge acquisition in an attempt to maximise performance locally and its transfer and relevant application. Participant 1.2 sums this up nicely when she states *“She was just this old woman and ready for retiring and had really old ways and I think her ways made me better at my job”*.

How the participants defined the terms learning and knowledge and any connecting phrases helps with the overall analysis and findings. This process also contributes to how the narrative themes are categorised.

### **5.2.8 Categories**

As discussed in Chapter 4 (Methods) the categories emerged through group analysis and are intended to be used as a metaphor rather than a specific prescriptor. These categories are intended to be used as building blocks which in turn help provide combinations and/or recombination of any theories that may emerge; *“...the loose ends, the stuff we neither expect or nor can explain, that pushes us towards theoretical breakthroughs”* (Vaughan, 1992, p176).

This analysis was used to help provide new insights that may emerge on the organisation. Holland (1995) describes this as characteristics or properties and mechanisms or processes where the findings are explored which helps to critique the data thoroughly.

### **5.3 Overview of the three findings categories**

The three findings chapters presented combine the experiences, discussions and characteristics of the organisation members relating to learning and knowledge development. The first heading relates to collectives and fitness, the second relates to nonlinear and flow, the third to diversity. Although these characteristics are presented separately they all work together in a complex system of learning and knowledge development. This sharing and issues surrounding the organisation and how this interacts is discussed in later chapters.

#### **5.3.1 Collectives**

Organisational members frequently discussed how the collectives were formed and how knowledge emerged from this interaction and how the collectives try and maintain an element of fitness.

The idea 'Collectives' was first identified by the sense making workshop (though not named) and how the participants try and maintain an element of fitness to remain effective within the organisation. The sense making workshop struggled with some of the dynamics within the organisation and how group members solved problems and developed knowledge within the collective, effectively.

The term collectives is the first stage which helps provide some clarity on the impact of the local collectives and the individual agents as well as their behaviour within that collective. It is this complex understanding which is important and how "...complex agents interact" (Holland, 1995, p11). The term 'Collectives' helps provide a deeper consideration into how the groups interact individually and collectively and how members self-organise. It focuses on the group dynamics and the complex nature of learning and knowledge outcomes.

The term 'Fitness' was developed from the individual and the collectives attempt to meet the needs of the organisation and how they needed to find solutions to

problems they encountered on a daily basis to remain an effective organisational member.

The term 'Collective' included categories such as 'Support', 'Motivation', 'Conflict', 'Trust', 'Fitness', 'Commitment', 'Initiative' and 'Fear of Change'.

Table 5.1 below helps illustrate some of the categories and how this links to the group dynamics.

**Table 5.1 Categories and properties of Collectives**

Category	Property	Description
Self-organisation		
	Support	The commitment of organisational members to collective members and the local collective
	Motivation	Motivation is important to stretch and motivate individuals to maximise collective goals
	Conflict	Individual and collective claim on both individual and collective outcomes
Fitness		
	Trust	Trust was seen as very important for the collective to help resolve workplace problems
	Fitness	Participants highlight how they must remain fit within the organisation to remain competitive in a time of change
	Commitment	Outcomes of the local collective and how they try and maintain their fitness to effectively solve problems
	Initiative	Novel outcomes resulting from collective behaviours
	Fear of Change	Impact on the individual, local collective and organisation when facing change

What related strongly to the local collective was how organisation members identified others with whom they could develop solutions to complex workplace problems with a view of increasing their fitness. The focus groups discussed how they found suitable people within their local collectives and how they created boundaries around their local collective and how they then built a hierarchy.

This was an important concept within the findings and how the participants within the study were unclear about their sphere of inclusion, which was developed further by the sense making workshop. The participants within this study highlighted some very important themes and how the perceptions of its members relating to work had an influence on how they learnt and shared knowledge within their local collectives.

### **5.3.2 Nonlinear**

The 'Nonlinear' activities within this organisation can be seen as the overall inputs and outputs of its members and how they interact with each other within the organisation. These nonlinear activities have a direct impact on the 'Flow' of the organisation through various connections of its organisation members and this could be through information exchange, learning and sharing, innovation and how knowledge is developed or even limiting its access.

The participants in this study frequently discussed how nonlinear activities impacted on the 'flow' of the organisation and how learning often happened at the fringes as a result of trying to find solutions to individual problems and the difficulties faced in sharing this knowledge outside of the local collective. The flow of the organisation was frequently being interrupted by the hierarchy particularly from line managers and the senior management team. In addition participants highlighted that peers in other areas of the organisation would also affect the flow of the organisation.

The discussions within the focus groups highlighted how there was often strong tensions and conflict within the organisation and how this nonlinear activity was having a direct impact on delivering an effective service. In addition, the formal structures and hierarchy within the organisation and the focus on policies and procedures and how organisation members must follow a clear linear path was also causing tension. The nonlinear activities and how this related to learning and knowledge was discussed in terms such as 'real world' and the 'perfect world' and how there is a clear disconnection between the two. Participants

experiences highlight that there are numerous challenges within the organisation about what can actually be delivered in the 'real world' and what the organisation would like to be delivered 'perfect world' and how the organisation has an obsession with command and control which means it cannot be really be delivered .

The term 'Nonlinear' included categories such as 'Experience', 'Adaptive', 'Procedures', 'Clarity', 'Realistic', 'Consistency', 'Hierarchy', 'Management style', 'Exposure', 'Risk', 'Blame culture', 'Rhetoric', 'Recognise', 'Structure', 'Behaviours', and 'Flow of information'.

Table 5.2 below helps illustrate some of the categories and how this links to the group dynamics.

Table 5.2 Categories and properties of Nonlinear activities

Category	Property	Description
<b>Real world</b>		
	<b>Experience</b>	Participants described how their experiences helped them resolve practical problems
	<b>Adaptive</b>	Participants described how they must adapt when dealing with unexpected problems and formal procedures
	<b>Procedures</b>	The strict procedures within the organisation caused various problems and restricted organisational effectiveness
	<b>Clarity</b>	Members described how the lack of clarity in the organisation caused a sense of crisis
<b>Perfect world</b>		
	<b>Realistic</b>	There seemed to be a disconnection with what can be delivered by organisational members and what is expected of them
	<b>Consistency</b>	Organisation requirement for consistent application of policy
	<b>Hierarchy</b>	Hierarchy and control restricted effectiveness of the organisation
<b>Flow</b>		
	<b>Management Style</b>	The extent to which organisational members are allowed to explore
	<b>Exposure</b>	The extent to whether organisational members are allowed some exposure to new situations
	<b>Risk</b>	Participants perceptions of taking risks without breaking organisational rules
	<b>Blame Culture</b>	Repercussions of making mistakes or breaking the rules within the organisation
	<b>Rhetoric</b>	The gap between what the organisation advocates around learning and knowledge and what actually occurs
<b>Disconnection</b>		
	<b>Recognise</b>	The organisation fails to recognise the disconnections
	<b>Structure</b>	The complex structure of the organisation nationally caused frustration when trying to satisfy everyone's needs
	<b>Behaviours</b>	Control over the behaviours and outcomes of organisational members through policies and procedures
	<b>Flow of Information</b>	Information sharing and the difficulties faced locally, organisationally and nationally

### 5.3.3 Diversity

Diversity was less prominent in the discussions but did provide a greater understanding of the makeup of the local collectives and how this impacted on organisational outcomes. This was particularly noticeable when considering the survival of the group in a complex environment and how they tried to be innovative to promote their own survival. The participants shared their stories and how a range of individuals filled niches within the local collectives. The stories helped to identify the dynamic and innovative interactions of its organisation members and the importance of context (Holland, 1995). Participants spoke about the individual and the local collectives and how various input and outputs (models) would impact on their ability to learn and share knowledge. Rhodes and Mackenzie (2003) argue that these models can be a combination of actions, behaviours and decisions taken by people within the organisation and how this can stifle innovation and learning.

Participants subtly highlighted how various memories of previous litigation, held with individuals and the local collectives prevented them from 'letting go' which restricted their flexibility to meet the organisations changing environment. Holland (1995) describes these internal models as building blocks which help develop themes which provide a better understanding of real learning needs. Although diversity was far less prominent in the discussions it was important in helping to identify the complex nature of learning and knowledge and its entanglement. The sense making workshop helped draw out some of the complexities and characteristics around learning and knowledge.

The term 'Diversity' included categories such as 'Culture', 'Balance', 'Acceptance', 'Empathy' and 'Audience'.

Table 5.3 below helps illustrate some of the categories and how this links to group dynamics.

**Table 5.3 Categories and properties of Diversity**

Category	Property	Description
Diversity		
	<b>Culture</b>	Diversity and culture was seen as essential to develop new, novel and innovative ideas
	<b>Balance</b>	Having the correct balance of actions and behaviours that is allowed to challenge contributes effectively to the local collectives
	<b>Acceptance</b>	Accepting mistakes and moving forward is seen as a positive thing
	<b>Empathy</b>	Empathy promotes effective relationship with organisation members and customers
	<b>Audience</b>	As spectators the organisation was very bad at identifying gaps in their knowledge and how to address any shortfalls

#### 5.4 Chapter conclusion

This chapter introduced how the participants in this study constructed their meaning of learning and knowledge within a context for further analysis and discussion. This helped provide greater empirical analysis within a real working environment and will be presented in the following chapters.

The concepts and categories will be utilised to make sense of the findings and in addition a reflexive approach will be employed where both the researcher and researched participants interpret meaning and actions.

“The logical extension of constructivist approach means learning how, when, and to what extent the studied experience is embedded in larger and, often, hidden positions, networks, situations, and relationships. Subsequently differences and distinctions between people become visible as well as the hierarchies of power, communications, and opportunity that maintain perpetuate such differences and distinctions” (Charmaz, 2006, p130).

## Chapter 6

### 6.1 Collectives

The sense making workshop helped provide some insight into how to group the clusters further. Although this was never clear and easy to define it did seem that three dominant properties emerged.

The three dominant properties that emerged were 'Collectives' and how localised learning and knowledge sharing seemed to occur through work engagement. 'Nonlinear' which considers some of the complexities that surrounded organisational knowledge and how it was developed. 'Diversity' and how some of the surrounding features impact on creativity and knowledge.

These have been presented and discussed separately in the following chapters; however, there are no clear separate lines and each area impacts on the other. Each sub heading has been taken from the various properties that emerged as discussed in Table 5.1, 5.2 and 5.3.

### 6.2 Findings

This chapter aims to develop some of the characteristics further highlighted in Chapter 5 (Table 5.1) particularly around 'Collective' and 'Fitness' from the participants' narratives. Throughout the first part of this chapter the experiences of the participants and how they form collectives and how knowledge emerges from their interaction will be considered in more detail. In addition, how the organisational members identify and interact with each other (particularly around collectives and fitness) and how this interaction relates to learning and knowledge outcomes will be highlighted. Rhodes and Mackenzie (2002) argue that individuals work through different patterns of relationships as a way of coping in a complex environment.

## 6.3 Support

Support is a very important feature when sharing knowledge within the collective which was gathered from themes around individual and collective, with a view of meeting the needs of the organisation. Participants discussed the importance of increasing their fitness and the struggles maintaining interaction with collective members in a shifting local environment. Participants seemed very aware that they had to be reliant on the behaviours of organisational members to succeed in the organisation.

*3.2 "...if someone had a question they could post it on there [referring to an online discussion website provided by the organisation to help support the staff]. You would then get by various sources someone would get back to you straight away. They would then offer you advice on how you should resolve your query. I found that system very interesting and engaging..."*

Support was often seen as a connection with other members of staff which could be in a variety of formats and whether those members were willing or available to support in a time of crisis or difficulty.

Some participants were more specific to a workplace problem and how it can be difficult to obtain the specific information needed to resolve complex workplace issues. They talked about the difficulty of their working environment and group dynamics.

*3.3 "...within 20 minutes I got a detailed answer and further more they gave me directions where I could get additional information. I found that really useful and it was a way of obtaining the information I needed to resolve a workplace problem to a complex issue..."*

Participants also talked about good leadership within the organisation and how a good manager can be very supportive.

3.5 *"...this is about a good manager and if they are they bring out the best in you..."*

3.2 *"I have had good managers in the past and when you have a good manager they are very supportive. It's nice to know you have that support even if you do not need it. Without that your job can be very difficult at times."*

They also discussed bad/poor leadership which has the effect of limiting opportunities for members to learn and how the lack of support for an individual request to do some formal training that may help them to do their job more effectively.

2.5 *"...I wanted to do this as I felt it would help me in my work and help me become more efficient and they did not want to know..."*

The participants discussed the knowledge flow in the organisation and how the complex structure and hierarchy did not fit the needs of the organisation to work effectively.

2.5 *"...we are not supported by knowledge in this organisation and the management feel they can hold back what we need to know, honestly [group laugh]..."*

A senior member of staff attempted to defend this view of management in this discussion and was clearly shaken about the group consensus she said.

2.1 *"...some of the things that were being discussed at a senior manager's level we did not necessarily need to inform the staff of because..."*

2.1 *"...at the end of the meetings we decide what we should communicate and what knowledge should be shared with the staff..."*

Despite this the support of the collective is seen as critical to learning and sharing.

3.5 *"...we do have our differences and we all have different opinions from time to time but strong team work that supports each other always works best. I know the group cannot stay together forever but when it works well you know its working and they always help you back..."*

The local collectives seem to self-organise and support each other around their connections and this provides access to other members.

### **6.3.1 Motivation**

Motivation is seen as important to the participants who shared some stories about how they have been encouraged to stretch or motivate individual members for the collective goals. This participant explained how he had been inspired to help promote the efficiency of the organisation.

3.3 *"...one of my ideas was to merge 2 departments and by merging these departments they would work more effectively and before my ideas there was a lot of mistakes being made and people walking around trying to address these queries..."*

3.3 *"...I sat down with senior managers and explained my ideas to them and from those conversations my ideas had been implemented".*

3.3 *"It was this manager and my colleagues that helped me with my ideas and gave me the confidence to progress which helped the business".*

Members talked about learning from others especially in their local environment often through a very supportive network which helped their individual and professional development. The example below helps demonstrate how participants learn through work and how their local collectives share knowledge.

3.2 *"...once you have a good idea, it's no good leaving it on the shelf and not taking it further and not just saying we can leave it on the back burner and we will come back to it. You need to run with the ideas and see how far it will go and then decide*

*whether it was appropriate or not. Definitely the most important thing is having that environment when you have the opportunity to create and be flexible... [yes, yes, group approval]"*

The example above shows the importance of having an environment which encourages collective development through work.

What seems important is a collective supportive environment that is willing to challenge a set rules and boundaries and allows members to learn from the environment and through feedback, whether this is positive or negative.

*3.5 "...sometimes you just have to do things differently but there are always risks personally and also at a team level but sometimes you just have to be brave and try something new..."*

### **6.3.2 Conflict**

The local collectives clearly support and motivate its members; however, there is an element of protectionism towards its members from other parts of the organisation. The ownership of individual and local collective outcomes (previously discussed) often keep their learning secret, which in turn limits knowledge sharing across the organisation and creates an environment that is full of tension.

The participants shared an example where they had lost control of a piece of work and any recognition they could have gained at a local level. Despite the fact that members know they should be thinking at an organisational level they feel reluctant to do this and instead prefer to focus their learning individually and locally.

*3.3 "...the worse thing a manager can do is take your idea that you have brought forward..."*

*3.3 "...this will not motivate the staff to bring ideas forward. This can dent a person's confidence and this is not good..."*

3.3 *"...by allowing ideas to come forward this is how you can break down barriers and remove those stereotypes like 'if you have nothing good to say then shut up'. This clearly does not progress an organisation forward..."*

There was a sense of bad feeling around this discussion and a reluctance to be completely open and honest about their frustrations. The bad feeling seemed to simmer to the top when a member was talking about locally developed knowledge and the reluctance to share this at an organisational level.

3.3 *"...having some recognition for your work and the teams work will result in a much healthier workforce and a happy workforce, obviously. This will create efficiency and productivity will increase and this will be the same in any organisation. From this the company will grow because people are happy but if people are frustrated there will be no growth [yes, yes, group agree]"*

## **6.4 Trust**

Trust locally was very important to the participants who also discussed the dangers of this being broken outside of the collective. The lack of recognition and stealing of ideas was also highlighted and the importance of this collectively.

2.2 *"Trust is very important in organisations and life and you cannot trust anyone until you have met them and you cannot do that through a video camera"*

2.3 *"The ones I have learnt the most from are the ones I trust and the ones I don't trust I close up and you give them the minimum amount of information you need to give. The ones I couldn't challenge, you end up not even having an opinion as you know it's pointless and you and the organisation does not grow and the managers does not grow either. The managers you trust you can open up to, although you might not agree and that's not a problem but that's good for you both and the organisation to learn"*

Trust for this manager (below) had a more direct focus on their own learning and at the same time, wanted to suppress the junior member's previous comments (above).

*2.1 "For me trust is the most important thing. I have to have assurance the person I am learning from has the expertise and this could be a qualification or through experience. Knowing that someone has high qualifications in their field means that I will value that opinion. If a lay person had told me something that they had read in a book but had never worked in that field I would listen to their views but I wouldn't value it. For me the qualifications and experience is what I rate highly".*

When discussing the sense of ownership and the lack of trust within the organisation, members often kept secret any solutions they had, which might help resolve workplace problems.

The following excerpt helps illustrate some of the conflicts between local and organisational knowledge and why this is often kept secret when trying to address organisational problems.

*2.3 "You are not encouraged to think outside of the box and if you do the managers try and steal your ideas for their own promotional gains".*

The general fear of sharing knowledge and knowledge development at the local level seems to create secret behaviour within the organisation. The participants' experiences around problem solving at the local level highlights their concerns about sharing knowledge outside of their local collective.

The ownership, fear and secrecy seem to contribute to the local collective's unwillingness to share knowledge particularly outside of the immediate group. These themes help demonstrate some of the barriers to knowledge dissemination and how this impacts on the organisation's overall access to knowledge which exist within its boundaries.

### 6.4.1 Fitness

An important category that seemed to emerge was the issue surrounding the 'fitness' of individuals and the collectives and how this contributes to the organisations ability to resolve problems. Participants did talk about how they needed to remain 'fit' especially when relating to constant change and how this interacted with their local collectives which relied heavily on the behaviour of others who they often trusted.

One participant shared their views with the rest of the workshops which seemed to get approval.

*3.1 "I like to observe how something is done and then I try and place my own spin on it with the view of improving the idea...It's all about maintaining your fitness and resolving problems and sometimes you just have to be flexible enough to do it [group laugh]. It does help enormously if your team understands the difficulties you face, especially when things just keep changing".*

Following on from that comment the remaining participants seemed to agree with some of these remarks and discussed the issues surrounding conflict and the struggles of organisation members to remain effective in their environment.

*3.2 "I suppose I am very similar...[referring to the above statement] but I also like to see how things work practically on the ground...it can be very difficult to keep your head above water and you risk being dragged into the swamp, if you're not careful"*

*3.3 "Yes that is true and when organisation members keep banging heads it can be difficult. You have to remain flexible to deal with these problems. It can be so exhausting but you have to remain focused on the job as the people who will suffer are our customers".*

The participants are very aware that knowledge seems to emerge when dealing with challenging situations of any kind. Creativity and innovation are very

important for these organisational members, which seems to compliment individual and collective knowledge.

#### 6.4.2 Commitment

The participant stories demonstrate a commitment to meet the needs of their customers and their environment. The term 'effective' is often used in the stories around learning and knowledge and how this can be used to meet the needs of their clients.

*2.1 "...despite this I just keep thinking about the work we do and how important our customers are and that keeps me going, sometimes. It is so important to remain effective in these challenging times and let's be honest a challenging organisation".*

Participants discussed the broad range of policies that the organisation has to comply with and how this can be extremely bureaucratic at times and how they try to maintain their commitment and effectiveness to their work.

*1.1 "Having the knowledge is important but it's the ability to apply that to a working environment that is important and the transition is important. I think of a HR policy and I read it and I understand and then I need to have an understanding [of] how it works in action and linking in other areas. The transition is what people struggle with from my experience and what causes frustrations".*

*1.3 "...I think it's [referring to the above statement] a combination of things and what the circumstances are and there are some things that I have had to research and look up. Yet there are other times when you do need the interaction [of others] and I think it does depend on what it is and what you need it for [referring to knowledge]".*

These participants believe commitment and effectiveness often sits within the individual's capacity and how they might use rules to find a way around things

that meets the organisation's needs. As a result participants acknowledge the need for learning opportunities to satisfy all organisational members.

*3.1 "...you might want to speak with me when I have completed my Union training and see how that works...Once that has been completed I should have better skills to help the broader organisation".*

The participants see commitment and the effectiveness as meeting the needs of the organisation members and learning seemed to occur in this pursuit of effectiveness where knowledge helped deal with current local solutions.

### **6.4.3 Initiative**

Initiative is a very important property for the participants around learning and knowledge and how this can be developed. Using your initiative and being innovative is often argued to be the same/or similar to knowledge creation and problem solving when dealing with work issues.

For the participants using their initiative to improve work performance was an attempt to work around an often outdated or unworkable strategy or product.

*2.1 "...We have changed various processes in this organisation and we are in the process of making more changes...you have to be innovative all the time as the work we do can be extremely complex and keeps changing "*

*2.1 "...this will be an enormous learning curve for staff in this organisation and we will collect feedback from that training and change if necessary. I know people are very anxious about the changes that are about to happen...there are major changes ahead and staff will have to adapt and be innovative"*

*2.1 "...sometimes the change is important especially if it produces better results".*

The participants do seem to be aware of the importance of initiative at improving the overall business performance and what is seen as acceptable may need to change to improve the local work context.

2.2 *"...I know when we have changed Chief Executives and Directors they all have a different style... I know here in this organisation it has been useful for the new Chief Executive to highlight the awful situation we are in as a business and we have to learn new ways of doing things to survive..."*

There was some conflict between the individual and the collective if you were trying to use your initiative where the organisation preferred consistency and discourages any form of initiative.

3.2 *"...I think that mine [experiences] is very similar and working in the awarding body I realised that the work that was being carried out was very random. You had pieces of papers flying about, the odd spread sheet system...[highlighting their tensions in the organisation]"*

2.3 *"...you are not encouraged to think outside of the box and if you do..."*

3.5 *"...that is all good but when you do this [thinking outside the box] they say no [management], no as there is a lot of politics and they don't like it..."*

Researcher *"What do you mean by that?"*

3.5. *"If you want to survive this place you learn to keep your mouth shut and keep your head down. Just look at the staff turnover. Please, no great ideas [group laugh]"*.

It seems that certain members (who had been in the organisation a while) thought it was much safer not to use your initiative which seems to result in the stagnation of behaviour.

However, other members thought that you were allowed to use your initiative especially when you were given some level of autonomy. This was very much an isolated group and clearly had some freedom within the organisation.

*2.2 "...this way they can push the boundaries without any fear that something will break without the ability to reverse their actions if needed. This gives people a chance and to develop [group agree]".*

This story did demonstrate that to be successful you need to be allowed to use your initiative and does seem to describe some level of reduced restrictions, comparatively.

Initiative does seem to present itself here as a local response to problems and/or frustrations within the organisation. When initiative was allowed to flourish is seemed to be a very positive thing for the individual and the organisation. The tensions that surround this area especially between initiative, innovation, organisational requirements and consistent behaviour are seen as very significant for knowledge development.

#### **6.4.4 Fear of change**

The fear of change is often discussed in the narratives especially when relating to the interaction of individuals and between the individuals and the collectives within their environment. Participants talked about how change had to happen and some of the uncertainties that surrounded change.

*2.2 "...we have changed various processes in this organisation... I know people are very anxious about the changes...sometimes the change is important..."*

Local collectives often described the changes as frustrating and how new Chief Executives come and go. The participants make reference to the feelings of staff members and the reluctance of staff to air their concerns

2.5 *"...they talk about change within the organisation. Once they have done that we go through a new process that never works well. I cannot think of anyone who will say to management that it is not a great idea, we just think oh great, here we go again. You only have to look at how many Chief Executives we have had and this firm keeps killing them off. We then have new ideas and new procedures which results in change for change sake [group laugh]"*.

Participants also talk about the pressures to change and once again these comment and tensions refer to the new Chief Executives who had just started because of the sudden departure of the last one.

2.2 *"...I know when we have changed Chief Executives... the new Chief Executive had to highlight the awful situation we are in as a business and we have to learn new ways of doing things to survive economic downturn"*.

2.1 *"...I have to disagree with you on some points that there is a time and a place to give people bad news..."*

The participants talked about the frustrations of change within the work environment relating to the sharing of knowledge and how this has been inhibited by the new structure.

2.2 *"...if someone has actually explained the context you will know that you cannot do this because of that and you will need to speak to this person first, things like that. It is really important why you are doing a piece of work and why it is important. If someone had just explained who we should be communicating with under the new structure, it would make life a lot easier"*.

2.1 *"...as well as the why it is the practice of it as well. Even if you have the reason why it's the experience of the implications of getting something wrong that is important to know the reason why, something should be done in a particular way"*.

2.2. *"That's a good point [group agreed]..."*

The fear and frustrations of change in this organisation is constantly being highlighted as well the lack of autonomy. It seems as if this fear and the frustrations within the organisation seem to stifle some elements of learning and knowledge sharing across the broader organisation..

## **6.5 Chapter conclusion**

The idea of the collective within this study has helped provide a device that allows a much deeper analysis and discussion on how individuals interact and group characteristics that emerge between organisation members. This idea is tied up with the idea of fitness within rugged fitness landscapes (Stacey, 2001, Morrison, 2002) and highlights the mutuality of individual and collective learning and how knowledge is developed in a context.

This part of the chapter has helped highlight the interaction between individuals and their self-organisation with an aim of improving fitness in a complex organisation. It emphasises how collectives reinforce their own boundaries and as a consequence these boundaries limit learning and knowledge sharing beyond a local context.

An interesting aspect which has been highlighted is the way individuals and the collective work together to improve their local fitness but the knowledge which is formally sanctioned by the organisation lacks connection. Participants discussed the importance of local knowledge and how this is very active and flows locally. This raises some serious questions as to why the formal aspect of the organisation lacks alignment with the experiences of individual members. These issues will be developed further within the next chapter.

The narratives often highlight how learning frequently emerges from organisation members' engagement with work. The participants frequently mention that this engagement is influenced by the constant changes and challenges thrown in the way and the difficulties in finding clear organisation rules whilst fulfilling the needs of the customer and work colleagues. It is this uncertainty which impacts on new knowledge and its ability to flow freely in the

organisation which impacts on the participants learning and knowledge experiences.

## Chapter 7

### 7.1 Nonlinear

This chapter aims to develop some of the characteristics further highlighted in Chapter 5 (Table 5.2) particularly around 'Nonlinear' and 'Flow' from the participants' narratives. The data highlights tensions between what the participants can actually deliver and what is expected from them by the organisation and draws attention to this constant conflict and how this interrupts the sharing of knowledge. Waldrop (1994) describes how the interaction of complex systems cannot always be predicted and/or anticipated when considering individual behaviour.

### 7.2 Experience

Participants often talk about their experiences and how this relates to practical application which could be dynamic and nonlinear.

*1.2 "Yeh, that takes me back to when I had my first job as a wages clerk and a woman sort of trained me...she obviously didn't have any qualifications but had been there years and just.. It never once didn't balance in all the years..."*

Participants spoke about experience and how this worked well as a way of learning the environment which was critical to their survival.

*1.2 "...you find your own way and doing something and that procedure you have might not be the best way and might just be someone else's way... some of it is through doing the job and gaining the experience and the old fashion way is the best..."*

Putting to one side the human interaction and the nonlinear dynamics, the participants talked about their frustrations and the limitations of technical systems especially around learning and its intent.

2.2 *"...when we talk about technology it is a support mechanism for education and not the be all and end all..."*

Information systems featured in the discussions and how it has its limitations and failed to deliver what was expected to organisational members.

1.3 *"...We have had new systems introduced by XXXX we have just had to work out how to use them. As their process and their guide is not always helpful. So you do have to try and work through [it] yourself..."*

1.3 *"...whenever I have tried to do anything online I have never been able to finish. [General agreement between all focus group, laughter in agreement]"*.

The participants discussed how they had to deal with complex problems at work and how this can be difficult to prepare for. They also spoke about the difficulties and frustrations they encountered and how this could be difficult because of the constant changes and the unpredictable environment and how they struggle to learn continuously.

### **7.2.1 Adaptive**

Participants have to deal with constant change and they have to be adaptable to unexpected problems which they face daily. This individual and collective flexibility around problem-solving freedom is critical for their survival 'fitness landscape' (Kauffman, 1995).

The narratives highlight some of the skills needed which supports this flexibility within the environment. The participants (below) also highlighted some of the deviant behaviours which occurred when rules were applied flexibly.

1.3 *"Of course when he left we had queries within our team and I then took it on myself because it was a bit annoying because we could not answer these questions as we were all thinking well who is going to answer this then. So I decided to look into it...I would send emails out to other managers around the*

*queries that I had been asked. They would then respond by saying thanks that was very useful. We then started to get other queries in the XXXX and what we decided to do was make a..."*

*1.2 "But that wasn't your job and if you didn't adapt quickly we would have had 11 regions breathing down our neck [Group agree]"*

*1.5 "...yes I remember when this was applied over liberally and we ended up getting into trouble with XXXX...[Group laugh]"*

*1.2 "Oh the hierarchy and it's not your job and all that [Group laugh]"*

The participants provided examples where being adaptive especially with a broad set of goals had very positive effects around learning and knowledge development.

*2.3 "Those differences in people and the extreme challenges of fall outs are what make us so much better as a group. You see people learn differently but also think differently. Together you get a better solution you would never consider without other people. It can be a hassle to get the solution you want sometimes and it helped me understand the bigger picture. I found this because I came at it from my own direction and had the time to research it myself".*

*2.4 "...in those unplanned meetings we had a lot of good ideas and this helped me enormously..."*

The participants' environment which was unpredictable prompted their discussion on the importance of being adaptive around the formal procedures as it was these procedures that restricted their ability to meet the needs of their environment.

## 7.2.2 Procedures

An environment where the participants are allowed to use some discretion is seen as vital to promote workplace effectiveness for the organisation. It is this discretion that helps promote learning for the individual and the collective.

The participants often spoke about the strict set of rules that must be followed in the organisation.

*1.1 "I think of an HR policy and I read it and I understand and then I need to have an understanding how it works in action and linking in other areas. The transition is what people struggle with from my experience and what causes frustrations".*

*3.2 "It was the ability to apply some discretion that gave the IT system a platform a kind of a chat room with the boundaries that you would get within any ICT policy".*

*1.1 "...I went through some training with a new manager and I did a car park rota procedure and I had read through it and it all seemed fine to me... Implementing this simple procedure had made a huge difference and we..."*

*1.5 "...it is for this reason they must be followed and the reason for this is very very complex and has significant history..."*

The strict rules and procedures and how the participants must comply with complex legislations is very frustrating for them especially when dealing with their environment and their customers. In addition to this, any interpretations are made by management and then these interpretations are passed down to an appropriate lower manager who is waiting desperately for some kind of flexibility in these inflexible rules.

*1.2 "I am not saying you don't need the procedure but you don't have to follow things exactly..."*

*3.4 "...it does get in the way, I mean the legislation and there are many interpretations of the law, my god, the amount of*

*hoops we have to jump through [group laugh]...management always have the final say anyway as they do this with their intimate knowledge [group laugh]..."*

The participants sometimes broke the rules to fulfil the customer needs; however, the fear of 'being found out' was evident in the discussions. Participants highlighted their concerns about making such judgments especially around problem solving and this did seem to stifle the sharing of knowledge. This restraint seemed to have an impact on the organisations ability to change to meet customer needs.

*3.1 "...you have to be careful about making such decisions and if you get them wrong you will know the consequences...sometimes you just make the right decision for the customer, how hard can it be"*

*3.4 "...when you talk to the customer they tell you what they want and if you dare mention that you get your head bit off. They say policy this and policy that and you must follow procedures so why bother even trying sometimes [group laugh]..."*

These difficulties faced in the organisation were discussed further and how organisation knowledge is suffering as a consequence. In this example the participant mentions the endless procedures within the organisation and how this stifles organisation knowledge.

*1.3 "I know I have already been given all this information in paperwork and I'm told I'm reasonably intelligent [group laugh] and there were endless documents and I was trying to see what was what and by the time I had done this they had moved on [group laughter]..."*

The participant seems to keep highlighting issues around using their discretion with procedures and the consequences of getting this wrong. They often talk about issues surrounding their customers and the organisation and issues in the past which have caused devastating consequences.

2.5 *"...to be honest I stay well clear of the grey areas here. We have had so much trouble in the past and honestly if you get this wrong..."*

2.4 *"...yeh but you can use discretion with your customers they will never know and will you ever see them again, probably not..."*

2.1 *"I wouldn't, [responding to the above statement] we have seen many people here come and go for that reason...one word, litigation [group take deep breath]"*.

The concerns that were being discussed were previous litigation cases within the organisation and this may be why the organisation felt that they had to have a clear set of rules (cause and effect). However, this justification will not provide a solution to unanticipated problems that the organisation members face on a daily basis.

### **7.2.3 Clarity**

The participants discuss issues surrounding clarity and without clarity can cause a sense of crisis. This was often discussed around nonlinear and often complex environments and how this in itself could provide opportunities for learning and the sharing of knowledge. The participants highlighted some of their concerns around the lack of clarity and how changes in the senior management team contributed to these difficulties and stifled learning and knowledge.

2.4 *"...we need to improve communications and if we actually started talking then we wouldn't have to have all these meeting."*

2.2 *"...changed Chief Executives and Directors they all have a different style...they keep changing and they all want different things at the same time"*

2.4 *"I think most organisations could improve or are similar, aren't they [group laugh].From my own experiences working at different organisations you see a lot of organisations fail to keep"*

*staff informed and you rarely have any form of clarity from the senior management”*

One manager expressed their views on the complex environment they work in and their own frustrations.

*2.1 “...we have gone from no meetings and no communications, for meetings for meetings sake. To overly taking up too much of my own time to the extent when I could not do my day to day job. I actually don’t know what the right balance is here. I am actually struggling with the amount of meetings I have to attend at the moment because my role still involves me being an active participant at inputting financial system into the database and not just overseeing managerial role. I have my own workload and have large checklists to do myself and if I have to meet the IT department and then I have to end up in one to one meetings with staff. I then have to attend management meetings and then department meetings and then another for functional skills and then security. I could have just done a whole week of meetings and my work is still there and it keeps building up and it then becomes a problem”.*

What does seem to be important is that the lack of clarity (constant change) that can cause a crisis is more pressing on the individual rather than the group. Again this seems to suggest that organisation members prioritise the local and immediate.

The participants also talked about how this lack of clarity and the pressures of work can actually have a positive impact on their learning.

*3.1 “You then go back and see how it works and this allows you to look at it in a different way and you question is my learning and is my knowledge correct; is there a better way of doing things as you learn...”*

*2.1 “...learning from my own mistakes and following my own notes myself and going back if it doesn’t work. This helps*

*enormously and when you are busy it can be a positive outcome to your own learning and knowledge development”.*

Participants also talk about their heavy workload and how this in itself can create innovation within a team and develops knowledge that has helped changed processes. For these participants the lack of clarity which creates crisis can be a positive thing at times.

*2.1 “...we have talked about what happens with the practical application of new ideas and how it’s working on the ground and whether it working or not. We have then had the opportunities to feedback the processes and see whether it is working or not. We then attempt to share ideas for different solutions [we] would be allowed to be put forward”.*

*2.5 “...it can be very difficult here sometimes but when you don’t have clarity and you have to be creative and come up with new ideas and sometimes this really works well...”*

The participants also made reference to the high levels of control in the organisation which in itself can stifle the distribution of knowledge developed.

*3.4 ...you see so much that different teams do different things and why should we bother. Especially when you have that XXXX saying I want this I want it NOW...you get no clarity and no real support from the other teams...and just because she a manager, I don’t think so...it’s no wonder we don’t share or distribute our knowledge effectively because we don’t work as a team”.*

The sense making workshop did help develop this theme further.

*1.1 “...you know when things get like that you have to call on your strength and experiences. At the end of the day you know why you are here and what is important to you. For me that is the customer. I will remain professional and ...”*

The participants often operate in a chaotic environment which is often caused by the lack of clarity. It is this lack of clarity which provides individuals an opportunity to be innovative around learning and the sharing of knowledge.

### 7.3 Realistic

There does seem to be some disconnection between what is expected (perfect world) and what can be realistically (real world) delivered by individuals within the organisation. The difficulties and frustrations seem to stifle the flow of learning and knowledge across the organisation. The following participants expressed some of their difficulties faced within the organisation.

3.2 *"... I think a lot of it depends on how you put that across...it will take time for individuals to understand it...from my experience organisations have given us a complete breakdown on the issues and why we need to cover it. Then we have been given information for us to go away and read on the subject. The following day we would be asked to practically demonstrate on how it works. Basically you have done the reading around the subject area and to get a basic idea and the following day you can see the practical application on the ground...seem to fall down is when they just give you theory and if you do things this way this is what you get. That's all good and well and not everyone is on the same wave length and people need to see it practically and be realistic and see it on the ground or have a go at it themselves...[yes, yes group approval]. Then you have time to go away and you then have time to go away with that new information you have received...I think it's a blend and its dependent on the work you are doing...the management have to be realist about what can be delivered [yes, yes group approval]"*.

3.3 *"If they do want this for the good of the company they will do this in a more accurate understandable way"*.

3.5 *...the management do not see the practical application of some things and they are completely unrealistic with their*

*expectations and need to see the 'real world' and not their 'perfect world' [group laugh]".*

The participants seem to have a very good understanding about what work can be realistically completed in their working day. However, the participants believe that management seem to struggle to understand the difficulties faced by its organisation members and the differences they portray as 'real world' (what can be delivered) and the 'perfect world' (what they would like delivered) which is developed around consistency and control and places huge constraints on its members.

### **7.3.1 Consistency**

For these participants the organisation sees consistency and order as very important for the delivery of services to its customers and other organisation members which is evident in the narratives.

However, the participants do not always comply with the organisations requests for consistency.

*3.4 "...if you have that many rules and procedures it can be difficult if not impossible to deliver an element of flexibility and give your customers what they need and sometimes you have to step outside of this..."*

What does seem evident is that the Senior Management Team believes that consistency is a very important concept but the individuals and the collectives work around this in practice.

*2.1 "...we as the Senior Management Team have had a lot of responsibility and need to make sure staff deliver what is expected from them..."*

*3.2 "When I initially started I got a 50 page document on how I should do my job. Unfortunately it was just text and it contained loads of writing and it had no diagrammes showing you how things should look once you have completed a stage. I found*

*that very difficult...Although all these are important sometimes you have to find new ways of working that actually work on the ground. The Senior Management do not need to know what you are doing all the time and as long as it works”.*

3.4 “...yes that has been similar for me and you have to see what works...”

The level of rules and procedures the participants had to follow was evident when one member said about how they have to read from a script when answering the telephone even when they knew it could be robotic and cold.

3.3 *...when we had to answer the phones from that stupid script after that problem we had we were all saying the same thing when it was pointless. [group laugh]. Honestly, it was so cold and we all sounded like robots...the management thought we had to have all the same message but they didn't have to do it [group laugh]”*

A member of the Senior Management Team talked about how inconsistencies were still happening as a result of some organisation members not having expert knowledge which led to customer dissatisfaction. The same manager then went on to describe how new procedures were being developed and how this would work.

2.1 *“We have done a variety of processes here such as brainstorming and re-engineering sessions. We have talked about what happens with the practical application of new ideas and how it's working on the ground and whether it working or not. We have then had the opportunities to feedback the processes and see whether it is working or not. We then attempt to share ideas for different solutions would be allowed to be put forward. We also value experience and whether someone has tried to do something elsewhere and share the pros and cons. We always keep in mind the staff's technical capabilities in a particular subject and tailor any training to them. We have changed various processes in this organisation*

*and we are in the process of making more changes and designing a training session...The training sessions will be done with the management team and this will HOPEFULLY be devolved down. It will probably end up like Chinese whispers but it will only be as good as the manager who passes it down and their expertise”.*

Some participants expressed negative views on the term ‘expert’ and their expertise which threw doubt on stable information and answers to clear questions.

*2.1 “Yes that is something like I was discussing yesterday around purchase orders. We were talking about recent studies where experts in any field were as bad at predicting the future as non-experts. Just the same as any lay person as predicting the future as we were talking about...”*

*3.4 “...we have seen so many experts here and let’s be honest they were useless and we have people here who are much better and hold more qualifications and experience...”*

What is evident is that several of the participants had negative views of the role of the expert which was the term used frequently when referring to an external consultant coming into the organisation to offer support. The participants highlighted their experiences of these experts and how they had failed some of the organisation members.

*3.1 “...yes remember what happened with XXXX when that expert tried to tell him what to do. How embarrassing for the Senior Management Team when that happened, have they no shame and expertise in what, exactly. Why would you employ someone as an expert when they have less experience and qualifications that the person already doing the job [Group laugh]”.*

Other participants had plans of how they could engage with experts in their complex world and gather their knowledge in an existing context.

2.4 *"...I like the theory but once you are on the ground things are very different, we then have someone who is an instructor who distinguishes the reality...and the different applications on the ground and the hazards... After a few days things start to fall into place and you read the theory but when you are on the ground its sometimes can be different. It is important having other people there with different views and their expertise is very important".*

The participants are suggesting that the nature of knowledge which is supposedly held by these experts is the issue. It is evident that the participants deal with complex issues and they make reference to experts dealing with explicit areas of knowledge which is much easier to deal with while they have to deal with the more elusive, tacit elements of knowledge.

In the following example this was highlighted when discussing a procedure which was more about the transfer of explicit knowledge but the difficulties which occur around the tacit.

2.1 *"A good example is when you read a policy or procedure and when I think of a HR policy and I read it and I understand [of] and then I need to have an understanding how it works in action and linking in other areas. The transition is what people struggle with from my experience and what causes frustrations. This is difficult to pass over and not so easy to do or explain and you know how complex it is and how easy to get wrong and when inconsistencies will occur".*

Complex environments seemed to suggest inconsistencies could happen at any level but this does seem more prominent at the operational level. The concerns of this were very clear not just because they felt unsupported but because they knew that a challenging situation could be very risky.

3.5 *"...like it has been said time and time again if you get things wrong in this organisation you will get your head chopped off...it all comes from the issues we have had in the past and there is no doubt that the same mistakes will not be tolerated especially*

*over the XXXX...Reprisals you can guarantee that happening.  
Can you remember XXXX..."*

The inconsistencies here are also seen as a response to a nonlinear context which is not just about problem solving but also the interpretation of procedures or rules which were set by the organisation to correct such behaviour. The participants also discuss the difficulties in applying rules in a consistent manner and the effect this has on the internal processes.

*1.5 "...it changes so many times and the difficulty is keeping up  
and if we knew something before it could have helped...we  
need to be consistent with our communications as it causes  
problems..."*

Clearly the participants are trying to maintain consistency in a complex environment but the difficulty here is that the organisation does not remain consistent.

### **7.3.2 Hierarchy**

Consistency, hierarchy and control are all discussed in the narratives and are frequently linked. The lack of autonomy and the high levels of control through the hierarchy seemed to limit the effectiveness of the organisation in its nonlinear environment.

The hierarchy was highlighted in the workshops and the sense making workshops helped expand some of these areas further.

*1.1 "...it's all about the power and control..."*

*3.3 "You see you have 'boundaries' because you have a  
reliance on 'managers..."*

*3.5 "...there are a least 5 or 6 layers in the organisation and you  
cannot do this or say that you have to go through your various  
levels...remember when that XXXX said he has never seen*

*anything like it and as soon as he left they flattened the structure and placed in 2 more layers [group laugh]*".

3.2 "...I remember when XXXX did that and everyone laughed..."

Nonlinear does help provide a language around the participants' experiences and how these experiences are connected. The importance of consistency in an inconsistent world has been highlighted and the need for innovation and flexibility and how these help meet the needs of a particular context. The conflict seems to occur when the organisation demands consistency, and the participants wanting greater flexibility around their learning and the sharing of knowledge which in the long term should provide the organisation with a competitive advantage.

Holland (1995) describes flow as a movement over networks through various agents and connectors. Flow within any organisation could be the flow of information and/or physical resources.

It is very clear that the Senior Management Team in this organisation struggle to understand what is happening operationally and how policy development fits into this. Although all parties involved acknowledge they work within a complex environment, those who are directly involved with the customers on a daily basis maintain this fixation of control and consistency is becoming untenable.

Using flow helps highlight some of these power relationships within the organisation, especially around organisation members and how this affects the ability to flex and learn with their customers and colleagues. The narratives have helped provide a much greater understanding on how organisation members learn through exploration especially when they are allowed to fail without the fear of repercussions. The participants also highlight some of the rhetoric which talks about freedom of learning and how they are allowed to explore with examples of negative comments and a strong blame culture if you get things wrong.

The lack of shared understanding is also highlighted by the participants and how this has an effect on any planned learning and the sharing of any knowledge beyond the local collective. The tensions between policy development and practice are also highlighted through flow and how this presents gaps in organisational knowledge and its sharing.

The participants believe that power in this organisation sits at the top and they highlight how this is held with the Senior Management Team. The operational staff seem to position themselves as subservient rather than supporting them. As one senior manager states *"...it amazes me sometimes how when we say 'jump' they never question 'why' its astonishing me why they keep doing this... (Participant 3.2).*

Any form of direction for these participants seems to relate to management style, rhetoric, risk, blame and exposure. The narratives demonstrate how these properties impact on any opportunities to learn for these participants and they talk about management styles and how this has an impact on learning and any willingness to share knowledge out of the local collectives.

### **7.3.3 Management style**

The ability to respond to local conditions is important in the discussions and the participants acknowledged the significance of informal learning and development in the organisation.

For some of the participants stories around their supervisor or line manager emerged and how they could be supportive in their learning.

*3.1 "...I thought I have never heard that before and it sounds very interesting. My manager agreed and she started looking at it and she is doing a course on XXXX and she used that in one of her assignments. The manager then stated that I have done a whole assignment based on these 5 freedoms and it was just come from the conversation we had. Yet if I had not mentioned*

*that in that conversation she would never have picked that up.  
Apparently she got very good feedback on that..."*

Other stories emerged how some participants had attempted to share knowledge without obtaining permission. The issue of power seemed to emerge and obtaining permission was seen as essential even though it could be very important operationally and strategically.

*2.2 "I was involved in an IT group and this helped get the ball rolling and I appreciate that it might come a time when you no longer need such a group but you have created a communication network and people in each team. You can then communicate with them say through email and you have got the ball rolling and you have shown that any queries come back to the right people. Sadly I had not got the right permission from XXXX and had to undo a lot of this work and I suppose it's about the management style as well".*

The senior management did seem to recognise how they had a big influence on individuals and how they had to grant permission and the impact this had on the individual and the collective especially around their learning.

*2.1 "You have to think about your audience like we said earlier and how that individual wants to perceive that information and the environment and how they want to receive it. I do keep a tight rein on the work and the individuals in my area and when I am happy they can share that with everyone else. I know but I like to be in control and I think that works best, mostly".*

Being an effective leader was highlighted in the discussions and how this linked to learning opportunities and how leaders do not restrict or stifle learning but grant permission to be more independent and allow members to explore.

*3.1 "Leadership is critical and when you have an effective leader they bring out the best in you. The supports the guidance is all important and they give you the flexibility to grow".*

3.2 *"Yes and the thing is there is no right or wrong answer and by allowing ideas to come forward this is how you can break down barriers..."*

The importance of learning and permission was highlighted by one participant whilst reflecting on the narratives and how this linked to the transferring of knowledge seemed to summarise some of the key points that emerged.

3.2 *"...if it is less formal and less rigid with the correct management style and people are aware of where you are coming from and what you are trying to achieve; coupled with the right intentions the organisation will be more creative and you will learn a lot more in a more effective way. Knowledge will then flow across the organisation and people will be allowed to create solutions".*

Any form of leadership which allows the sharing of knowledge and helps address local conditions is seen as very important for these organisational members. Leaders who help and support are seen as far more effective at encouraging learning and the sharing of knowledge, than those who simply direct.

#### **7.3.4 Exposure**

The opportunity to explore and to be exposed to different situations was linked to learning and knowledge creation by the participants that allowed the movement of knowledge throughout the organisation.

3.1 *"It is important to expose your staff to different environments and allow that to happen. Having some recognition for your work and the teams work will result in a much healthier workforce and a happy workforce obviously. This will create efficiency and productivity... Learning and knowledge sharing are linked and having this exposure is a win win for everyone [yes, yes group agree]"*.

One participant shared their experiences when they were exposed to a new situation and how this contributed to the organisations knowledge.

*1.1 "...I became interested in it and I said could I just sit and see what you are doing? I got the feeling that I wanted to sit and learn from him and I kind of just decided to make my own notes. It was never like an official session where I said... This helped me and also helped the organisation as I could share what I had learnt and I tried something different".*

One participant talked about how they had been constrained when they wanted to gain new knowledge and then apply that knowledge to the organisation. When they approached their manager about their ideas and said how it could benefit the organisation and themselves, they were rejected and they described how they felt frustrated and let down.

*3.5 "...I know when I wanted to share what I had gained and build on that my manager rejected my ideas and I felt sick especially when we supposedly support learning. I still don't understand why and what on earth is the problem with..."*

The development of knowledge within the organisation seems to be limited by the lack of opportunities and exposure.

*2.2 "All staff should have opportunities and allowed to be exposed to new situations and be allowed to make mistakes, but does that really happen, probably not [group agree]"*

There is little doubt that the participants often feel that there is lack of value placed on individuals and this has a significant impact on knowledge flow within the organisation.

### **7.3.5 Risk**

The participants often talked about risk especially in a nonlinear environment and how there could be repercussions and how they need to survive. Yet there

were also discussions about the importance of taking risks (even at a low level) and how risk taking behaviour needed to be employed.

2.1 *"Is that not evolutionary about the risk as previously mentioned and it's about our own survival no matter what environment you are in. You are going to absorb the knowledge because you are going to benefit your own longevity. But if they are not telling you the truth then you are going to fall flat on your face. So you are probably doing this risk assessment on everyone all of the time".*

2.2 *"That's a good point and it could be the level of risk we are talking about here. That's an interesting thought...develop them and give them work that is low risk at the same time give them a lot of authority in that area and autonomy. This way they can push the boundaries without any fear that something will break".*

What did seem apparent that although the participants talked about risk there did seem some reluctance to taking any significant risks within the organisation.

### **7.3.6 Blame culture**

The participants frequently talked about the blame culture and this did seem to link with management styles, exposure and risk. Having a strong blame culture seemed to limit opportunities around learning and the sharing of knowledge within the organisation. This was demonstrated in each of the workshops and seen as very important in learning and the sharing of knowledge.

The participants described the issues surrounding the blame culture within the organisation.

3.2 *"Again I have put down 'management style' and keep popping in my mind. Pressure and it seems as this organisations does not allow people to learn from their mistakes. Blame culture is a good one and they should not have one..."*

3.5 *"...well if you make that mistake they will quickly point the finger at you and say it was you. They know how to pass the blame over and that's why most people will not take a risk..."*

The issues surrounding culture also raised some very interesting discussions in the sense making workshop.

1.4 *"...it is very obvious that most do not want to talk about the culture in detail within this organisation and that has to be because of XXXX. I know XXXX did tell me about it in a private meeting and look where they are now. The culture of this organisation is about blame and it's like treacle and you have to try and get through it".*

1.2 *"...oh yes it's like swimming with piranhas and you never know when you might get bitten [group laugh]"*.

The issues surrounding the blame culture is seen as historic because of past litigation and this has resulted in this type of behaviour. Despite this, participants agree that this type of behaviour is unhealthy and should be removed to promote a more effective learning process.

2.2 *"You really need to remove that blame culture as this stifles the organisation and the individual and it is not the best way to learn. You need to stop punishing and it should be more about support and guidance. Not about if you get this wrong you will get it in the neck [group agree]"*.

3.3 *"Remove the blame and you promote learning as people will take more risks and this can come down to management styles"*.

Participants described how having permission to make mistakes has been tried in an attempt to promote learning. This came about when a new XXXX tried to remove the blame culture within the organisation.

3.5 *"I remember when the new XXXX came into the organisation and tried to promote a healthier organisation and*

*remove the blame culture. I remember them saying 'that we are not brains surgeons no one will die if we make a mistake'. The irony of that story is that the person, who tried to make change happen and promote a more effective learning environment, fell on the sword".*

3.2 *"...yes I remember that and it did not end well but credit for trying..."*

Trust is also part of the problem when discussing the blame culture within the organisation especially outside of the local collective. The local collective do seem more supporting and less likely to blame when errors occur. Outside of the collective blame does seem to be more prominent which moves between the collective groups.

3.5 *"...when you have a strong team that is very supportive and you can trust them and at the same you can be honest about any fears you have. However, the danger is when you are placed in a situation when it goes outside and they will try and blame you".*

2.2 *"That's the trust issue I was talking about".*

2.3 *"It depends on the people as well".*

2.1 *"They can trust you as a manager but it's an open plan office where everyone is sitting... It seems to happen more outside of our team and I am not blaming anyone but it does happen".*

The culture of blame in this organisation does seem to be fairly significant and according to the participants making a mistake has resulted in the loss of several staff members. The blame culture does seem to limit the sharing of knowledge outside of the local collectives.

### 7.3.7 Rhetoric

The participants provide several examples about the rhetoric surrounding the encouragement for learning and having innovative ideas towards their work and how this is discouraged in practice. Argyris and Schon (1996) describe this as the distance of espoused theories and theories in use.

The participants believe this distance is a barrier.

3.4 *"...they talk about the diversity of learning and how we are organic and encourage creative thinking but really is that what really happens..."*

3.2 *"I suppose most organisations talk about it..."*

The participants talk about this distance and the rhetoric surrounding the promotion of learning as suppressing any forms of enthusiasms especially around innovation, problem solving and any attempt to share knowledge across the organisation.

3.2 *"I suppose most organisations talk about it and use the rhetoric but how many actually do. In this organisation you can forget any creative thinking and if you learn something new keep it to yourself. It's like XXXX they get someone in who has less knowledge and less experience I wish someone could explain that to me. If you wanted to do a course or learn something new, FORGET IT. Don't bother sharing it is they don't want to know. Talk about suppressing".*

However, the participant did briefly talk about how that was not always the case and in the early days things were slightly different when there was less rules and procedures.

3.1 *"If you look at this organisation things used to be very different. There were not so many rules and procedures and your views did matter and you were encouraged to be more creative and share that across the organisation".*

3.4 *"Cleary things have changed now [group agree]..."*

The rhetoric is not just at the more senior levels within the organisation as a member of the Senior Management Team explains what seems to happen operationally.

2.1 *"It will probably end up like Chinese whispers... We seem to get everyone just saying yes, yes we agree and understand and they end up doing something completely different anyway".*

The sense making workshop tried to work through some of the issues raised and how this effected the organisation individually and collectively.

1.1 *"There is a lot of talk with this focus group and this is not how they really work in practice. It is also interesting that they must use the 'rhetoric' otherwise you could be squashed by the hierarchy. Individuals know what they must say and the local collectives do their own thing anyway".*

The rhetoric does seem to present a gap between what the organisation states officially and what seems to happen on the ground relating to learning and work innovation. This does seem to highlight the frustrations from individuals and the formal organisation and the lack of connection with local activities and outcomes.

#### **7.4 Recognise**

This category and how participants felt disconnected was touched upon by each workshop and the sense making workshop and was often closely linked to the other categories such as 'fear', 'structure' and the importance of being 'consistent'.

The participants talked about how the organisation had failed to recognise this disconnection and how this linked to patterns of behaviour around knowledge sharing.

An element of this disconnection was highlighted by this participant who had a very influential position in the organisation across 11 regions in the UK.

3.4 *"...there is a lot we should be sharing but for some reason this does not happen as much as it should. I don't know why they are not listening it seems as if they have just closed their ears..."*

Cross team working was discussed and the participants acknowledged theoretically this was a good idea but said it rarely happened. The discussions highlighted the difficulties faced when trying to work across different levels and the hierarchy.

2.1 *"For me after 5 years at working in the same organisation we have gone from no meetings and no communications for meetings for meetings sake. To overly taking up too much of my own time... I have my own workload and have large checklists to do myself and if I have to meet the IT department and then I have to end up in one to one meetings..."*

2.2 *"Recently I have been working on my own mini project and it's only when we all come together with our mini projects it makes sense as a bigger project and how this all links with the processes and the people make it work. Without those links no one really has a sense of what they should be really doing and who they should be talking to. You also would not get the appreciations from other departments work and other perspectives... Again it's because we don't have time, and what do we end up choosing, it's because we are pushed with our time in business and people don't have the time to give you that..."*

3.4 *"...you also have the different levels you have to contend with and the hierarchy as you cannot talk to that person unless you go via that manager..."*

It seems from these examples knowledge is only important when there is a need for it and creating a collective is not always possible unless a problem

occurs and then the collective comes together which develops and shares knowledge.

#### 7.4.1 Structure

The organisation operates in a very complex structure overseeing 11 regions (licence agreement) whilst working with government bodies who oversee elements of their policy developments which is then disseminated across the UK. At the same time they have to develop their own strategy for internal policy development and then deliver that to their customers.

The participants describe how the organisational structure is causing tension which is trying to satisfy everyone's needs.

*2.2 "That can be difficult especially when you have areas of authority being reinforced by an organisation structure where you have a manager so certain and how do you challenge that. This causes a lot of tension and we are trying to keep everyone happy not only internally but externally as well".*

The overall organisation structure seems to stifle the flow of knowledge across all levels. Participants talk about the hierarchy especially across the network and their relevant Senior Management Teams and how there seems to be a strong separation and lack of understanding and how this links back to the customer. The organisational structure seems to puzzle organisation members and reinforces the local collectives.

*3.2 "...we pick up good practices and you pick up bad practices and depending on the organisation and the way it is structured you could be preaching 20 years of bad practices".*

*3.4 "...the problem is the way the entire network is structured as you have so many different levels and internal politics and trying to cope with all 11 regions not to mention your own office. You then have this constant movement of people policies and ideas which you have to put together. If you have an idea they get defensive and don't want to know how it works in their region.*

*Then you have mistakes and then it comes back to you and then you have to deal with it. It gets to the point why bother sharing anything as you get it in the neck from all angles. It's not surprising you can only confide with your colleague sitting next to you. The politics, hierarchy and the different structures it's terrible and it leaves me completely puzzled and the people it affects the most are our customers".*

Participants did describe that they made some attempts at breaking down some of these barriers with little or no success.

3.2 *"...Yes and the thing is there is no right or wrong answer...you can try and break down barriers..."*

2.1 *"...I think there have been managers who have done that here...I think you were one of them XXXX weren't you? However, you could be seen as rocking the boat and from experience those who tried have a very short life expectancy".*

Other participants talk about their local collectives and how that works well and when they receive outside interference this breaks down the group's performance.

3.3 *"I have done that with my manager...It works well in your team and it's when you get that outside interference it goes wrong. It just seems that the team can be intimidated especially when they have more senior roles within the network structure".*

One participant tried to place a more positive spin on the whole issue of structure and how this had changed dramatically in recent years with a surprised look and an interesting comment from one of the managers.

2.2 *"I know when we have changed Chief Executives and Directors they all have a different styles of communication. I know here in this organisation it has been useful for the new Chief Executive to highlight the awful situation we are in as a business and we have to learn new ways of doing things to survive economic downturn".*

2.1 *"I have to disagree with you on some points that there is a time and a place to give people bad news. I know for this organisation we had got to a point that things could no longer be hidden..."*

The participants describe the tensions surrounding the organisation structure and how this feeds into the 11 regions spread across the UK. The formal structure impacts heavily on the organisation members to remain flexible and competitive in their changing market which ultimately impacts on all their customers and their unpredictable needs.

#### **7.4.2 Behaviours**

One of the strongest indicators of how this organisation uses a variety of measures to manage individuals' behaviours was the vast amount of policies and procedures it has. The participants described that there was a clear disconnection that the organisation felt was needed and what the individual and the local collective felt they needed to operate effectively.

The participants described how they could problem solve local issues but the endless policies restricted and punished their behaviour.

3.4 *"...well you know how to deal with your local issues but the danger is always that you slip up with one of the policies and procedures. There is a blame culture here and if you make a mistake you run the risk of punishment through the disciplinary procedures. This has been used effectively in the past and they got rid of some of the staff for exactly that..."*

3.5 *"...how many policies do we have now? I have lost count and this restricts any flexibility we have...it's getting ridiculous now...how will this help our customers? [group agree]"*.

With absolute horror in some of the faces of the operational staff, a member of the Senior Management Team decided to discuss some of the new ideas being discussed at a senior level in one of the workshops to maintain consistency.

2.1 *"We have done a variety of processes here such as brainstorming and re-engineering sessions. We have talked about what happens with the practical application of new ideas and how it's working on the ground and whether it working or not. We have then had the opportunities to feedback the processes and see whether it is working or not. We then attempt to share ideas for different solutions would be allowed to be put forward. We also value experience and whether someone has tried to something elsewhere and share the pros and cons. We always keep in mind the staff's technical capabilities in a particular subject and tailor any training to them. We have changed various processes in this organisation and we are in the process of making more changes and designing a training session. This will be an enormous learning curve for staff in this organisation and we will collect feedback from that training and change if necessary. I know people are very anxious about the changes that are about to happen and even though I have explained the theory, the anxiety is still there. Staff are worried and it's the unknown. Sometimes the change is important especially if it produces better results... The training sessions will be done with the management team and this will HOPEFULLY be devolved down... It will be placing a lot more responsibility on the managers and they will have to be accountable..."*

There seems to be little doubt with the above examples that there is a strong emphasis on maintaining consistency in the organisation. While the organisation places greater emphasis on following the formal policies and procedures the operational staff feel that the feedback from their customers and work colleagues has greater significance in their changing environment. The disconnection between formal and the local impacts on organisational members which results in poor motivation.

### 7.4.3 Flow of information

The participants talked about the flow of information and how at times there was just too much to take in and very little time to manage what needed to be done and instead they focused their local collectives workload.

*2.2 "...have the time and again when we look at someone's CV and what skills are we looking for. Again it's because we don't have time, and what do we end up choosing, it's because we are pushed with our time in business and people don't have the time to give you that... It's like here when I have to look at the IT system and think that information is there somewhere but how can I do that if haven't got the time. I have to focus on here and now and what needs to be done in our team and its priorities".*

One participant commented on how there was a degree of uncertainty on what they should do with all the data that had been collected and how this data linked to information and how it would benefit the organisation and its performance.

*3.3 "I know when we input all the data in the XXXX system I wonder why. It just seems so time consuming and I have asked my manager why we keep doing this and there is no logical answer. It's almost as we have to just keep collecting data and inputting that into the database. They even recruit staff at busy times to do the same and we are all inputting this information in the system [group laugh]. I wish someone could tell me how this improves the organisation and its performance as I have no idea".*

This comment did seem to stir up underlying issues of how the organisation seemed fixated with the collection of data and then struggled to identify how this could be applied to resolve problems.

*3.3 "That's a very good point and you see that a lot I remember XXXX stating we had to set up another data base to collect more data about the staff in the organisation. But why, what are we going to do with that information and how will that deal with the issues concerned".*

The participant gave a further example of how this inefficiency was creating problems in the organisation and how disconnection between various regions caused major concerns.

*3.3 "I know that the various regions are all using different systems so we have about 11 regions all paying staff to input the same information in different IT systems. Can you believe that as I couldn't when I started here. I asked why can't we use a system that is compatible between us all, off the shelf. Do you know what I was told? Yes that is a good idea in theory but we have tried something similar and you will have to speak with XXXX. Honestly can you believe it we have all these people scattered across the UK doing different thing with similar data and none of it gets put into practice. I thought we supposed used these systems to make us more efficient [laughter]"*

Despite the difficulties and the disconnection, participants seemed to have a strong affiliation with their customers.

*2.1 "However, despite this I just keep thinking about the work we do and how important our customers are and that keeps me going, sometimes".*

The collectives do seem isolated from each other especially around the work context where they try and survive and improve where they can. This isolation or separation from the other collectives seems to suggest that they are not overly concerned about other collectives where they themselves are trying to do the same.

This disconnection in the narratives is discussed through the various categories and is very important to identify the interaction between learning of the individuals and the collectives and how this fits into the knowledge of the organisation.

## 7.5 Chapter conclusion

Nonlinear and flow has helped identify issues within the narratives around learning and knowledge. The participants described how they often found it difficult to predict their daily work and how they might find solutions to these problems which are presented in terms of Nonlinear. The participants described what can be realistically delivered (real world) and what the organisation would like delivered (perfect world) and this causes tensions and impacts on how knowledge flows through the organisation. Throughout the stories, learning is often described as local, adaptive and mainly focused on problem solving. Participants also described how knowledge emerges and often maintained locally through the experiences of individuals and the collectives and then protected from organisational criticism.

The following chapter highlights some of the issues that emerged in the narratives around diversity and how this links to learning and knowledge.

## Chapter 8

### 8.1 Diversity

Following on from the previous chapters and some of the concepts around Collectives and Nonlinear this chapter focuses on some of the complexities that have emerged around Diversity and how this links to learning and knowledge in the narratives, highlighted in Chapter 5 (Table 5.3).

Diversity is far less prominent than some of the previous concepts and categories but seen as particularly important in providing a greater understanding of some of the key issues relating to learning and knowledge. The sense making workshops helped draw out some of these discussions which placed a much deeper understanding of these complex entanglements. Waldrop (1994) describes this as a characterisation of new and uninterrupted innovative ideas.

The participants in the narratives describe how diversity is important within the local collectives and how this helps provide innovative ideas which helps in their survival. They describe how they have to remain flexible within their local collective to stay competitive within the organisation.

3.2 *“Diversification is very important as having many different skills within your team helps and makes you much stronger”.*

Researcher *“Can you expand what you mean as that sounds interesting”?*

3.2 *“You see in my team we are not all finance people and some of have slightly different backgrounds. But when you do have meetings and/or discussions it’s good to have different perspectives and ideas. I know we do not always agree but at least we thrash out these ideas and it makes us much stronger in the organisation”.*

Innovation was also seen a major part of this diversity and how new and creative ideas blossomed which provided positive knowledge outcomes. The following discussion highlights how diversity within the team promoted a whole new way of thinking around the learning strategy that was being implemented within the organisation and hopefully rolled out across a further 11 regions.

3.4 *"That is very similar to our situation when we had all that XXXX we decided that the current way of doing things was not working. So because we all had different backgrounds ranging from IT, HR and Finance we could look at the problem from multiple angles. In addition we were lucky enough that we could be open and honest with each other. Clearly we had to allow XXXX to do the work as it was their area but once this had been done we could sit down and look at it again. This worked really well and we even tried out this new learning strategy and we could all be consistent amongst different areas. I honestly think without this diversity we could not have made it work and in addition the other regions wanted to be part of that. The word was out and what a great way of working and everyone felt really positive after so many years...so many people benefitted and I know XXXX did and many others [group agree]"*

The example above demonstrates that there is a strong relationship between diversity, innovation, learning and knowledge within the local collectives and how this impacts on organisation knowledge.

The sense making workshop helped draw out some of these discussions further and how diversity, innovation and learning are inherently linked. The following exert highlights some of the key issues discussed and how the sense making workshop interprets these discussions.

1.1 *"I feel a lot of them are talking about diversity without actually saying it. I know they are struggling with some of the concepts around this discussion but it does come across as very important in leaning effectively [group agree]"*.

1.3 *"Yes that is true as when I have worked with them over the years this is exactly what happens and I know you have the politics and stuff but removing that you do have novel ideas which links to learning. I remember that happened to ..."*

1.2 *"Yes there is a lot of terminology that I think links these discussions like feelings, respect and empathy which all come into play when you think of it [group agree]"*.

1.3 *"...it all compliments each other and clearly linked..."*

The ability to have some elements of freedom also came in play and how this linked to diversity. The participants discussed learning experiences and how this moved the organisations knowledge forward.

3.5 *"We have a lot of restrictions in the organisation for a variety of reason and I know we have talked about this in the past. I do not want to go over old ground but when you do get some levels of flexibility and freedom it clearly helps. But when you get this freedom and have a diverse group it often really works well. The diversity of the group especially when you different views you can approach things in very different ways. I have worked in a variety of teams over the years and it always seems to be the same. Of course other things always come into play but when you have different backgrounds and the freedom to apply that shared element we can all learn together and push things forward in different ways and directions..."*

Newcomers to the group can also provide novel approaches and the following example highlights how they can help move things forward. This example demonstrates what happens when a newcomer joins a group but has limited knowledge of some of the perceived organisational constraints which was stifling the overall project.

2.5 *"I remember when XXXX joined us but they did not understand or appreciate the politics and the hierarchy of the situation. But when we sat down they had some really good ideas but we said you cannot do that and they said why?"*

*What's the problem? [Group laugh]. I must admit I did feel slightly silly when I tried to explain to them, but it was true. They said leave it with me and they pushed the ideas forward ploughing through what can be described as rubbish and got the job done. My god it was nice to see..."*

A very poignant point was highlighted by a member of the same workshop just reminded the group the importance of diversity.

*2.2 "Those differences in people and the extreme challenges of fall outs are what makes us so much better as a group. You see people learn differently but also think differently together you get a better solution you would never consider without other people. It can be a hassle to get the solution and you have had the arguments and seen things differently and someone else who you communicate with might like..."*

Diversity seems to be an important function of the organisation and in itself is a very complex product. There is little doubt that diversity helps to bind together the local collectives and the participant seem to suggest this promotes organisational effectiveness.

### **8.1.1 Culture**

Once again the sense making workshop helped draw out some of these ideas around culture. The sense making workshop did try and make sense of these issues and never doubted that there was a strong culture within the organisation with many unwritten rules. They suggested this had many different elements and was very difficult to define clearly. Damen (1987, p367) defines the notion of culture as "learned and shared human patterns or models for living; day- to-day living patterns. These patterns and models pervade all aspects of human social interaction. Culture is mankind's primary adaptive mechanism", whereas Lederach (1995, p9) defines culture as "the shared knowledge and schemes created by a set of people for perceiving, interpreting, expressing, and responding to the social realities around them".

1.4 *"...it's so difficult to define or label and has many different elements but I keep coming back to diversity...maybe it's because of my background religious belief and things but culture fits under diversity and diversity under culture [group agree]..."*

3.1 *"...it is complex but important we try and understand what is happening..."*

The participants also describe how the tacit rules can come into play which instructs the members indirectly.

2.5 *"...sometimes it's not what they say but what they don't say if you get my drift..."*

2.2 *"...Is this not the culture we..."*

2.5 *"I suppose so..."*

As discussed previously the culture within the organisation can actually inhibited the flow particularly around a strong blame culture and the stealing of other people's ideas.

2.2 *"You really need to remove that blame culture as this stifles the organisation and the individual..."*

3.3 *"Remove the blame and you promote...as people will take more risks and this can..."*

2.3 *"You are not encouraged to think...and if you do the managers try and steal your ideas for their own promotional gains. Why bother and with a culture like that it can be very difficult sometimes to keep motivated and let be honest even bother coming into work".*

The participants describe how the organisations own recruitment practices can actually reinforce the existing culture. Argyris and Schön (1978) would refer to

this as 'single loop learning' where the organisation can actually prevent change happening, which in itself will obstruct innovation and new opportunities.

3.4 *"...this can start at the recruitment stage as when they do the interviews you know immediately the type of people they will employ. It's always the same and if you remember when they employed XXXX and look how that turned out. No one wants to actually do that job and when they do it will go wrong. It is a nightmare why don't they address the problems that are there instead of keep going through more and more staff. When this does happen it causes huge amount of upset. Never mind the cost and they keep saying about how much is that and this but what about the cost of creating these issues there is something seriously wrong with the system [group agree]"*.

The issues raised in the above narratives are clearly restricting the innovation within the organisation and limiting any knowledge that is locally developed.

### 8.1.2 Balance

Having the right balance and actually making it work within the organisation is seen as very important. Instead of having a variety of processes supporting the staff to meet the needs within their environment there should be a much greater momentum to making the system actually work.

2.2 *"I sometimes think about how many people we have lost in this organisation and we need to improve our systems and processes as when we talk [as a team I mean] to XXXX we really need to make things work in a much better way and I honestly think we do not have the right balance"*.

2.3 *"It's been the same here for many years and many of the programmes we have simply don't work and we never seem to put them right. We keep going in circles round and round and to be honest I am getting dizzy now [group laugh]"*.

What seems to be apparent is that there is a lot of repetition and very little innovation and the overall strategy is rarely challenged. The participants have

provided several examples about their practices, policies and programmes that are ineffective and perpetuated throughout the organisation.

Rhodes and MacKechnie (2003) describe internal models as a set of inputs that include actions and/or decisions that agents are capable of taking when combined with all possible pairing of current and future states.

The internal models in this organisation have helped identify some interesting aspects of organisational knowledge development. When the models are not linked to feedback then these opportunities for change are restricted. The lack of local collectives feedback and the disconnection with the remaining organisation participants say '*we really need to make things work in a much better way*' and '*we keep going in circles, round and round*'. The participants talk about how there is a need for greater innovation and creativity in order to deal with the uniqueness of their environment.

The internal models are clearly restricting organisation members and their performance in the work context. There are no examples that demonstrate that any internal models shift as a result of feedback and this increases the frustrations for organisation members.

### 8.1.3 Acceptance

The participants also discuss how these internal models are restricting the organisations strategy and some of this is deeply entrenched in the way the organisation does what it does.

The participants describe how this can be very difficult to challenge.

*3.1 "The problem can be, but not always when something has been agreed as part of the overall strategy there is little acceptance or flexibility within our environment to actually say well this is really not working and we need to stop. Maybe that's part of the problem and we need that environment that will accept these mistakes and challenge, so we can move forward positively".*

Acceptance and having the ability to let go seems to very problematic for this organisation when relating to the internal models. One participant in particular describes how this can be very difficult emotionally when you try and/or redefine these models.

*2.2 "Sometimes you have to accept that there are just some things you cannot do or change. This is very difficult to accept sometimes, but I know for your own health, it just has to be that way".*

This discussion seemed to set off a slightly emotionally debate which was surprising.

*2.2 "Some of this may not be intuitive like someone who is so certain about something, whether it is intuition and you want to believe them and then often you do. When actually the best way of approaching it is might not want to believe them and then think about the areas of uncertainty. That can be difficult especially when you have areas of authority being reinforced by an organisation structure where you have a manager so certain and how do you challenge that. This causes a lot of tension and*

*we are trying to keep everyone happy not only internally but externally as well”.*

*3.2 “That also depends whether you have a manager that allows you to challenge. Or when a manager actually asks you to challenge them... Where before I was very quiet and insular and I wouldn’t want to admit that I had made a mistake and I would rather cover it up.”*

*1.1 “When things do not always work to plan you just have to let them go sometimes”.*

What does seem apparent is that the organisations own internal models can place an enormous amount of pressure on the organisations members which is both tacit and explicit. The participants clearly feel uncomfortable with some of these processes which they feel can be very disruptive which is a sharp contrast to environmental feedback which is felt to be more positive and organic. However, it is important to note that some organisation members do recognise the importance of accepting these difficulties and how sometimes you must let go.

### 8.1.4 Empathy

Empathy was a very fascinating thread in the narratives where the participants seemed to share stories where having a good understanding seemed to link to innovation and provided positive outcomes.

The following discussions help demonstrate some working examples where this happened.

*3.1 "I remember when I was working with XXXX it seemed as if you really needed to have a good understanding what your customer wanted. When working with XXXX I took it upon myself to get a much better relationship with these people and we knew what we both wanted. So I created a new process [off my own back] and this helped them get what they wanted. It was a win win situation but without that empathy it would never have happened. I am still very happy I did what I did but at times I was worried it wouldn't work [group laugh]"*

*3.4 "I think of a time when I was working with XXXX and it was important to build up those relationships and when that is done you have a much better understanding. When I did that with XXXX, can you remember [3.2, yes yes I do] it was important to get to know your customers and when those relationships have been built you have better idea what to put into place. It does help you become innovative and when you have done that you can share that around and everyone benefits. I thought XXXX would have had a problem with it but all that come back was praise [3.2, yes that's true]"*

The discussions highlight the importance of interaction with your environment and how sharing knowledge which emerged from this innovation had positive outcomes for the individuals concerned and the organisation.

In these examples it was the individuals who had a greater empathy with their customers and other organisation members who helped develop and share new knowledge.

### 8.1.5 Audience

The participants did talk briefly about how their audience was very bad at acknowledging what they did not know and identifying gaps in the knowledge it holds individually and collectively. As a consequence of this lack of understanding, participants believed that the organisation failed to respond adequately to what their clients needed.

*3.4 "As an organisation we are very bad at identifying gaps in our knowledge and this has been the same for many years. I honestly believe that we struggle to know how to address this shortfall. It is very disappointing to be honest as our clients suffer because of this and we struggle to adapt to the changing environment. Education is going through major changes at the moment and how are we supposed to react to these changes if we cannot identify what we need to know".*

*3.2 "You are so right and that could be the big test for us especially as competition is opened up we need to improve in so many ways and having the ability to address these gaps will be crucial".*

The stories shared by the participants have provided a very useful insight particularly around diversity and some of the internal models which can be at an organisational level, collective and/or individual. Although these relationships are not clear it does seem as if these can affect individual and collective behaviours. The participants have helped draw out some of these complexities but would acknowledge themselves they can be very difficult to define.

### 8.2 Chapter conclusion

Some of the key properties have emerged from the participants discussions relating to the learning and knowledge development within the organisation context. Chapter 6 (Collectives) has helped identify the nature of localised learning and the sharing of knowledge particularly through work engagement. Chapter 7 (Nonlinear) has helped identify some of the key issues and complex

problems of organisational knowledge and how this knowledge is developed. Chapter 8 (Diversity) has helped identify some of the features that promote and limit creativity of new knowledge.

Although these areas have been presented separately, there are no clear defining lines as each impacts on the other which in itself helps provide a greater understanding from one to another. Complexity theories helps us understand the complex nature of learning and knowledge and how this emerges which provides new insights and various connections. Keene (2000) argues that the conventional way of looking at organisations remains caught up in the principles of scientific management, which emphasise control, order, predictability and the deterministic world of cause and effect. She claims that the mechanistic approach of reducing all systems to their constituent parts is inadequate to allow managers to deal with the changing environment. Tetenbaum (1998) helps identify some of these issues further where you need to be complexity aware and engage with the 'new order' where a manager must be able to manage the transition, build resilience, destabilise the system, manage order and disorder, manage the present and the future, and create and maintain a learning organisation.

The following chapters will help develop these links further and how this relates to complexity and how this links with learning and knowledge.

## Chapter 9

### 9.1 Discussions and implications

The original research enquiry was *what are the relationships between workplace learning experiences and organisation knowledge?* This inquiry can be broken down into parts; *what are the experiences of participants relating to their learning*, and *how do these experiences relate to organisational knowledge?* This chapter will aim to pull these areas together and then apply a holistic perspective on these discussions.

The participant's narratives have clearly identified the complex nature of this study but several major threads did emerge. The central themes which did emerge were, (1) (Collective) *individual and collective learning and knowledge*, (2) (Nonlinear) *knowledge was portrayed as complex which is frequently situated and active*, (3) (Diversity) *models can be disruptive*. All these areas will be discussed and analysed throughout this chapter.

In an attempt to connect the various discussions this chapter will highlight some of the major themes that emerged and then cross reference these themes with the academic literature whilst drawing on complexity metaphors.

An important aspect of this research is that it draws its findings from the participants own descriptions and experiences through the various narratives which incorporates cultural discourse.

The findings of this research provide a deeper understanding of learning and knowledge where the complexity will not blind the researcher to reduce the rich interconnectedness of their experiences into **neat categories**. The categories provided will provide a unique and novel insight into organisational experience which cannot be presented separately as they are deeply interwoven (Haggis, 2005). This chapter will discuss some of the complexities involved and how the experiences of the participants can be explored in a more holistic way.

## **9.2 Workplace experience**

The participants highlighted the social nature of learning in their workplace and discussed its emergence through their individual and collective engagement whilst working in a challenging and changing environment. The participants also described that the development of knowledge came about because of the numerous interactions they encountered with diverse others. They also discussed how they overcame challenging situations within their environment by identifying and selecting individuals who would support their success. The stories highlight how individuals were very selective in their interaction which contributed to the local collectives overall success rather than that of the organisation as the flow of knowledge between the various organisational groups was fragmented.

The tools provided to help share knowledge by the organisation which included organisational structures and strategic plans for the network (11 regions) was seen as very limited by the individual. The participants describe how the entire structure locally and nationally should be broken down and then put back together to help with the changes needed in the current economic downturn. Waldrop (1994) argues that having the opportunity to provide positive feedback is fundamental to organisational learning and allowing individuals to interact with their environment positively.

The various relationships already highlighted in the Findings chapters, 6, Collectives (Fitness), 7, Nonlinear (Flow) and 8, Diversity (Models) provides an interaction of the various theoretical perspectives which is described in the contemporary academic literatures around learning and knowledge (for example, Winch and Ingram, 2002, Fenwick and Tenant, 2003).

### **9.2.1 Individual and collective learning**

The relationship between the individual and the collective is seen as critical to the belief in complexity where the individual and the collective are both seen as a learning entity. Complexity focuses on the patterns that emerge from the

collectives which have been formed by the interaction of the individuals. The belief is that the individual and the collective are not discrete but are interactive.

The overall collective behaviour emerges from these interactions where learning occurs interactively. Backstrom's (2004, p467) provides a useful definition of collective learning when he describes it as "...rather enduring changes in a collective as a result of interaction between the collective and its context", captures a notion of collective learning concomitant with complexity although the findings of this study suggest that even its separation of collective and context is inappropriate". In short individual and collective learning is seen as co-emerging which is often formed through their interconnections in a specific work context. This unique web of interactions is where learning and knowledge flourish through various relationships and clearly contributes to one another.

### **9.2.2 Individual and local collectives**

Stacey (2003) argues that these patterns of understanding and meaning develop through the local interaction of people as this allow various agents to sufficiently connect with one another.

Within this research participants have clearly highlighted the localised nature of learning through the interaction with their work colleagues in their shared work environment. Stacey states that in these complex environments individuals often respond to the information within their immediate local environment where niches are formed as a result of this local adaption. Cohen (1995) states that individuals and the local interests assert themselves at the expense of organisation concerns which forces them to have a much better understanding of the tensions between the developing organisation and the more formal organisation and the behaviours within.

The participants understanding of these tensions help them to focus on learning in their own environment and how this relates to others within their own context. This type of learning has been developed through some of the social learning

theories where it is grounded in the interaction and activity of everyday working life (Visser, 2005).

What does seem apparent and confirmed by Anderson (1999) is that this isolated behaviour where individuals only interact and receive inputs with a few in their local environment leads to isolated areas in the organisation.

These occurrences present a problematic element for this organisation and presents strong themes of disconnection between the local collectives and the broader organisation. This study as well as others that have been conducted helps demonstrates the difficulties in validating knowledge. No matter how this has been adopted agents are learning through the interaction of others with local settings (Brookfield, 1985, Visser, 2005).

This study helps demonstrate how knowledge grows through experimentation and problem solving with the individual and the collective. The lines between the individual and the collective are clearly blurred and it is this distinction which differentiates this research from others. Lave and Wenger (2000) focus on the term 'community' and how participants share understandings and its meaning through their local community. Lave and Wenger also focus on the participation within the collective and how this is central to learning and knowledge, whereas this study focuses more on the complex interaction.

### **9.2.3 Localisation and shared experiences**

Localisation is important in the participant's discussions particularly around their selective interaction and similar issues concerning information and knowledge sharing and how this is developed and has been studied by others. Ackerman and Pipek (2003) through their studies find that technologies are secondary when creating networks through various experts within an organisation. Cross and Parker's (2003) findings are very similar and argue that personal contact is much preferred as a source of knowledge and remind us that individuals are often bound by their work roles and their informal relationships which is similar to Lave and Wenger's (1991) research.

Various studies have highlighted how individuals must have a sense of trust when it comes to their sources of knowledge and how there must be a willingness to engage with problem solving which generates new knowledge. The participants within this study reflect very similar views but this is blended within their local collectives.

This study has helped identify how localisation provides personal connections where individuals facilitate knowledge which provides opportunities to solve problems from sources of knowledge they trust. It is this localisation which allows the connectivity between various agents and promotes effective learning. Anderson and McMillan (2003) argue that individuals within an organisation are often attracted to one another when they help or share a task. It is this localisation and connectivity which facilitates learning and adaption within a context.

There are obvious tensions within the participant's narratives which are often discussed in a very local context. The participants discuss how they selectively interact with organisational members depending on their own and to some degree other member's commitment to the organisation's mission. The participants seem to reduce this disagreement through their shared understanding which they believe to be right. This is based on their own local construction which they believe is an appropriate way to behave within the organisation.

#### **9.2.4 Individual, collective learning and knowledge**

The participants often describe learning as individual and collective and rarely describe any changes of behaviour or understanding between the two. This connectivity between the individual and the collective is apparent in the participants discussions when sharing stories of learning as they interact within their working environment. Stacey (2003a) believes that learning is very much an activity of independent people where this web of interactions see patterns of meaning emerge. This understanding is not vastly different to Lakomski (2001)

where a lack of boundaries occurs between private knowledge and public culture. Stacey's work demonstrates a strong relationship between the individual and the collective in 'learning' and knowing', whereas Lakomski focuses more on the individual and the collective through 'culture' and the influence this has on learning.

This study demonstrates the importance of collectivity to learning and knowledge experiences which is supported by others. Weick (2001, p267) argues that the collective mind provides a unique process of interrelating which gives us exceptional quality learning. However, Weick argues that the collective mind comes before the individual comprehension which is very similar to Vygotsky (1962).

This study seems to suggest something slightly different to the above where the collectivity is not between individuals or does it come before the individual but the two exist interactively with individuals who are closely connected in some way. Spender (1996, p71) sums this up nicely when he states; "learning at the collective level is the outcome of the interplay between the conscious and automatic types of knowledge, and between the individual and collective types of knowledge as they interact through the social processes of the collective, such as teamwork".

Foucault (1984, p23) takes a very interesting perspective when contemplating external spaces and states; "The space in which we live, which draws us out of ourselves, in which the erosion of our lives, our time and our history occurs, the space that claws and gnaws at us, is also, in itself, a heterogeneous space. In other words, we do not live in a kind of void, inside of which we could place individuals and things. We do not live inside a void that could be coloured with diverse shades of light; we live inside a set of relations that delineates sites which are irreducible to one another and absolutely not superimposable on one another".

This statement has a very interesting perspective and links some of the complex issues surrounding the findings and its complexity. The participants in this study argue that learning is not individual or collective but a complex web of interactions.

### **9.2.5 The collectives self-organise**

The ever changing environment and how individuals struggle to maintain some kind of effectiveness is an important theme in this study. The individuals within this environment respond to the local conditions by self-organising which helps them restructure their thinking and behaviour in an attempt to adapt to their conditions.

There are various properties that emerge to support this and how individuals have to use their initiative to remain effective and maintain their overall fitness. Groups that self-organise help exemplify this where individuals come together in response to pressing issues and concerns and act collectively to resolve workplace problems.

This collective action that occurs where the collectives self-organise with little or no direction is very similar to the finding of Anderson and McMillan (2003, p34) that a "...simple individual level rule generates an adaptive group level functional unit, team, without any hint of explicit coordination, direction or command and control". Without a doubt any attempt that provides direction can be seen as limiting the overall group behaviour. When direction and control are introduced this is met with frustration, whereas autonomy where groups are allowed to explore and make mistakes is seen as more adaptive which often produces much higher performance. Anderson (1999) defines this as a phenomenon which allows systems to leap ahead with much higher fitness rather than the slower routes.

The participants provide examples of their collective understanding and how they must maintain their fitness and emphasise the importance of doing the right thing for their customers. In many cases this means they are in conflict

with the formal rules of the organisation and this can alter their behaviour. The participants believe that they are doing the right thing and behaving appropriately when they bend the rules especially when this is coupled with their tried and tested experiences. Fenwick and Tennant (2000) provide a useful insight in collective understandings as they believe that language plays an important role to what a community might see as truth and/or reality. The participants do not specifically refer to the language that is being used but this does provide an interesting insight into the collective and their discussions around the 'real world' and the 'perfect world' and their protection collectively.

This study seems to suggest that fitness is about working effectively to maximise performance and outcomes for their internal and external customers. The participants aim to attract as much positive feedback that can be obtained and attempt to reject any elements of negativity. This can be seen when the participants try and resolve any immediate problems with their customers who they interact with daily whilst hiding their behaviours from the organisation where they might receive negative feedback.

### **9.2.6 Collectives self-protection**

An interesting property that emerged between the participants was how they must be supportive in an attempt to protect the local collective which is supported by Field's (2004) learning theory. This type of learning is about opportunity and the ability to adapt within a particular environment which can lead to deviant behaviours. Fenwick and Tennant's (2004, p63) analysis on collective behaviours describe how language plays an important part in how individuals see 'truth' and 'reality' and how they are doing the 'right' thing within their local collective.

Participants highlight in their stories that they have to be innovative in a local context in an attempt to protect themselves. The participants also recognise that this behaviour obscures any form of scrutiny which is outside of the local collective. Field (2004) argues that this type of behaviour is well known where

groups who have common interests will have a tendency to protect themselves. Stacey (2003) believes that this connectivity provides important learning and knowledge sharing opportunities within the local collectives. Fenwick and Tennant (2004) state that this type of knowledge may become authoritative as the local collectives reinforce their own social circle and may become resistant to change.

This study wants to have a better understanding of the effectiveness of localised learning and how the local collectives adapt to meet the needs of their circumstances. Hill (2004, p226) provides an interesting insight into what he sees as grassroots knowledge when he states, “popular grassroots knowledge...described as ‘fugitive’-on the other hand-escaped the control of the specialists. It was generated by common folks who understood that meaning was complex, conflicted, and ambiguous. They displayed fewer constraints binding their belief systems...”. Similar to Hill’s work, knowledge and its validation is seen as important for these participants to promote their survival. However, in this study validation is provided by the local relationships as anything external does not contribute to the local collective fitness.

This study provides us a much better understanding as to how the creation of new knowledge occurs as a result of problem solving in a novel and local context. At the same time when others within the local collectives have experience of dealing with familiar problems, their existing knowledge is then recycled with little or no criticism. When multiple perspectives are applied to a problem from a variety of personal experiences then the individual is left to apply their own plan of action to resolve the issue.

### **9.3 Complex knowledge**

Few would argue that knowledge is complex, emergent and active and this was highlighted frequently in the academic literatures and some of this is influenced by complexity theories. This study does frequently highlight how the individual and the collective engage and develop knowledge. How knowledge is situated

and seems to emerge from this interaction which is often locally produced by its members which can be nonlinear and dynamic. The more formal elements of the organisation which focuses on consistency and control leads to numerous frustrations and concerns of its members who respond by protecting the local collective and are unwilling to share beyond the same. These tensions occur as a result of the disconnection between policy and implementations of the policy delivery which leads to learning from ontological and political interests of its members (Field, 2004).

### **9.3.1 Learning through work**

This study shows that learning occurs through the work that participants undertake where interaction occurs between the collectives in an organisational context and is supported by Fenwick (2001). Learning that happens in informal practices is far more effective than that of formal training programmes especially when members have the opportunity to ask questions, check, reflect and practice (Marsick and Watkins, 1999). The idea of learning through work has a significant impact on traditional styles of learning which is often focused on individual skills which frequently moves away from a work based context. There is little doubt that the individualised skill based training which is more focused on technical, economic interests still dominates working practices.

In contrast to some of the more dominant, traditional learning programmes that are promoted in business, this study highlights the importance of the connection between the learner and context and how this creates knowledge through work engagement and action. Allen and Strathern (2003) refer to this as the self-modifying and interconnectivity style of learning that occurs very frequently when learner and context are entwined together.

### **9.3.2 Nonlinear learning**

Nonlinear falls under the banner of complexity as this helps us understand the nonlinear interactions, influence, context and independence of how learning occurs and impacts on the organisation.

This study provides an understanding of how the collective and the environment evolve and adapt together and how the boundaries can be very difficult to define as they are both emerging and changing. Fenwick (2003) believes that the context is not a separate background of any particular system for a particular person or performer. The findings in this study identify the complex nature of learning between the participants and the context. The actors evolve and adapt together from learning off other actors which can have a major influence on others within that environment, which provides opportunities for learning and its adaption (Allen and Strathern, 2003).

The entire concept of co-emergence between the learner and context through various interactions is not new. In fact the idea of the individual, formation and the environment through various interactions in a particular context has been written about by Dewey (1933), Elkjaer (2004), Fenwick (2004) and Visser (2005).

Within this study the participants frequently discussed the complex nature of their work and the impact this has on their learning. The participants highlighted how their work can change daily and how they needed to remain effective within their environment. These unique experiences and the dynamics of their work meant that they could not predict or apply a set of solutions to these complex and ever changing working problems.

### **9.3.3 Structures and collectives**

As briefly discussed the local collectives discuss how they need to be deviant and recognise how this might interfere with the flow between various entities within the organisation. What emerges from this study is that collectives do not build hierarchies, instead participants talk about how they learn within their collectives and how they share knowledge. What does not emerge is a knowledge hierarchy which self-organises through the various levels of the local collective which is discussed and supported by Holland (1995).

The participants do discuss how the local collectives feel disconnected with the hierarchy of the organisation. Lave and Wenger (1991) and Brown and Duguid (2000) both suggest that when you have opposing forces this can place the organisation at odds with itself and has an impact on work, learning and innovation where the local communities will hide insights that have been gained within the broader organisation.

The participants in this study make reference to 'us' as the local collective and they seem to separate themselves from the broader organisation in an attempt to protect themselves. The local collectives have a separate identity from the broader organisation and this interrupts the flow of knowledge throughout the organisation. This seems to be the preferred behaviour which has been adopted by the local collectives. The feedback loops which emerge locally are also seen as very positive which helps innovation, problem solving and promotes local fitness, whereas, the formal organisation focuses more on processes and productivity and how this fits into the larger organisational context.

Field (2004) provides an interesting perspective on learning in these local collectives and different feedback loops when he states; local collectives see learning from what he calls their 'ontological interests' which are self-protecting and an attempt to reduce anxieties. This learning is prompted by the threat of changing environments which seeks a continuation of the local collective. Field (2004) also states that organisation members have a 'political interest' where learning and knowledge emerges from organisation members in an attempt to avoid bureaucracy and its restrictions.

The participants in this study talk about bending or breaking rules and how they hang on to locally developed knowledge as if they worked in separate groups independent of the organisation. They also describe how they have to prioritise workloads and how they reduce tensions by dealing with immediate and local priorities over organisational priorities.

What does seem apparent is that learning and adaption occurs as a result of this feedback which supports the ontological and political interests of the local collectives. This learning occurs as a result of the changing working environment where the local collectives try and promote their survival and fitness, from any attack of uncertainty. Learning also occurs as a result of the political interests where the local collectives aim to gain greater independence over their work in order to meet their difficult and conflicting demands.

The findings demonstrate how the formal organisation creates an environment where the more organic elements of the organisation cannot flow and this formality acts like a barrier. This is a complex relationship and supported by Beesley (2004) who states that organisations do not learn by themselves and have sets of rules, norms and procedures that have a heavy influence on how knowledge is acquired and utilised. Beesley goes on and states that, learning emerges through individual engagement with the collective in a particular context.

#### **9.4 Diversity and learning**

Diversity was not mentioned by the participants heavily in this study relative to other themes. The participants did however, discuss how diversity contributes to learning, innovation and change within the local working environment and how this occasionally had an effect on the organisation as a whole.

Diversity is seen as a very important feature which helps change systems within the workplace and this argument is supported by Stacey (2003b), Anderson (1999) and Holland (1995). Stacey (2003b) argues that diversity is essential in the transformation of groups and how they interact which produces new learning and knowledge opportunities. Anderson (1999) also supports this view and believes that diversity is the most important factor when transformation is needed within organisations. "Transformation is possible only when the entities, their interactions with each other and their interaction with entities in the system's environment are sufficiently heterogenous, that is sufficiently diverse"

(Stacey, 2003b, p375).Holland (1995) believes that it is the nature of diversity and adaption which helps contribute and change related parts of the organisation.

The narratives described how diversity and its related issues helped contribute to the learning within the local collectives and spoke about the energy and excitement diversity created. Stacey (2003b) believe that it is the diversity of the group which helps transform the dynamics and provides greater interaction and understanding/misunderstanding leading to significant new knowledge.

Understanding diversity has played a significant role in this study and how diversity in itself can make significant changes to working practices. Stacey's theory argues that it is these imperfections which cause a greater understanding or misunderstanding between the agents which propels new understandings within the working environment. Diversity within the local collectives is not the only contributing factor here but diverse interaction with other contextual actors also plays a part. The narratives have helped illustrate how the changing environment of the workplace helps change the local collectives and how they adapt to these challenging circumstances. This is an important finding within this study which helps identify how learning and organisational knowledge relate to work and learning.

#### **9.4.1 Learning and innovation**

Participants frequently described how they had to be innovative within the workplace and that innovation and learning were very closely linked. What was particularly interesting was when the participants were asked how their learning had contributed to organisational knowledge in some context; they often referred or hinted at innovation. These discussions have provided an interesting understanding on how the creation of new knowledge which has materialised from learning through work offers a more critical understanding between learning and knowledge. As a consequence this helps us have a much stronger

understanding of the combined actions of learning and knowledge and its approaches in organisations.

Reagans and McEvily (2003) believe that any form of knowledge that is collected or accumulated is a form of learning. However, within this study the 'collected' or the 'accumulation' is seen as a very narrow definition or feature when trying to define learning especially when trying to identify participants engagement with their work and the creativity involved in learning. Foss and Mahnke (2003) believe that innovation is very risky which can be very unpredictable and immensely labour intensive which requires significant human capital investments. This study slightly contradicts this view where innovation and its creativity are seen as an everyday occurrence within a complex and ever changing working environment.

### **9.5 Learning and knowledge**

This study has provided a very different perspective on learning and innovation which contributes to a new and different understanding of the existing literature. Elkjaer (2004) argues that organisational dynamics and metaphors play an important role when looking at learning within organisations. This study has considered the acquisition, participation and the production within organisational dynamics which has helped provide a more comprehensive view of looking at learning in this organisation.

The traditional way of looking at learning places focus on the individual and the way that person's conscious understanding, rationalises, interprets and categorises and stores this knowledge (Fenwick and Tennant, 2004). The formation of knowledge which is seen as stable where the acquisition of knowledge can be easily added is where this study diverges. The participants do provide examples where they have learnt something new and how this has altered their plans and contributed to usable knowledge in the local collectives. Some of the dominant acquisition theories on knowledge suggest this is exact, substantial and a very stable thing. However, this study has found that

knowledge grows from the interactivity of its members in a particular environment and context where this is shared, utilised and discarded from contextual feedback loops. This study suggests that learning as acquisition is only one part of a complex and dynamic system of learning and knowledge and not an essential feature.

Participation learning theories are more closely linked to how the participants in this study learn but once again this does not explain the findings entirely. Closely associated with the findings in this study, participation theories do focus on learning through the participation in communities in everyday life where learning moves from the mind intellectually to learning that is situated more in the situation where members interact and participate (Fenwick 2003). Theories such as these focus on the creation where learning is seen as contextual and relational which is imbedded in action (Spender, 2006a). The interesting element here is that they see the individual and collective as very different entities where participation focuses on the learner and the relevant context. The separation of the individual and the collective can be seen as a diversion from the participation discussions.

Elkjaer (2009) believes that understanding learning, organisational learning and its acquisition and how these experiences and interactive adjustments happen between the individual and the environment is a key feature. This study does follow a similar line but in addition to this it wanted to understand how new knowledge was created in a time and environment of uncertainty through nonlinear interaction of the collectives.

If we consider this way of thinking then learning centres around the creation of knowledge which can be placed in a particular context that emerges from interaction. These collectives are dynamic and active and are often going through a state of change and/or fluctuation.

### **9.5.1 Workplace learning**

The discussions above draw on the experiences of workplace learning and how this relates to theories surrounding, learning, knowledge management and complexity. The participants within this study describe how they self-organise individually and collectively and describe how they utilise diversity within the workplace which can be nonlinear and interactive.

These experiences help provide a new and fresh perspective in the contemporary academic literature and provide a better understanding between the individual and the collectives and the emergence of knowledge within a context. This study has also helped provide insight into the disconnection between the formal and informal elements of the organisation and links between innovation and learning

The following discussions will expand further on some of the issues surrounding learning experiences and knowledge within the organisation and how this links (or not) to some of the theoretical constructions.

### **9.6 Learning and organisational knowledge**

One of the key findings of this research is that the formal parts of the organisations which focuses on policy, consistency and control is very restrictive. There is little doubt that within this organisation learning is an integral part of workplace experience. However, the heavy regulations and policies (internal and external) which have been developed to maintain consistency and control creates tensions where autonomy and control compete. As a consequence of these competing factors organisational knowledge struggles to grow from the learning of its organisational members.

The difficult aspect of this is how to manage knowledge effectively? The organisational members acknowledge that knowledge is very important in the organisation particularly for problem solving. The justification, validation and understanding of knowledge and how this could be used in the local collectives

were of particular importance to its members. The findings of this study seem to suggest that knowledge is very difficult to manage at a local level and how this could be captured at an organisational level and used effectively for its consumption is slightly problematic.

The narratives have demonstrated the complex nature of learning and of knowledge management and how this interweaves and interconnects between relationships, experiences and organisational contexts.

### **9.6.1 Individual learning and the collective**

Members of the organisation in each of the focus groups frequently discussed how the organisation had sets of rules and procedures that must be followed in some context and how this caused various tensions and frustrations. The disconnection between the local collectives, organisation and the Senior Management Team is critical to the original research question and will now be discussed in more detail.

The narratives in this study frequently discuss how they have shared learning in the local collectives and this is something similar to what Field (2004) would describe as 'shared-interest-group learning'. Field suggests that 'shared-interest-group learning' is very useful in helping us understanding how individuals at a very local level (mostly) interact to solve immediate local problems. A very similar vein was highlighted by Scarbrough, Bresnen et al (2004) in their research when they identified a sharp contrast to what is learnt and diffused at a very local collective level to what is learnt and diffused across the broader organisation. They go on and say that organisation and individuals are not the same and organisations have been constructed for a specific purpose where individuals have not, which leads us to consider the informal and formal emergent properties. The structure of the formal organisation has been constructed for a particular purpose whereas the emergence of the local collective is more self-organised and undirected.

The findings of this study seem to suggest something slightly different to the work of Stacey (2003a) when the individual and the organisation are aspects of the same process in their interaction of learning. Although the findings in this research would agree with the interaction of the individual and the organisation, the structure of the organisation prevents the development process of this interaction.

On numerous occasions the participants within this study highlight how the structure of the organisation is one of the main reasons for the disconnection between the local collectives and the broader organisation. The participants discuss how the organisation is driven by consistency and control and how they as members must remain flexible to meet the needs which are predominantly driven by their engagement within the organisation context.

Identifying the relationship between the learning individual and the learning collective and how this links to the organisation is very difficult. One of these reasons is that the organisation has a very purposeful structure which has some disconnection from the activities of the local collectives. Another reason is that there is a clear contradiction between the lack of boundaries between the individual and the local collective and the boundaries that exist between the local collective and the organisation. It is this disconnection that cuts the knowledge flow within the organisation.

### **9.6.2 Autonomy and consistency**

The narratives describe how the participants are frequently at odds with attempting to maintain an element of fitness and flexibility within their own working environment. Flexibility is an existing theme in the literature surrounding workplace learning and knowledge management and written about by Fenwick (2001) and Koopmans (2005) and once again this underpins a much deeper discussion about the nature of knowledge.

The rules of the organisation which are there to promote consistency with a view that knowledge can be easily verified which is rooted in truth and if you

share this notion there can be a presumption that knowledge is stable and separate from its context. The assumption here is that there is always a clear relationship between cause and effect which leads to specific applications of certain occurrence. Such beliefs will allow a consistent solution to standard problems that may emerge in the workplace.

However, the participants in this study do not think of knowledge in this way and see knowledge as something that is constructed in the collective which relies on a context and is continually changing. The work of the participants is under continuous change and the assumptions of consistent knowledge which is linear and predictable seems to be inappropriate where Nonlinear features. In these cases a level of autonomy is needed and seen as a critical element for the organisation members to perform appropriately.

It is this lack of shared understanding on how to maximise the performance of the organisation which seems to dislocate and drive a wedge between the local collectives and the formal organisation. In each of the workshops the participants described how a level of autonomy and tolerance was essential with an environment where the members were given permission to experiment, was seen as critical to learn and work effectively. However, an environment which focused on rules and procedures had the opposite effect and constrained their effectiveness. The participants described how this was the same whether they were dealing with customers or heavily involved in developing new policies and/or qualifications. Complexity theory would argue that these interactions between the organisation members which are nonlinear leads to novel and unpredictable outcomes and requires a level of greater flexibility (Davis, Phelps et al, 2004).

### **9.6.3 Learning through work**

This study has demonstrated how learning occurs locally often in very small clusters, however, this is rarely recognised or supported by the organisation which often seems to be very undervalued and in some occasions discouraged.

The type of work that is conducted in this organisation provides fertile opportunities for learning and produces excellent knowledge outcomes for the individual and the local collectives. The surprise findings in this study are that this learning space is undervalued and rarely utilised in this organisation where the worker and learning are separated. Whereas, formal learning and knowledge systems and their processes are used against the organisation members to maintain an element of consistency and control.

This organisation does provide an element of training for their organisational members but this is sporadic and inconsistent and seems more focused on technology, economic and political aims and objectives. Koopman (2005) argues that managers often dominate this path and focus more on the functional elements of learning and knowledge. Within this organisation there does seem to be a strong focus on the technical and economic interests and this is a powerful driver for their learning and knowledge management programmes. As a consequence of this there is a much stronger focus on in-house training and technological aids in the forms of databases and other online tools.

We cannot assume that all learning that happens through work will in some way support the overall organisation aims and in fact it would be fair to say that much will not. Field (2004) argues that shared learning is not always rich, directed or goal orientated and this can create some problems for organisations that are built on traditional values of management and control. This study has found that much of the learning that occurs has occurred as a result of immediate and local issues where new knowledge is reinforced or quenched without exposing this to the broader elements of the organisation.

#### **9.6.4 Learning through work/organisational knowledge**

The research in this study shows that learning emerges through the work of all the focus groups regardless of the work they undertake. This seems to challenge the work of Koopmans (2005) who argues that as the intensity of

knowledge increases this places an enormous amount of pressure on organisation members to be more innovative. It is clear that this organisation is going through constant change and the organisation members interact in a very nonlinear way. Despite the knowledge intensity of this organisation and the fact they carry heavy workloads, it is learning through work which seems to be the dominant discussions and how this contributes to the knowledge of the organisation. Despite the fact that knowledge was seen as sophisticated and complex by the participants this did not waver the views on how they spoke about learning.

The participants rarely talked about their knowledge management systems to resolve or support them in their work and when they did this was on a very limited level. Instead, when participants wanted solutions to their immediate problems they relied on members in their immediate vicinity to meet their expectations. These findings are supported by the work of Dixon (2000) and Cross, Parker et al (2001) in their knowledge management research. This raises a very interesting point that organisational members may not be inclined to follow the official organisations information channels and may instead be more concerned with the validation of that knowledge within a context.

As discussed previously organisational learning is seen as very important if an organisation wants to remain competitive and despite this the participants highlight how it is the individual and the local collective who are the critical factor in dealing with the pressures of their environment. Participants also highlight how they encounter numerous difficulties in connecting with the organisation and how they have a much stronger affiliation with their local collectives.

As a result, this research suggests that learning occurs in a very ad hoc way and this often happens at the very edges of the organisation and improves the performance of the individual and the local collective. This happens very incrementally and helps us understand the behaviours and localised changes within the organisation. Despite this the organisations hierarchical structure fails

to anticipate and respond to its environment effectively and this is supported by the work of Waldrop (1994) who argues that a hierarchical structure can change a systems ability to learn, adapt and evolve effectively.

In addition, this study has highlighted how knowledge development is closely entwined with learning. As a consequence of this intimately entwined entanglement there does seem to be some difficulty in saying that this can be managed effectively which is supported by Alvesson and Karreman (2001) when they argue that knowledge is very ambiguous, dynamic and intrinsically related to meaning, so therefore very difficult to manage. The participants in this study discuss how knowledge emerges through interaction which has validity and local support which is often situated in its production. Once again this seems to be at odds with management styles that are fixated with control and consistency and supported by various views of knowledge in organisations (Snowden, 2002, McDermott et al 2002, Stacey, 2003a) to name a few.

This study has found that the idea that organisational learning is very problematic questions the assumptions that an organisation can be seen as a 'whole' learning entity. Instead it shows that learning from the individual and the local collectives contributes to the organisational borders. In addition, this study throws some doubt on the idea of 'knowledge management' and the findings provide insight as to how knowledge activities in this organisation are intrinsically self-organising.

## **9.7 Chapter conclusions**

The discussions above have helped demonstrate how learning and knowledge are very independent and demonstrate problems concerning collective learning and organisational knowledge. Tensions around the organisations requirements of consistency and control and how staff would like greater flexibility have been highlighted, especially around the flow of information and knowledge. There is little doubt that the work conducted in this organisation is complex and due to the nature of this complexity there are various limitations of an effective

knowledge management approach. In addition, the arguments around the ability of this organisation to learn have been identified and how this knowledge is very difficult to manage.

Considerations of complexity in this research has helped identify how 'learning' and 'knowledge' are seen as very interactive between organisational members which is formed and reformed in a particular work context. Identifying the independence helps in business application by bringing together the different specialist areas. Organisation members who engage and learn help contribute to organisational knowledge and this happens frequently through their work. Having a much greater understanding of this has helped provide a more holistic approach which recognises the complex needs of its organisational members such as motivational, social, developmental and technical. In addition, it highlights how organisations can benefit from having a much greater understanding of how its members interact in the real world and how they learn and share knowledge which contributes to the organisations competitiveness in a changing environment.

## Chapter 10

### 10.1 Conclusion

The aim of this research was to develop 'whole' perspectives on learning and knowledge in organisations whilst considering complexity theory. What this research identified was that there needs to be an amalgamation of learning and knowledge approaches in this organisation. Learning and knowledge in this study are often completely separate from the management systems and a strong emphasis is placed on workplace learning. Learning and knowledge is a complex entanglement which is deeply entwined where each contributes and forms the other (Huzzard, 2004).

If we consider how this could have implications for business it is important to reconsider some of the themes previously covered. There should be a greater focus on the individual and the collective along with strategies to promote interactivity, autonomy, risk taking, problem solving and the promotion of diversity which will interrupt stagnant business practices at the individual, collective and organisational level. Fuller and Unwin (2004) support these views and argue that knowledge is a complex interactive process which is active and unrestrained.

A complexivist view would be that a tightly controlled organisation which is heavily focused on structures, strategies and plans is senseless. Anderson (1999) argues individuals try and improve their fitness through this interaction where they self-organise in local groups and as a consequence the emergence of surprise outcomes happen. This view does help provide a less rational perspective where systems are seen as secondary which goes against some of the more traditional views on organisations (Frank and Fahrback, 1999).

## 10.2 Individual and collective learning

This research helps add weight to the social perspectives on learning in organisations and questions some of the thinking around the more formal, individualistic perspectives on learning in organisations (Visser, 2007). In addition, this research helps focus on the human processes of knowledge and how this is emergent and active in organisations. Colon (2003) argues that there is a lot of knowledge in organisations which emerges from informal learning and organisations should have plans in place that allow this to emerge without interference. It is very likely that this learning is frequently overlooked by researchers and employers but is extremely dependant on this informal learning where significant contributions are made towards the functionality of that organisation.

### 10.2.1 Emergence

On a practical level this may mean that managers need to redevelop the whole concept of how people can learn more effectively within an organisation. A process which allows greater experimentation and greater flexibility to resolve workplace problems may be needed. "The complexity involved in ensuring the right balance between these different dimensions means that in the final analysis one cannot realistically expect more than incomplete or imperfect learning organisations. However, this does not in any way negate the validity of the quest to reconcile these competing but 'real' interests...One of the keys to promoting learning in organisations is to organise work in such a way that it promotes human development" (Nyhan, Cressey et al 2004, p67).

This study reveals that learning emerges from the individual and the local collectives through change in a particular context. It is from these demands that innovation seems to emerge free from control which leads to important knowledge development. When you have conflict between the individual and the organisation where the organisation attempts to teach the individual in some capacity we see failure and/or resistance.

What does seem apparent in this study is that it is important to try and align organisational members with the organisations goals. Given that learning emerges from such interaction, it is vitally important to allow all groups within the organisation to engage around a particular problem which in itself will help develop knowledge in the organisation. Any attempt to try and force the development of such groups can have negative consequences. Instead these groups should be allowed to develop organically thus allowing greater opportunities for learning and knowledge development and sharing within the organisation.

### **10.2.2 Autonomy**

The participants in this research discussed how they would like more autonomy around their exploration and how they make decisions but at the same time they discussed how they feared reprisals from the senior management team if they failed. This is reflected in the literature where Stacey (2003a) argues that learning inevitably will give rise to anxiety and in a society where it is important to know and have a good understanding, not having this can create a great deal of shame.

At the same time, it can be very difficult for learners to experiment even when the threat of reprisals is removed; Schein (1999) argues that any form of encouragement that wants to promote innovation must be joined with a supportive environment in an attempt to reduce these anxieties.

### **10.2.3 Interaction**

The narratives in this study are critical in understanding human experiences and their interpretations on how they develop and share knowledge. The learning and knowledge facilitator acts as an interpreter to these narratives. Fenwick (2003) argues that story making is a good way in which an educationalist can interpret various relations and activities and then reflect this back on itself.

Spencer (2002) reminds us that workers have always learned at work and this study is no different, highlighting how knowledge emerges through various interactions situated in a work context. As a business it is important to provide an environment and the appropriate time for local collectives to interact and develop situated knowledge. This view is shared with Ellstrom (2001) who argues that to integrate work and learning you need to provide appropriate learning resources which might include space and time.

This study reinforces many of these arguments, where appropriate time and space that is removed or separate from the more formal organisational constraints is beneficial to learning. The participants in this study frequently discussed how teams self-organise outside of the formal organisation and how this provides important learning.

As previously discussed this research highlights how the organisational members prefer to use trusted and accessible sources when learning and sharing knowledge. For a business it might be important to let go of some of the complex management/information systems and provide greater opportunities for interaction to promote better knowledge sharing.

However, it needs to be noted that this study is not saying that management/information systems are not important; it is saying that these organisational members have to interpret this information to deal with local contextual issues. The disconnection between organisation members, operational imperatives and organisation policy seemed to occur as a result of the members rejecting a standard set of principles and practices for their own constructions of doing the right thing.

#### **10.2.4 Flexibility**

Flexibility and recognition is seen as very important around the development, collection and verification of knowledge which although may be seen as a great opportunity at the local level can be seen as a threat to the organisations success. Having locally developed knowledge may be seen as extremely

effective for the local fitness, but this learning may be inappropriate for the organisation to remain effective. What is important is that there is some understanding and recognition that these working experiences can be very nonlinear but the ability to problem solve and network effectively can provide great opportunities for learners to work flexibly and at the same time meet organisation imperatives.

This study challenges some of the arguments around whether learning should be taken out of the training room and that knowledge is somehow canonical and that professionals manage effective training programmes. Fenwick (2003) supports this view and argues that we should challenge the prevailing orthodoxy around legitimate educational practices. This study does not place formal training at an advantage instead it underlines how the organisational members seemed to self-validate their own locally produced knowledge and how this is shared and valued to deal with immediate contextual issues. The organisational members often described how formal training sessions, internal communication and various management systems were disjointed and rarely appropriate to meet their needs. According to one member *"I have never seen such rubbish, they want us all to behave like robots but what use is it really. We have had various training needs analysis in this company and none of them ever work. It's ridiculous, a joke"*. These formal training sessions are focusing on a very linear path where consistent solutions are being applied and which clearly do not meet the needs of the organisational members which are nonlinear.

Criticism of formal training is available in the literatures and the importance of non-formal education and training has been highlighted and how this must meet and satisfy a diverse field (Bhola, 1984, Carron and Carr-Hill, 1991, Lauglo, 2001).

What this study seems to suggest is that instead of having formalised systems and training programmes to support learning and knowledge sharing there needs to be a greater appreciation and understanding that workplace learning is about relationships, continuous creation and exploration. These views are also

shared by Atkin (2000) who argues that learning should be placed in a particular context within a real community which will provide significant contributions and challenges.

Removing these training sessions from a more formal setting which may involve a training room will help provide legitimate emergent knowledge. As a consequence of these actions this will help provide an environment where knowledge can be shared across local collectives throughout the organisation removing instilled fears about failure and reprisals.

### **10.2.5 Diversity**

Diversity is seen as particularly important for creativity and innovation in a social setting. Nonaka (1994) argues that it is the social system and the diverse viewpoints that produce a creative organisation and it is this complexity around the self-organising of groups which helps diverse thinking to resolve problems. In essence different ideas and views are very conducive to enlarging individual and group perspectives.

Organisations that try and limit diversity will therefore restrict learning and the development of knowledge. Nonaka and Takeuchi (1995) argue that when this happens the organisation becomes stagnant and/or redundant.

Kauffman (1995) argues that diversity continuously promotes diversity which promotes change and opens up new niches through rich and innovative interactions which allows an effective response to new and emerging environments. Therefore diversity promotes and develops new knowledge throughout these interactions involving the individual and the collective. Stacey (2003b, p417) supports this view; "Transformation is possible only when the entities, their interactions with each other and their interaction with entities in the system's environment are sufficiently heterogeneous, that is sufficiently diverse so that new themes emerge as people struggle to understand each other and as their conversations are cross-fertilised through conversations with people in other communities and disciplines".

### **10.2.6 Innovation**

Innovation and how organisational members should challenge the norms is seen as important in the academic literature. Argyris (1999) and Fenwick (2003) argue that it is important to challenge and interrupt normative behaviours as this will help in the development of new knowledge. Evans and Kersh (2004) argue that an environment that is stimulating and engaging where innovation is recognised provides a variety of skills and greater opportunities in learning.

The development of knowledge beyond the local collective is troublesome for this organisation and a greater recognition of innovation and acceptance for individuals to challenge the norms are needed. Individuals in this organisation fear reprisals and have a sense of deviance outside of the local collective and this needs removing to promote new knowledge outside of the local collectives.

### **10.2.7 Complexity (Implications for business)**

The use of complexity has helped identify a different way of thinking around learning and knowledge and how this fits into management practices. This study had identified how self-organisation and connections within the organisation play a significant part in this development. The categories in this study have helped feature the experiences and how this informs prompt and interesting discussions. Bringing these prompt and interesting features to the forefront has helped identify what is in the background and provided a richer and fuller understanding.

### **10.2.8 Power and politics**

Power and politics and how this relates to learning are complex but some writers such as Schein (1999) believe it is essential in how we understand learning within organisations and the surrounding dynamics. Control, oppression and direction are issues which are seen to tie up with moral control. The dominating influence or logic within organisations includes such things as an 'expert' and/or some kind of dominant scientific discipline of knowledge

which are seen as a superior or legitimate form of knowledge. Fenwick (2003) argues this approach allows us to have a better understanding of some of the shadow themes that emerge, which gives us a greater consideration of some of these complex issues.

Holmes (2004) who challenges the work of Schein (1999) around empowerment through learning and how this can be a form of coercion does provide a deeper insight into the complexity of learning in the workplace. However, within this study the participants view learning rather than training as an opportunity to promote greater autonomy in the workplace which leads to independent and more effective learning.

The participants in this study see power as something that is formed through local work practices and relationships and empowerment is something that the employee assumes rather than that which is delivered by the organisation. These findings are similar to the work of Field (1997) and Contu and Willmott (2003) who disagree with some of the later work of Schein (1999) who argues that coercion is used to shift individual schematics to produce a cultural change.

### **10.2.9 Hierarchy**

A variety of issues arose around the hierarchy within the organisation and how organisational members are reluctant to share their learning and knowledge within the broader organisation.

On several occasions the participants within this study described how locally developed knowledge was taken from them by senior members within the organisation and then utilised for their own gain. In addition, they described how they are expected to conform to a set of rules and procedures of the organisation which is seen as good. However, if you dare challenge these procedures this was seen as bad and was frequently frowned upon by the hierarchy. Stacey (2003a) argues that leadership has become a way of delivering a set of rules and procedures to deliver harmony across the organisation and a way of making individuals conform. There does seem to be

little or no harmony across this organisation and in fact local collectives are encouraged not to conform, placing a new emphasis on what is ethical. Griffin (2001) argues that agents develop their own ethical approaches through local interaction and is based on context. There are numerous examples in this study where individuals within this organisation are willing to risk losing their jobs because of their locally developed ethical standards. This in itself provides a very interesting insight to how individuals learn through work and how they share knowledge within the organisation.

Figure 10.1 below provides an illustration of the current challenges faced at company XXXX. This illustration demonstrates that the flow of learning and knowledge around the organisation is extremely fragmented and held mainly within the local collective. The local collectives place barriers between themselves and the broader organisation. Participants within the study believe that the complex structure of the organisation and how the organisation was obsessed with the key characteristics of scientific management and how they wanted strict controls, restricted learning and knowledge sharing within the organisation.

**Figure 10.1: Current challenges faced at company XXXX**

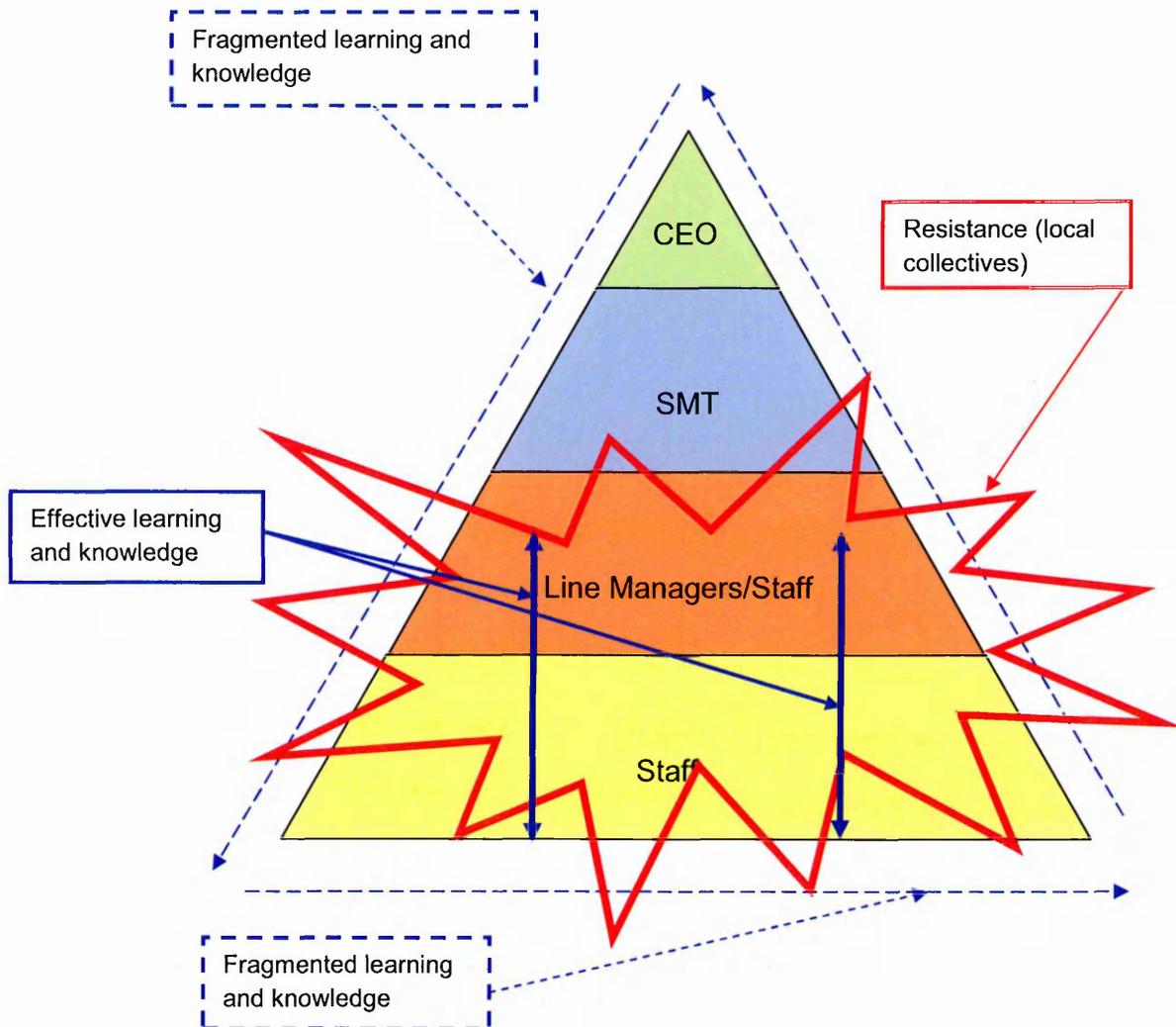
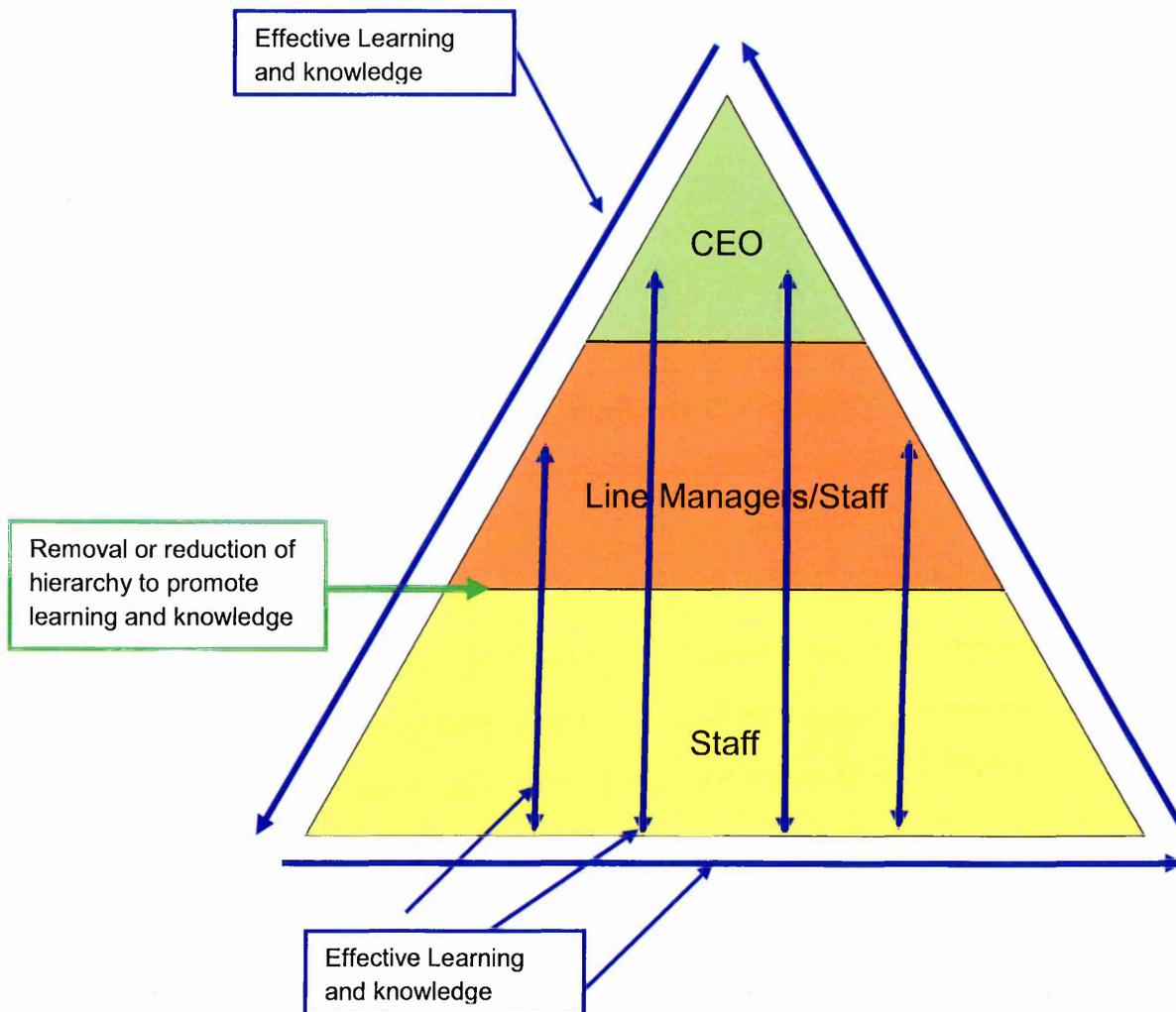


Figure 10.2 below provides an illustration of the potential improvements that could be made at company XXXX to promote learning and knowledge. The illustration provides an improved model of what could happen if you remove or reduce the hierarchy and strict controls within the organisation. The flow of learning and knowledge would flow around the organisation and pour through the various agents within. The local collectives would reduce the locally developed barriers and contribute to organisational knowledge more effectively.

**Figure 10.2: Potential improvements that could be made at company XXXX**



### 10.3 Findings and summary

This study has helped demonstrate the links between learning and knowledge within a 'real' business environment. The arguments that have been presented throughout this chapter are that organisations as a whole do not learn and it is the local collective which learn often within their specific boundaries. The participants describe how knowledge contained within the organisation cannot be easily managed despite the views of Senior Management.

At the beginning of this research there were several questions that were unanswered and this research wanted to examine the complex entanglement between learning and knowledge within a professional and very influential organisation that has over 4 million customers. This research has helped develop a new methodological approach which contributes to the body of knowledge around organisational learning, knowledge management and workplace learning.

There were many findings within this study, however, six key areas emerged which will now be summarised more succinctly to help conclude some of these arguments.

1. The use of the complexity theory helped provide a much deeper understanding into learning and knowledge within organisations and how this is relentless in its interaction which provides a more holistic perspective on how learning and knowledge interacts in a 'real' working environment. This provided a more organic way of looking at learning and knowledge which is more about innovation, relationships, networking and informal learning which all helps contribute to knowledge.
2. The issues surrounding learning are not as clear as a lot of the literature seems to suggest. Individuals and the local collectives have complex entanglement where learning seems to emerge from a complex web of self-organisation and interaction within a specific work context.

3. The findings showed how organisational members struggled with the wide range of tasks they had to complete in their working day and how they also struggled with this constant change. Knowledge emerged as a consequence of the learning that organisation members had to undertake on a daily basis which provides great opportunities for bringing together the organisation's learning and knowledge strategies.
4. The organisational members described how the organisation was heavily focused on some of the key characteristics of scientific management and how they wanted strict controls and defined outcomes which created tensions and uncertainty particularly around how they should interact with one another in their working lives. As a consequence of these tensions, this restricted opportunities around learning and knowledge sharing within the broader organisation.
5. The organisation prided itself with its slogan 'The Diversity of Learning' where they believed they were a learning organisation. What this research found was that learning and knowledge sharing was very much restricted to the local collectives and held at the fringes of the organisation. As a consequence this research questions the assumptions that organisations can truly learn.
6. The term 'knowledge' was difficult to define for these organisational members and was very much seen as a moving and active entity. The reality of knowledge was seen as very valuable but a much greater focus was placed on this in the local collectives within a specific context and time. Knowledge that was seen as an accepted standard or principle was questioned by these organisational members. The formal training that was provided by the organisation and the various management systems that were being used were seen as incompatible to what the members found valuable for learning and developing valid knowledge.

Finally, this research has demonstrated that learning and knowledge cannot be separated and co-emerge in the activities of its organisational members where they try and remain effective in their local collectives in order to remain efficient

through constant change. When we consider learning and knowledge in the ways of these participants we could argue that we need to separate and disengage from the dominant discourse that various management systems such as data and information can be managed effectively and a combination of strategies may be more prudent. This research agrees with the findings of Nonaka and Konno (1998) when they highlight that environments which are self-organised where solutions can evolve through improvisation seem to be a strong factor for effective learning and knowledge development.

Considering all the issues discussed and how this links to professional practice it might be time to consider some fundamental changes in how people learn and share knowledge both in educational environments and elsewhere. Many businesses are still dominated by the key characteristics of scientific management which stifle growth and movement in an increasingly competitive global market. For example, organisations that are less focused on strict controls and unnecessary bureaucracy will promote learning and allow knowledge to flow across the 'whole' organisation.

If we are facing one of the worst global economic downturns since the great depression of 1929 it may be time for businesses to re-think and manage differently and be more proactive in how to utilise existing talent in its workforce, to remain competitive.

#### **10.4 Contributions to study**

This study has made contributions to the body of knowledge in organisational learning, knowledge management and workplace learning theory. The use of grounded theory that was sensitive to complexity theory helped provide a fresh perspective through its theoretical and empirical integration.

The study's aim was to provide a more holistic perspective on learning and knowledge through experiences in a real business environment. The discussions emphasised the complex entanglement of learning and knowledge

and how this was inseparable from the individual and the collective and how the interaction occurred within a context.

The study fulfilled its overall objectives by developing various characteristics and themes that emerged through the narratives that related to learning and knowledge within a real business environment. Overall it highlighted the complexities that surround these emergent themes and how they relate to each other. The use of grounded theory that was sensitive to complexity provided a more innovative approach which strengthened its theoretical integrity and helped provide a more informed range of learning and knowledge facilitation strategies.

The study also provided empirical validation of the importance of complexity theory when thinking about the human experiences within a real working environment. This study also provided a much greater insight and further clarification about local interests and how they learn and develop knowledge which provided an interesting perspective on organisational learning.

The research provided a much deeper understanding of learning and knowledge experience and how the two occur in a complex network of interactions permeated and reinforced by context and supported practices. This is built on the recognition of learning and knowledge and how this is intimately tied up with human interaction and with business practices.

## 10.5 Further research

This research has helped identify the relationships between learning and organisation knowledge from the experiences of organisational members. However, as with any type of research it has its limitations and new areas of potential research have emerged. Three possible areas have been highlighted below and if researched effectively will have significant commercial application.

1. What type of organisation truly learns and does this differ depending on the organisation environment and/or industry?
2. Are there differences between organisations that have a 'truly' flexible structure than those who do not? Does this impact directly on how people learn and share knowledge?
3. Are there any obvious restrictions that could emerge by combining learning and knowledge facilitation and how could this be addressed to work more effectively in business?

This is not an exhaustive list but does help in the continuation of related research with the view of having 'real' business application.

## Bibliography

Accenture (2002) *Typology of Work Settings*. Presentation given at the Knowledge Management Seminar, 31<sup>st</sup> October 2002 at the Overseas Development Institute, London. Available at [http://www.odi.org.uk/rapid/Bibliographies/KM/Background\\_Review/Abstracts/KM\\_Abs\\_00.htm](http://www.odi.org.uk/rapid/Bibliographies/KM/Background_Review/Abstracts/KM_Abs_00.htm) [Accessed 26/09/09]

Ackerman, M, S. Pipek, V et al. (2003) *Sharing Expertise: Beyond Knowledge Management*, Cambridge, Mass, London, MIT Press.

Ackroyd, S and Fleetwood, S. (2000) *Realist Perspectives on Organization and Management*. London, Routledge.

Acton, T and Golden, W. (2003) *Measuring Usability in User Interfaces: A Case of Divergent Metrics*, *Interfaces*, (55), 8-15.

Acton, T and Golden, W. (2003) *Training the knowledge worker: a descriptive study of training practices in Irish software companies*, *Journal of European Industrial Training*, 27 (2), 134-148.

Adolph, S. W. Hall, W and Kruchten, P. (2011) Using Grounded Theory to Study the Experience of Software Development. *Journal of Empirical Software Engineering* 16, (4)

Adorno, T. (1981) *Minima Moralia: Reflections from a damaged life*. London, Verso.

Adorno, T. (1981) *Prisms: Essays in cultural criticism and society*. Cambridge, MA, MIT Press.

Adorno, T. (2007) *Critical Thinkers*. USA, Routledge.

Ahmed, P, K. Lim, K, K and Zairi, M. (1999) *Measurement practice for knowledge management*. *Journal of Workspace Learning: Employee Counselling Today* 11 (8), 300-325.

Akgun, A. Lynn, S et al. (2003) *Organizational Learning: A Socio-Cognitive Framework*, *Human Relations*, 56 (7), 835-860.

Alavi, M and Leidner, D. (2001) *Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues*, *MIS Quarterly* 25 (1), 105-138.

Alavi, M and Tiwana, A. (2003) *Knowledge Management: The Information Technology Dimension*, Carlton, Victoria, Blackwell Publishing.

Allen, P, M and Strathern, M. (2003) *Evolution, Emergence, and Learning in Complex Systems*, *Emergence* 5 (4), 8-43.

Alvesson, M and Skoldberg, K. (2000) *Reflexive Methodology: New Vistas for Qualitative Research*, London, Sage.

Alvesson, M and Deetz, S. (2000) *Doing Critical Management Research*. London, Sage.

Alvesson, M and Karreman, D. (2001) *Odd Couple: Making Sense of the Curious Concept of Knowledge Management*, *Journal of Management Studies* 38 (7), 985-1020.

Alvesson, M and Willmott, H. (1992) *Critical Management Studies*. London, Sage.

Alvesson, M and Willmott, H. (1996) *Making Sense of Management: A Critical Introduction*. London, Sage.

Alvesson, M and Willmott, H. (2003) *Studying Management Critically*. London, Sage.

Anderson, C and McMillan, E. (2003) *Of Ants and Men: Self-Organized Teams in Human and Insect Organisations*. *Emergence* 5 (2), 26-42.

Anderson, D. Brown, M et al. (2004) *Vocational Education and Training. Dimensions of Adult Learning: Adult Education and Training in a Global Era*. Crows Nest, NSW, Allen and Unwin, 230-255.

Anderson, P. (1999) *Complexity Theory and Organization Science* *Organization Science* 10 (3), 210-230.

Annells, M. (1996) Grounded Theory Method: Philosophical Perspectives, Paradigm of Inquiry, and Postmodernism. *Qualitative Health Research* 6, (3), 375-396.

Archer, M. (1995) *Realist Social Theory: The Morphogenetic Approach*. Cambridge, Cambridge University Press.

Archer, M. (2000) *Being Human, the Problem of Agency*. Cambridge, Cambridge University Press.

Archer, M. (2003) *Structure, Agency and the Internal Conversation*. Cambridge, Cambridge University Press.

Archer, M. Bhaskar, R, et al. (1998) *Critical Realism: Essential Reading*. London, Routledge.

Argyris, C and Schön, D. (1978) *Organizational learning: A theory of action perspective*, Reading, Mass, Addison Wesley.

Argyris, C. (1992) *Overcoming Organisational Defences: Facilitating Organisational Learning*, Boston, Allyn and Bacon.

Argyris, C. (1999) *On Organizational Learning*. Malden, Mass., Blackwell Business.

Armstrong, M. (2002) *Employee Rewards*. London. CIPD.

Atkin, J. (2000) *Styles of Learning*. *College of Education* 26 (3), 50-55.

Backstrom, T. (2004) *Collective Learning: A Way over the Ridge to a New Organizational Attractor*. *The Learning Organisation* 11(6), 462-479.

Barney, J. B. (1991) *Firm resources and sustained competitive advantage*. *Journal of Management* 17 (1), 95-120.

Baron , J,N and Kreps, D,M. (1999) *Strategic Human Resources*. New York: *Framework for General Managers*. New York. John Wiley and Sons.

Barthes, R. (1974) *Mythologies*. London, Jonathan Cape.

Bartlett, A, B and Ghoshal, S. (1989) *Managing across Borders: The Transnational Solution*. Harvard Business School Press. Boston. MA.

Bartlett, D. (2001) *Grounded theory*. Dans J. M (Ed.). *Reader's guide to the social sciences*. Chicago . Fitzroy Dearborn.

Bartlett, D, & Payne, S. (1997) *Grounded theory : Its basis, rationale and procedures*. Dans G. McKenzie, J. Powell & R. Usher (Eds.), *Understanding social research : Perspectives on methodology & practice*. London . Falmer Press.

Becker, B and Gerhart, B. (1996) *The impact of human resource management on organisational performance: Progress and prospects*. *Academy of Management Journal*, 39, 779-801.

Becker, B and Huselid, M. (1998) *High Performance Work Systems and Firm Performance: A Synthesis of Research and Managerial Implications*. *Research in Personnel and Human Resource Management* (16), 53-101.

Beesley, L. (2004) *Multi-Level Complexity in the Management of Knowledge Networks*. *Journal of Knowledge Management* 8 (3), 71-88.

Bella, D.A. King, J.B and Kalin, D. (2003) *The Dark Side of Organizations and a Method to Reveal It*. *Emergence*, 5 (3), 66-82.

Beltran-Martin, I, Roca-Puig, V, Escrig-Tena, A and Bou-Llusar, J (2008) *Human resource flexibility as a mediating variable between high performance work systems and performance*. *Journal of Management* 34, 1009–1044.

Benjamin, W. (1968) *The work of art in the age of mechanical reproduction*. New York, Schocken Books.

Berg, P.O. (1989) *Postmodern management? From fact to fiction in theory and practice*. *Scandinavian Journal of Management* 5 (3).

Bernard, H. R. (2006) *Research methods in anthropology*. Lanham, MD: Altamira Press.

Bhaskar, R. (1975) *A Realist Theory of Science*. Brighton., Harvester.

Bhaskar, R. (1989) *The Possibility of Naturalism*, 2nd edn, Brighton, Harvester.

Bhaskar, R. (1994) *Plato Etc.* London, Verso.

Bhola, H. (1984) *Non-Formal Education in Perspective*, 13 (1), 40-53

Binney, D. (2001) *The Knowledge Management Spectrum – Understanding the KM Landscape*, *Journal of Knowledge Management* 5 (1), 30-42.

Blackman, D and Henderson, S. (2005) *Know ways in Knowledge Management. The Learning Organisation* 12 (2), 150-170

Bourdieu, P, Chamboredon, J.C and Passeron, J, C. (1991) *The Craft of Sociology Epistemological Preliminaries*. Berlin and New York de Gruyter.

Boxall, P and Macky, K. (2009) *Research and theory on high performance work systems: Progressing the high involvement strea*, *Human Resource Management Journal* 19, 3–23.

Boyne, R and Rattansi, A. (1990) *Postmodernism and society*. New York, St. Martin's Press.

Brockman, B.,K and Morgan, R, M. (2003) *The role of existing knowledge in new product innovativeness and performance*, *Decision Sciences* 34 (2) 380-419.

Brookfield, S. (1985) *Self-Directed Learning: A Critical Review of Research. Self-Directed Learning: From Theory to Practice*. S. Brookfield. San Francisco, Jossey-Bass. 25 5-18.

Brown, J, S and Duguid, P. (1991) *Organisational learning and communities-of practice: Toward a unified view of working, learning, and innovation*, *Organisation Science* 2 (1), 40-57.

Brown, J, S and Duguid, P. (2000) *The Social Life of Information*. Boston, Massachusetts, Harvard Business School Press.

Brown, J, S. (1991) *Research that reinvents the corporation*, *Harvard Business Review* 69 (1), 102-11.

Brown, J. S and P. Duguid (2000) *Organizational Learning and Communities-of-Practice: Toward a Unified View of Working, Learning, and Innovation. Strategic Learning in a Knowledge Economy: Individual, Collective, and Organizational Learning Process*. Boston, Butterworth Heinemann.

Browning, J. (1999) *Teaching old dogs new tricks*. *New Statesman* 44 (56).

Bryant, A and Charmaz, K. (Eds) (2010) *The Sage Handbook of Grounded Theory*. London, Sage.

Burrell, G and Morgan, G. (1979) *Sociological Paradigms and Organizational Analysis*. London, Heinemann.

Business The Ultimate Resource. (2002). London. Bloomsbury.

Business The Ultimate Resource. (2003). *Movers And Shakers*. London. Bloomsbury.

Business The Ultimate Resource. (2003). *Talking Shop*. London. Bloomsbury.

Campbell, J. (1995) *Understanding John Dewey. Nature and co-operative intelligence*. Chicago. Open Court.

Cappelli, P and Crocker-Hefter, A. (1996) *Distinctive Human Resource are Firms Core Competencies*. *Organizational Dynamic* 24 (3).

Carnap, R. (1937) *The logical syntax of language*. London, Routledge.

Carnap, R. (1959) *The elimination of metaphysics through logical analysis of language*. London, Routledge.

Carron, G and Carr-Hill, R, A. (1991) *Non-Formal Education: Information and Planning Issues* (IIEP/Preserach Report 90) Paris. IIEP UNESCO

Chakravarthy, B. McEvily, S et al. (2003) *Knowledge Management and Compleitive Advantage. The Blackwell Handbook of Organizational Learning and Knowledge Management*. Carlton.Blackwell.

Charmaz, K. (1980) *The Social Reality of Death*. Reading. Addison-Wesley.

Charmaz, K (1991) *Good Days, Bad Days: The Self in Chronic Illness and Time*. New Brunswick. Rutgers University Press.

Charmaz, K. (2000) *Grounded Theory: Objectivist and Constructivist Methods. Handbook of Qualitative Research*. London. Sage.

Charmaz, K (2006) *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*. London. Sage.

Chaston, I. Badger, B et al. (2000) *Organizational Learning Style and Competences.* *European Journal of Marketing* 34 (5/6), 625-642.

Cilliers, P. (2002) *Why We Cannot Know Complex Things Completely.* *Emergence* 4 (1/2), 75-86.

Cilliers, P. (2005) *The Architecture of Complexity: An Introduction by Paul Cilliers* 7 (3-4), 128-138.

Cohen, M. D. (1999) *Commentary of the Organization Science Special Issue on Complexity.* *Organization Science* 10 (3), 373-376.

Cohen, M, D. Burkhart, R et al. (1995) *Routines and Other Recurring Action Patterns of Organizations: Contemporary Research Issues.* *International Institute of Applied Systems Analysis* 1-45.

Collinson, C and Parcell, G. (2004) *Learning to Fly*. London, Capstone Publishing.

Contu, A and Willmott, H (2003) *Re-Embedding Situatedness: The Importance of Power Relations in Learning Theory.* *Organization Science* 14 (3), 280-296.

Contu, A and Willmott, H. (2005) *You Spin Me Round: The Realist Turn in Organization and Management Studies.* *Journal of Management Studies* 42 (8).

Cook, S, D and Brown, J, S. (1999) *Bridging Epistemologies: the Generative Dance between Organizational Knowledge and Organizational Knowing.* *Organization Science* 10, (4).

Coombs, R and Hull, R. (1998) *Knowledge management practices' and path-dependency in innovation*, *Research Policy* (27) 235-253.

Coyne, R, D. (1997) *Creativity as commonplace*, *Design Studies* 18, (2), 135-141.

Crane, A. (1999) *Are you ethical? Please tick yes or no. On researching ethics in business organizations*. *Business Ethics* 20, 237–248.

Cross, R and Prusak, L (2002) *The People Who Make Organizations Go - or Stop*. *Harvard Business Review* 80 (6), 104-112.

Cross, R. A. Parker, A et al. (2001) *Knowing What We Know: Supporting Knowledge Creation and Sharing in Social Networks*. *Organizational Dynamics* 30 (2), 100-120.

Crossan, M. Lane, H and White, R (1999) *An Organizational Learning Framework; from Intuition to Institution*. *Academy of Management Review* 24 (3), 520-539.

Crossan, M (2003) *Altering Theories of Learning and Action: An Interview with Chris Argyris*. *Academy of Management Executive* 17 (2), 42-49.

Dahlbom, B and Mathiassen, L. (1995) *Computers in Context: The Philosophy and Practice of Systems Design*. Oxford, Blackwell Publishers.

Damen, L. (1987). *Culture Learning: The Fifth Dimension on the Language Classroom*. Reading, MA: Addison-Wesley.

Davenport, T and Prusak, L. (2000) *Working Knowledge*, Harvard Business School Press.

Davenport, T and Prusak, L. (1998) *Working Knowledge*. Boston, Harvard Business School Press.

Davis, B and Phelps, R (2004) *Complicity: An Introduction and a Welcome.*" *Complicity: An International Journal of Complexity and Education* 1 (1), 1-12.

Denzin, N. (1994) *The art and Politics of Interpretation*. Thousand Oaks, CA, Sage.

Denzin, N and Lincoln, Y. (1994) *Handbook of Qualitative Research*. Thousand Oaks, CA, Sage.

Denzin, N and Lincoln, Y. (1998) *The Landscape of Qualitative Research: Theories and Issues*. Thousand Oaks, CA, Sage.

Department of Education White Paper. (2010) *The Importance of Teaching*. Available at

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/175429/CM-7980.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/175429/CM-7980.pdf) [Accessed 12/10/10]

Derrida, J. (1976) *Of Grammatology*. London, John Hopkins Press.

Derrida, J. (1978) *Writing and Difference*. London, Routledge.

Dess, G and Picken, J. (2000) *Changing roles: leadership in the 21st century*, *Organisational Dynamics* 28 (3), 18-34.

Dewey, J. (1916) *Democracy and Education. An introduction to the philosophy of education* (1966 edn.). New York. Free Press.

Dewey, J. (1929) *Experience and Nature*. New York. Dover. (Dover edition first published in 1958).

Dewey, J. (1933) *How We Think. A restatement of the relation of reflective thinking to the educative process* (Revised edn.). Boston. D. C. Heath.

Dewey, J. (1938) *Experience and Education*. New York. Collier Books. (Collier edition first published 1963).

Dixon, N, M. (2000). *Common Knowledge: How Companies Thrive by Sharing What They Know*. Boston. Mass. Harvard Business School Press.

Dooley, K, J and Van de Ven, A, H (1999) *Explaining Complex Organizational Dynamics*. *Organization Science* 10 (3), 356-370.

Dovey, K and White, R (2005) *Learning About Learning in Knowledge-Intense Organizations. The Learning Organisation* 12 (3), 242-260.

Dreske, F. (1981) *Knowledge and the Flow of Information*. Cambridge. MA, MIT.

Drew, S, A, W and Smith, P, A, C. (1995) *The Learning Organization: Change Proofing and Strategy. The Learning Organisation* 2 (1), 4-16.

Drucker, P. (1988) *The coming of the new organization. Harvard business review* 66 (1), 42-54

Drucker, P. (1993) *Post-Capitalist Society*. Oxford, Butterworth Heinemann.

Dyer, L and Reeves, T. (1995) *Human Resource Strategies and Firm Performance: What Do We Know and Where Do We Need To Go? International Journal of Human Resource Management* 6, 650-670.

Dyson, S and Brown, B. (2006) *Social theory and applied health research*. Scotland, Open University Press.

Earl, M. (2001) *Knowledge Management Strategies: Toward a Taxonomy, Journal of Management Information Systems* 18(1), 215-233.

Easterby-Smith, M and Lyles, M. (2003) *The blackboard handbook of organizational learning and knowledge management*. Oxford. Blackwell Publishers.

Edvinson, L and Malone, M. (1997) *Intellectual Capital. New York, Harper Collins Publishers* 1 (4), 71-96.

Elkjaer, B and Simpson, B. (2011) *Pragmatism: A lived and living philosophy. What can it offer to contemporary organization theory? Research in the Sociology of Organizations* 32 50-85.

Elkjaer, B. (2003) *Social Learning Theory: Learning as Participation in Social Processes*. In M. Easterby-Smith & M. Lyles (Eds.). *The Blackwell Handbook of Organizational Learning and Knowledge Management*. Oxford. Blackwell Publishing.

Elkjaer, B. (2004) *Organizational Learning: The 'Third Way'*. *Management Learning* 35 (4), 410-432.

Elkjaer, B. (2009) *Pragmatism. A learning theory for the future. Contemporary theories of learning*. New York, Routledge.

Elkjaer, B., & Huysman, M. (2008) *Social Worlds Theory and the Power of Tension. The SAGE Handbook of New Approaches in Management and Organisation*, London, Sage.

Ellstrom, P, E. (2001) *Integrating Learning and Work: Problems and Prospects.*" *Human Resource Development Quarterly* 12 (4), 420-438.

Englehardt, C and Simmons, P (2002) *Creating an Organizational Space for Learning.* *The Learning Organisation* 9 (1), 39-47.

Evans, K and Kersh, N (2004) *Recognition of Tacit Skills and Knowledge - Sustaining Learning Outcomes in Workplace Environments.* *Journal of Workplace Learning* 16 (1/2), 60-72.

Evetts, J. (2009) *New Professionalism and New Public Management: Changes, Continuities and Consequences.* *Comparative Sociology* 8 247-266.

Faulkner, R. (1993) *Francis Bacon and the Projects of Progress*. Lanham, M., Roman and Littlefield.

Fenwick, T and Tennant, M. (2004) *Understanding Adult Learners. Dimensions of Adult Learning.* *Allen & Unwin* 52-73.

Fenwick, T, Edwards, R and Sawchuk, P. (2011) *Emerging Approaches to Educational Research: Tracing the Socio-material*. London, Routledge.

Fenwick, T. & Edwards, R. (2010) *Actor network theory in education*. London, Routledge.

Fenwick, T. (2001) *Tides of Change: New Themes and Questions in Workplace Learning. Sociocultural Perspectives on Learning through Work* Jossey-Bass 92 3-20.

Fenwick, T. (2003) *Learning Through Experience: Troubling Assumptions And Intersecting Questions*. Florida, Krieger.

Fenwick, T. (2003) *Reclaiming and Re-Embodying Experiential Learning through Complexity Science*. *Studies in the Education of Adults* 35 (2), 120-140.

Field, L. (1997) *Impediments to Empowerment and Learning within Organisations*. *The Learning Organisation* 4 (4), 147-158.

Field, L. (2000) *Organisational Learning: Basic Concepts. Understanding Adult Education and Training*. Allen and Unwin 2-52.

Field, L. (2004) *Rethinking 'Organisational ' Learning. Dimensions of Adult Learning: Adult Education and Training in a Global Era*. Allen and Unwin 200-220.

Fiol, C and Lyles, M (1985) *Organizational Learning, Academy of Management Review* 10 (4), 803-813.

Fleetwood, S and Ackroyd, S. (2004) *Critical Realist Applications in Organization and Management Studies*. London, Routledge.

Fook, J. (2002) *Social Work: Critical Theory and Practice*. London, Sage.

Foss, N, J and Mahnke, V. (2003) *Knowledge Management: What Can Organizational Economics Contribute?* Carlton, Vic, Blackwell Publishing.

Foucault, M. (1984) *Space, knowledge, and power, The Foucault Reader*. Penguin, London.

Frank, K. A and Fahrback, K (1999) *Organizational Culture as a Complex System: Balance and Information in Models of Influence and Selection*, *Organization Science* 10 (3), 253-277.

Frenkel, S and Sanders, K (2007) *Explaining variations in co-worker assistance in organizations*. *Organization Studies* 28, 797-823.

Fuller, A and Unwin, L (2004) *Expansive Learning Environments: Integrating Organizational and Personal Development. Workplace Learning in Context.* London, Routledge..

Galunic, D, C and Rodan, S. (1998) *Resource Recombinations in the firm: Knowledge Structures and the Potential for Schumpeterian Innovation, Strategic Management Journal* 19 (11), 90-1201.

Gell-Mann, M. (1994) *Complex Adaptive Systems, in Complexity: Metaphors, Models, and Reality*, Addison-Wesley, New York.

Gewirth, A. (1954) *Subjectivism and objectivism in the social sciences. Philosophy of Science* 2 155-163.

Gherardi, S. (2006) *Organizational Knowledge – The Texture of Workplace Learning.* Oxford, Blackwell.

Ghosh, A (2004) *Learning in Strategic Alliances: A Vygotskian Perspective. The Learning Organisation* 11(4/5), 300-312.

Giddens, A. (1976) *New Rules of Sociological Methods.* London, Hutchinson.

Glaser, B. (1978) *Theoretical Sensitivity. Sociology Press.* Mill Valley, CA.

Glaser, B (1992) *Emergence v Forcing Basics of Grounded Theory Analysis. Sociology Press.* Mill Valley, CA.

Glaser B (1998) *Doing grounded theory.* Mill Valley, CA.

Glaser, B and Strauss, A. (1967) *The Discovery of Grounded Theory: Strategies for Qualitative Research.* Chicago. Aldine Publications.

Gliner, J, A and Morgan, G, A. (2000) *Research methods in applied settings: An integrated approach to design and analysis.* Mahwah, NJ, Erlbaum.

Grant, R, M. (1996) *Toward a knowledge-based theory of the firm, Strategic Management Journal, (Winter Special Issue)* 17 105-122.

Greengard, S. (1998) *Will your culture support KM?, Workforce* 77 (10), 91-94.

Guardian Online (2013) *Schools Axe Valuable Vocational Training*. Available at <http://www.guardian.co.uk/education/2013/jan/28/schools-vocational-training> [Accessed 28/01/13]

Guest, D. (1997) *Human resource management and performance: A review and research agenda*. *International Journal of Human Resource Management* 8 260-276.

Guest, D. (1999) *Human resource management - the workers' verdict*. *Human Resource Management Journal* 9 (3), 5-28.

Guest, D.E. (2001) *Human resource management: when research confronts theory*. *International Journal of Human Resource Management* 12 (7), 1092-1106.

Habermas, J. (1984 (1981 in German)) *The Theory of Communicative Action: Vol. 1: Reason and the Rationalization of Society*. MA, Beacon Press.

Haggis, T. (2005) *Knowledge Must Be Contextual: Some Possible Implications of Complexity and Dynamic Systems Theories for Educational Research*. Liverpool, UK.

Hall T and Andriani, G. (1995) *Analysing intangible resources and managing knowledge in a supply chain context*. *European Management Journal* 16 (6), 680-692.

Hall, R and Andriani, P. (2002) *Managing Knowledge for Innovation*. *Long Range Planning* 68 (3), 75-90.

Halligan, J. (2004) *The Quasi-Autonomous Agency in an Ambiguous Environment: The Centrelink Case*. *Public Administration and Development* 24 140-158.

Hassan, I. (1987) *Pluralism in postmodern perspective*. In Calinescu, M and Heckscher, C and Donnelson, A. (1994) *The post-bureaucratic organization: New perspectives on organizational change*. London, UK, Sage.

Held, D. (1980) *Introduction to critical theory: Horkheimer to Habermas*. University of California, Berkeley.

Hempel, C. (1966) *Philosophy of Natural Science: Englewood Cliffs*. New Jersey, Prentice-Hall.

Hill, R. J. (2004) *Fugitive and Codified Knowledge: Implications for Communities Struggling to Control the Meaning of Local Environmental Hazards*. *International Journal of Lifelong Education* 23 (3), 220-248.

Hitt, D. (1995) *The Learning Organization: Some Reflections on Organizational Renewal*. *Leadership and Organisation Development Journal* 16 (8), 15-28.

Hitt, M. Hoskisson, R et al. (1994) Human Capital and Strategic Competitiveness in the 1990s. *Journal of Management Development* 13 (1), 32-48.

Hofstede, G. (1991) *Culture and Organisations: Software of the Mind*. McGraw-Hill, London.

Hofstede, G. (2001) *Cultures Consequences*. US. Sage.

Holland, J. H. (1995) *Hidden Order-How Adaptation Builds Complexity*. Reading, Massachusetts, Perseus Books.

Holmes, L. (2004) *Challenging the Learning Turn in Education and Training*. *Journal of European Industrial Training* 28(8/9), 620-639.

Horkheimer, M and Adorno, T. (1944/2002) *Dialectic of the Enlightenment*. Stanford, MA, Stanford University Press.

Huergo, E. (2006) *Innovation and Productivity Across Four European Countries*, *Oxford University Press* 22 (4), 480-489

Huselid, M ,A . (1995) *The impact of human resource management practices on turnover, productivity, and corporate financial performance* . *Academy of Management Journal* 38, 630-675.

Huselid, M, A and Becker, B,E . (1996) *Methodological issues in cross-sectional and panel estimates of the HR-firm performance link* . *Industrial Relations*, 35, 400-430.

Hussey, J and Hussey, R. (1997) *Business Research Methods*, McMillan Press.

Huzzard, T. (2004) *Communities of Domination? Reconceptualising Organisational Learning and Power*. *The Journal of Workplace Learning* 16 (6), 350-361.

Ikehara, H, T. (1999) *Implications of Gestalt Theory and Practice for the Learning Organization*. *The learning organization* 6 (2), 60-72.

Ives, W. Torrey, B et al. (1998) *Knowledge Management an Emerging Discipline with a Long History*. *Journal of Knowledge Management* 1 (4), 265-274.

James, W. (1917) *Selected Papers on Philosophy*. London, Dent and Sons.

James, W. (1975) *The Meaning of Truth*, 1911. Cambridge, Harvard University Press.

Johnson, P and Duberley, J. (2000) *Understanding Management Research*. London, Sage.

Kauffman, S. A. (1993) *The Origins of Order: Self-Organization and Selection in Evolution*. New York, Oxford University Press.

Kauffman, S. A. (1995) *At Home in the Universe: The Search for Laws of Self-Organization and Complexity*. New York, Oxford University Press.

Keene, A. (2000) *Complexity theory: the changing role of leadership*. *Industrial and Commercial Training* 32 (1), 12-25.

Kincheloe, J, L and McLaren, P, L. (1998) *Rethinking Critical theory and qualitative reserach*, in Denzin, N.K and Lincoln, Y, S. *The Landscape of Qualiative Research*. Thousand Oaks, CA, Sage.

Knights, D and Morgan, G. (1991) *Corporate Strategy, Organizations, and Subjectivity: A Critique*. *Organisation Studies* 12 (2), 250-278.

Kolakowski, L. (1972) *Positivist philosophy: from Hume to the Vienna Circle*. Trans, Harmondsworth, Penguin.

Koopmans, H. (2005) *A Symbiosis of Learning and Work-Practice. Knowledge Management and Management Learning: Extending the Horizons of Knowledge-Based Management*. New York, Springer.

Kotchen, J and Reiling, S, D. (2000) *Environmental attitudes, motivations, and contingent valuation of nonuse values: a case study involving endangered species. Ecological Economics* 32, 93-107.

Kramer, R and Lang, E. (1992-93) *The postmodern decision making paradigm: Moving beyond forced consistency. Speaker and Gavel* 30 (1-4), 55-68.

Kuhn, T, S. (1977) *The essential tension: selected studies in scientific tradition and change*. Chicago, Illinois, USA, University of Chicago Press.

Kuhn, T. (1970) *The Structure of Scientific Revolution*. Chicago, University of Chicago Press.

Kurtz, C, F and Snowden, D, J. (2003) *The New Dynamics of Strategy - Sense-Making in a Complex-Complicated World. IBM Systems Journal* 42 (3), 460-486.

Lakomski, G. (2001) *Organizational Change, Leadership and Learning: Culture as Cognitive Process. The International Journal of Educational Management* 15 (2), 62-78.

Lam, Y, L. (2001) *Toward Reconceptualizing Organizational Learning: A Multidimensional Interpretation. The International Journal of Educational Management* 15 (5), 210-220.

Laudan, L. (1977) *Progress and its problems: Toward a theory of scientific growth*. Berkeley, CA. University of California Press.

Laudan, L. (1996) *Beyond positivism and relativism: Theory, method, and evidence*. Boulder, CO, Westview Press in theory and practice, Scandinavian journal.

Lauglo, J. (2001) *Engaging with Adults. The Case for Increased Support to Adult Education*. Washington DC, World Bank, Africa Region.

Lave, J and Wenger, E (2000) *Legitimate Peripheral Participation in Communities of Practice. Strategic Learning in a Knowledge Economy: Individual, Collective and Organizational Learning Process*. Melbourne, Butterworth Heinemann.

Lederach, J,P. (1995) *Preparing for peace: Conflict transformation across cultures*. Syracuse, NY, Syracuse University Press.

Lepak, D, P and Snell, S, A. (2002) *Examining the human resources architecture: The relationships among human capital, employment and resource configurations*. *Journal of Management* 28 (4), 512-545.

Lepak, D. P and Snell, S, A. (1999) *The human resource architecture: Toward a theory of human capital allocation and development*. *Academy of Management Review* 24 (1), 30-49.

Lesser, E,L and Storck, J. (2001) *Communities of practice and organisational performance*. *IBM Systems Journal* 40 (4), 830-844

Levinthal, D and March, J. (1993) *The Myopia of Learning*, *Strategic Management Journal* 14 92-112.

Levitt, B and March, J. (1988) *Organisational Learning*, *Annual Review of Sociology* 14 315–345.

Lindblom, C, E. (1995) *The Science of 'Muddling' Through*.in *Public Policy: The Essential Readings*. Prentice Hall, London, Pitman.

Loermans, J. (2002) *Synergizing the Learning Organization and Knowledge Management*, *Journal of Knowledge Management* 6 (3), 284-292.

Lorsch, J. (1986) *Managing culture: The invisible barrier to strategic change*. *California Management Review* 28, 92-110.

Lovrek, I. Howlett, R. Lim, C, P. Jain, L. Phillips-Wren, G. (2010) *Knowledge-based intelligent systems and their applications*. *Journal of Intelligent and Fuzzy Systems* 21(1-2), 1-3

Lyotard, J. (1979) *The Postmodern Condition*. Manchester, Manchester University Press.

MacDuffie, J, P. (1995) *Human resource bundles and manufacturing performance: Organizational logic and flexible production systems in the world auto industry*. *Industrial and Labor Relations Review*, 48, 195-225.

Machlup, F and Mansfield, U. (1983) *The Study of Information: Interdisciplinary Messages*. New York, Wiley.

Macintosh, A, Filby, I and Tate, A. (1998) *Knowledge Asset Road Maps*, Basel, Switzerland.

Macmillan, I. (1978) *Strategy Formulation: Political Concepts*. West Publishing, St Paul.

Malhotra, Y. (2000) *Knowledge Assets in the Global Economy: Assessment of National Intellectual Capital*. *Journal of Global Information Management* 8 (3), 5-18.

Malhotra, Y. (2001) *Knowledge Management and Business Model Innovation*. Idea Group Publishing, London.

Malhotra, Y. (2005) *Integrating Knowledge Management Technologies in Organizational Business Processes: Getting Real Time Enterprises to Deliver Real Business Performance*, *Journal of Knowledge Management* 9, 2-28.

March, J. (1991) Exploration and Exploitation in Organisational learning, *Organisation Science* 2 (1), 70-89.

March, J. and Simon, H. (1958) *Organizations*. New York, John Wiley and Sons.

Marchand, D. (1998) Competing with Intellectual Capital in Georg von Krogh, Johan Roos and Dirk Kleine (eds) *Knowing in Firms: Understanding, Managing and Measuring Knowledge*. London, Sage.

Marcuse, H. (1965) On Science and phenomenology. in R. S. Cohen and M. W. Wartofsky, editors. *Boston studies in the philosophy of science*. Humanities Press, New York.

Marion, R. (1999) *The edge of organization : chaos and complexity theories of formal social systems*. Thousand Oaks, CA, Sage.

Marshall, N and Simpson, B. (2005) *Socially Constructing Emotion and Learning in Organisations: A Pragmatist Perspective. The Passion for Learning and Knowing*. Trento, Italy.

Marsick, V, J and Watkins, K, E. (1999) *Facilitating Learning Organizations: Making Learning Count*. Hampshire, England, Brookfield.

Martensson, M. (2000) *A Critical Review of Knowledge Management as a Management Tool*. *Journal of Knowledge Management* 4 (3), 202-218.

Martinez, M. (1998) The collective power of employee knowledge, *HRM Magazine* 43 (2), 86-94.

Martinez, M. (2011) *HR in Public Services, Critical Issues in Human resources Management*. London, CIPD.

Maslow, A. (1954) *Motivation and Personality*. Harper Brothers, New York.

McAuley, J, Duberley, J and Johnson, P. (2007) *Organization Theory*. Pearson. England.

McElroy, M, W. (2000) *Integrating complexity theory, knowledge management and organizational learning*. *Journal of Knowledge Management* 4 (3), 190-205.

McElroy, M. (2000) *Second-Generation KM: A White Paper, Knowledge Management* 4 (3)

McKelvey, B. (1999) *Avoiding complexity catastrophe in coevolutionary pockets: Strategies for rugged landscapes*. *Organization Science* 10 (3), 290-323.

McKern, B. (1996) *Building management performance for the 21st century*, *Practicing Manager* 17 (1), 12-22.

Miller, W, L and Morris, L. (1999) *Fourth Generation R&D: Managing Knowledge, Technology, and Innovation*. Hoboken NJ, Wiley.

Mintzberg, H and Lampel, J. (1999) *Reflecting on the strategy process*. *Sloan Management Review*, Spring 2-30.

Mintzberg, H and Waters, J. (1985) *Of Strategies Deliberate and Emergent*, *Strategic Management Journal*, 6, 255-275.

Mintzberg, H. (1979) *The Structuring of Organizations: A Synthesis of the Research*. Prentice Hall.

Mintzberg, H. (1983) *Power in and around Organizations*. Prentice Hall.

Mintzberg, H. (1983) *Structure in Fives: Designing Effective Organizations*. Prentice-Hall, New Jersey.

Mintzberg, H. (1987). *The Strategy Concept 1: Five Ps For Strategy*. *California Management Review*, Fall 10-24

Mintzberg, H. (1989) *Mintzberg on Management*. The Free Press, New York.

Mintzberg, H. (1998) *Five Ps for Strategy*, In: Mintzberg, H., J.B. Quinn and S. Ghoshal (Eds.): *The Strategy Process*, revised European Ed, Prentice-Hall, New Jersey.

Mintzberg, H. Ahlstrand, B and Lampel, J. (1998) *Strategy Safari: the complete guide through the wilds of strategic management*. *Journal of Management* 27 510-538.

Mintzberg, Henry (1994) *The rise and fall of strategic planning*. New York, The Free Press.

Mintzberg, Henry (1999) *Bees, flies, and CEOs; do we have too many bees making strategy and not enough flies?* *Across The Board*, January.

Mirvis, P (1996) *Historical Foundations of Organization Learning*. *Journal of Organizational Change Management* 7(5), 13-31.

Morel, B and R. Ramanujam (1999) *Through the Looking Glass of Complexity: The Dynamics of Organizations as Adaptive and Evolving Systems*. *Organization Science* 10 (3), 278-293.

Morey, D. Maybury, M and Thuraisingham, B. (2000) *Knowledge Management: Classic and Contemporary Works*. London, MIT Press.

Morgan, G and Smircich, L (1980) *The case for qualitative research*. *Academy of Management Review* 5, 491–500.

Morrison, J. (1997) *Organizational Memory Information Systems: Characteristics and Development Strategies*. *IEEE Computer*, 300309.

Mullins, L. (2002) *Management and Organisational Behaviour*. London. Pitman.

Mullins, L. (2010) *Management and Organisational Behaviour (9<sup>th</sup> Edition)*. London. Prentice Hall.

Nichols, R and Allen-Brown, V. (1996) *Critical theory and educational technology*. In D. Jonassen (Ed.) *Handbook of research for educational communications and technology*. New York, Simon and Shuster Macmillan. 226-252.

Nietzsche, F. (1954) *On Truth and Lie in an Extra-Moral Sense*, in *The Portable Nietzsche*. New York, Viking.

Nietzsche, F. (1965) *Nachlass*, in A Danto, *Nietzsche as Philosopher*, New York, MacMillan.

Nietzsche, F. (1967) *The Will to Power*, (1911) New York, Random House.

Nonaka, I and Konno, N. (1998) *The concept of Ba: building a foundation for knowledge creation*. *California Management Review* 40 (3), 40-54.

Nonaka, I and Takeuchi, H (1995) *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*. New York, Oxford University Press.

Nonaka, I and Toyoma, R. (2007) *Why do firms differ? The theory of knowledge-creating firm*, in: Ichijo, K., Nonaka, I. (eds.) *Knowledge creation and management. New challenges for managers*. Oxford University Press, Oxford.

Nonaka, I. (1988) *Toward Middle-up-Down Management: Accelerating Information Creation*. *Sloan Management Review* 29 (3), 8-32.

Nonaka, I. (1991) *The Knowledge-Creating Company*. *Harvard Business Review* 69 (6), 94-105.

Nonaka, I. (1994) *A Dynamic Theory of Organizational Knowledge Creation*. *Organization Science* 5 (1), 5-39.

Nonaka, I. Toyama, R and Byosiere, P. (2001) *A theory of organizational knowledge creation: understanding the dynamic process of creating knowledge*, in: Dierkes, M. Antal, A,B. Child, J. Nonaka, I. (eds.) *Handbook of organizational learning and knowledge*. Oxford University Press, Oxford.

Nyhan, B. Cressey, P et al. (2004) *European Perspectives on the Learning Organisation*. *Journal of European Industrial Training* 28 (1), 62-92.

OECD (2009) *Policy Response to the Economic Crisis: Innovation For Long Term Growth*. Available at <http://www.oecd.org/science/inno/42983414.pdf> [Accessed 22/09/2010]

Ostroff, C and Bowen, D, E. (2000) *Moving HR to a Higher Level*, in K. J. Klein, K, J and Kozlowski, S,W (Eds.) *Multilevel Theory, Research, and Methods in Organizations*. San Francisco, Jossey-Bass.

Oval, R. (2003) *Changing Pedagogy: Contemporary Vocational Learning*. Sydney. UOT.

Palmer, J. (1998) *The human organisation*. *The Journal of Knowledge Management*, 1 (4), 285-298.

Pan, S, L and Scarbrough, H. (1998) *A socio-technical view of knowledge-sharing at Buckman Laboratories*. *The Journal of Knowledge Management* 2 (1), 55-65.

Pervaiz, A and Zairi, M. (2000) *Innovation: A Performance Measurement Perspective*, in Joe Tidd (ed.) *From Knowledge Management to Strategic Competence: Measuring Technological, Market and Organisational Innovation*. London, Imperial College Press.

Petrash, G. (1996) *Dow's Journey to a Knowledge Value Management Culture*, *European Management Journal* 14, 4-10.

Pilbean, S and Corbridge, M. (2006). *People Resourcing*. London. Pearson.

Plato. (1956) *Protagoras and Meno*. Harmondsworth, Penguin.

Plato. (1974a) *The Republic*. Harmondsworth, Penguin.

Plato. (1974b). *Theaetetus*. Oxford, Clarendons Press.

Podsakoff, P, MacKenzie, S, Paine, J, and Bachrach, D. (2000) *Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research*, *Journal of Management*, 26, 513–562.

Poincare, H. (1902/1905) *Science and Hypothesis*. In *The Foundations of Science*. Trans. George Halsted. New York, The Science Press.

Polanyi, M. (1966) *The Tacit Dimension*. Doubleday & Company Inc, Reprinted 1983.

Porter, M, E and Kramer, M, R. (2006) *Strategy and society: The link between competitive advantage and corporate social responsibility*. *Harvard Business Review* 84 (12), 75-92.

Porter, M. (1980) *How competitive forces shape strategy*. *The McKinsey Quarterly*, Spring 30-55

Porter, M. (1980b). *Competitive Strategy: Techniques for Analyzing Industries*. New York, Free Press.

Porter, M. (1985) *Competitive Advantage*. New York, Free Press.

Porter, M. (1990). *The Competitive Advantage of Nations*. Macmillan, London.

Porter, M. (1997) Response to Letters to the Editor. *Harvard Business Review*

Prahalad, C and Hamel, G. (1990) *The Core Competences of the corporation*. *Harvard Business Review* 68 (3), 79-91.

Quinn, J. (1980) *Managing Strategic Change*. *Sloan Management Review* Summer 21, 4.

Reagans, R and McEvily, B. (2003) *Network structure and knowledge transfer: The effects of cohesion and range*. *Administrative Science Quarterly*, 48, 230-269.

Reed, M. (2005) *Reflections on the Realist Turn in Organization and Management Studies*. *British Journal of Management Studies* 42, (8).

Reichenback, H (2003) *The philosophy of Space and Time*. London, Dover Publication.

Rhenman, E. (1973) *Organization Theory for Long-Range Planning*. London, Wiley.

Rhodes, M, L and MacKechnie, G (2003) *Understanding Public Service Systems: Is There a Role for Complex Adaptive Systems Theory?* *Emergence* 5 (4), 52-85.

Richards, L. (2002) *How does HR face the Globalisation?* *European Business Review* 12.

Robertson, M and G, O'Malley Hammersley (2000) *Knowledge Management Practices within a Knowledge-Intensive Firm: The Significance of the People Management Dimension*. *Journal of European Industrial Training* 24 (2/3/4), 230-153.

Rousseau, D, M. (1995). *Psychological Contracts in organisations*. Newbury park, Sage.

Ryan, A. (1995) *John Dewey and the High Tide of American Liberalism*. New York, Norton.

Santosus, M and Surmacz, J. (2001) *The ABCs of knowledge management*. CIO.

Sayer, A. (2000) *Realism and Social Science*. London, Sage.

Scarborough, H. Swan, J et al. (1999) *Knowledge Management*. London, Institute of Personnel and Development.

Scarborough, H. (2003) *Knowledge Management, HRM and the Innovation Process*. *International journal of manpower* 24 (5), 500-520.

Scarborough, H. Bresnen, M et al. (2004) *The Processes of Project-Based Learning: An Exploratory Study*. *Management Learning* 35 (4), 490-502.

Schein, E. (1992) *The Learning Leader as Culture Manager, Organisational Culture and Leadership*. San Francisco, Bass.

Schein, E. (1999) *Empowerment, Coercive Persuasion and Organizational Learning: Do They Connect?* *The Learning Organisation* 6 (4), 160-172.

Schlick, M. (1917/1920) *Space and Time in Contemporary Physics*. Oxford, Oxford University Press.

Schneider, S. (2003) *Managing Across Cultures*. England, Prentice Hall.

Schostak, J, F. (2002) *Understanding, Designing and Conducting Qualitative Research in Education*. Buckingham, Open University Press.

Scott, P. (2005) Knowledge Workers: Social, Task and Semantic Network Analysis, *Corporate communications, An international journal* 10 (3), 255-278.

Seely- Brown, J. (1993) *Learning in Organisations*. Western Business School, Ontario.

Senge, P, M. (1990) *The Fifth Discipline: The Art and Practice of The Learning Organization*. New York, Doubleday.

Senge, P, M. (2006) *The Fifth Discipline: The Art and Practice of The Learning Organization (revised and updated)*. New York, Doubleday.

Shaw, P. (2002) *Changing Conversations in Organisations: A Complexity Approach to Change*. Routledge.

Silverman, D. (1993) *Interpreting qualitative data: Methods for analyzing talk, text and interaction*. London, Sage.

Silverman, D. (2000) Analyzing talk and text. In N. K. Denzin and Lincoln, Y,S (Eds.), *Handbook of qualitative research* (2<sup>nd</sup> ed.) Thousand Oaks, CA, Sage.

Simon, H. (1957) *Administrative Behaviour*. London, Macmillan.

Simon, H. (1962) *The Architecture of Complexity In: Proceedings of the American Philosophical Society*. 106 (6)

Simonin, B,L. (1999) *Transfer of Marketing Know-how in International Strategic Alliances: An Empirical Investigation of the Role and Antecedents of Knowledge Ambiguity*. *Journal of International Business Studies* 30 (3), 455-495.

Sims, H, P and Gioia, D, A. (1986) *The Thinking Organization*. San Francisco, Jossey-Bass.

Smith, M, K. (2002) *Chris Argyris: theories of action, double-loop learning and organisational learning* (Online). Available at [www.infed.org/thinkers/argyris.htm](http://www.infed.org/thinkers/argyris.htm) [Accessed 10/06/09]

Snowden, D, J. (2000) *Knowledge Elicitation: Indirect Knowledge Discovery*. *Knowledge Management* 3 (9), 1-10.

Snowden, D, J. (2002) *Complex Acts of Knowing: Paradox and Descriptive Self-Awareness*. *Knowledge Management* 6 (2), 85-112.

Snyder, P. (1978) *Towards One Science: Convergence of Traditions*. New York, St Martins Press.

Spencer, B. (2001) *Changing Questions of Workplace Learning Researchers. Sociocultural Perspectives on Learning through Work*. San Francisco, Jossey-Bass.

Spencer, B. (2002) *Research and the Pedagogics of Work and Learning. Journal of Workplace Learning* 14 (7), 290-307.

Spender, J, C and Grant, R. M. (1996) *Knowledge and the firm: Overview. Strategic Management Journal* 170–179

Spender, J, C. (1996) *Organizational Knowledge, Learning and Memory: Three Concepts in Search of a Theory. Journal of Organizational Change Management* 9 (1), 60-79.

Spender, J, C. (2003) *Exploring Uncertainty and Emotion in the Knowledge-Based Theory of the Firm. Information Technology and People* 16 (3), 256-289.

Spender, J, C. (2006a) *Getting Value from Knowledge Management. The TQM Magazine* 18 (3), 230-256.

Spender, J, C. (2006b) *Method, Philosophy and Empirics in KM and IC. Journal of Intellectual Capital* 7 (1), 12-28.

Stacey, R. (1996) *Complexity and creativity in organizations*. San Francisco, Berrett-Koehler.

Stacey, R. (1996) *Strategic management and organisational dynamics. 2nd edition*. London, Pitman Publishing.

Stacey, R. (2001) *Complex Responsive Processes in Organizations: Learning and Knowledge Creation*. London, Routledge.

Stacey, R. (2003a) *Learning as an Activity of Interdependent People. The Learning Organization* 10 (6), 320-335.

Stacey, R. (2003b) *Strategic Management and Organisational Dynamics: The Challenge of Complexity*. Harlow, Prentice Hall.

Stacey, R. (2007) *Strategic management and organisational dynamics. 5th edition*. London, Pearson.

Stacey, R. (2009) *Complexity and Organizational Reality: Uncertainty and the Need to Rethink Management after the Collapse of Investment Capitalism*. Routledge, Abingdon.

Stacey, R. (2010) *Strategic Management and Organisational Dynamics: The Challenge of Complexity*. London, Pearson.

Steels, L. (1993) *Corporate knowledge management, Proceeding of the International Symposium on Management of Industrial and Corporate Knowledge*. Compiègne, France.

Stewart T, A. (1991) *Brainpower: how intellectual capital is becoming America's most valuable asset*. *Fortune* 3 (June), 40-62.

Stewart, T, A. (1998) *Intellectual capital: The new wealth of organizations*. New York, Bantam.

Stewart, T, A. (2001) *The wealth of knowledge: Intellectual Capital and the twenty-first century organization*. New York, Currency.

Staruss, A. (1987) *Qualitative Analysis for Social Scientists*. New York, Cambridge.

Strauss, A and Corbin, J, M (1990) *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Calif, Sage.

Strauss, A and Corbin, J, M (1998a) *Grounded Theory Methodology - an Overview. Strategies of Qualitative Inquiry*. Calif, Sage.

Strauss, A and Corbin, J, M (1998b) *Basics of Qualitative Research - Techniques and Procedures for Developing Grounded Theory*. London, Sage.

Stump, D. (1989) *Henri Poincare's Philosophy of Science*. *Studies in History & Philosophy of Science* 20, 330-335.

Styhre, A. (2002) *Non-linear change in organizations: organization change management informed by complexity theory*. *Leadership & Organization Development Journal* 23 (6), 323-352.

Sveiby, K, E and Simons, R. (2002) *Collaborative climate and effectiveness of knowledge work*. *Journal of Knowledge Management* 6 (5), 402-435

Sveiby, K, E. (1997) *The new organizational wealth: Managing and measuring knowledge based assets*. Berrett Koehler, San Francisco.

Sveiby, K, E. (2001) *A knowledge-based theory of the firm to guide strategy formulation*. *Journal of Intellectual Capital* 2 (4), 335-359

Swan, J, Newell, S et al. (1999) *Knowledge Management and Innovation: Networks and Networking*. *Journal of Knowledge Management* 3 (4), 260-279.

Szulanski G. (1996) Exploring Internal Stickiness: Impediments to the Transfer of Best Practice Within the Firm. *Strategic Management Journal* (17), Special Issue: Knowledge and the Firm. (Winter, 1996) 20-45.

Szulanski, G. (2003) *Sticky Knowledge: Barriers to Knowing in the Firm*. London, Sage.

Tasaka, H. (1999) *Twenty-first century management and the complexity problem*. *Emergence* 1(4), 110-125.

Teece, D and Pisano, G et al. (1997). *Dynamic capabilities and strategic management*. *Strategic Management Journal* 18 (7) 505-533.

Teece, D, J. (2000) *Strategies for Managing Knowledge Assets: the Role of Firm Structure and Industrial Context*. *Long Range Planning* 33 30-55.

Tetenbaum, T. (1998) *Shifting paradigms: From Newton to chaos*. *Organizational Dynamics* 26 (4), 2-35.

Tidd, J, Bessant, J and Pavitt, K. (2001) *Managing Innovation – Integrating Technological, Market and Organisational Change*. John Wiley & Sons, New York.

- Torrington, D et al. (2005). *Human Resource Management*. London. Pearson.
- Toulmin, S. (1953) *The Philosophy of Science: An Introduction*. London, Hutchinson.
- Toulmin, S. (1972) *Human understanding*. Princeton, New Jersey, USA, Princeton University.
- Tsai W. and S. Ghoshal (1998) *Social capital and value creation: The role of Intrafirm Networks*. *The Academy of Management Journal* 41 (4), 460-478.
- Tsui , A, S et al (1997) Alternative approaches to the employee-organization relationship: Does investment in employees pay off? *Academy of Management Journal* 40 (5), 1080-1025.
- Tsui, A, S and Wang, D, X. (2002) *Employment relationships from the employer's perspective: Current research and future directions*. In Cooper, C.L. and Robertson, I.T. (eds) *International Review of Industrial and Organizational Psychology*. Chichester: Wiley.
- Tuomi, I. (1999) *Corporate Knowledge: Theory and Practice of Intelligent Organisations*. Metaxis, Helsinki, Finland.
- Vera, D and Crossan, M. (2003) *Organizational Learning and Knowledge Management: Toward an Integrative Framework*. Victoria, Blackwell.
- Visser, M. (2003) *Gregory Bateson on deuterio-learning and double bind: A brief conceptual history*. *Journal of the History of the Behavioral Sciences* 39, 260-280
- Visser, M. (2005) *The Social Construction of Organizational Learning and Knowledge: An Interactional Perspective*. Trento, Italy.
- Visser, M. (2007) *Deuterio-learning in organizations: A review and a reformulation*. *Academy of Management Review* 32 (2), 650-669.
- Von Krogh, G. Ichijo, K and Nonaka, I. (2000) *Enabling Knowledge Creation*. New York, Oxford University Press.

Vroom, V. (1964) *Work and Motivation*. New York, John Wiley and Sons.

Vygotsky, L. (1962) *Thought and Language*. Cambridge, Massachusetts, The M.I.T Press.

Waldrop, M. M. (1994) *Complexity: The Emerging Science at the Edge of Order and Chaos*. London, Penguin.

Weick, K. E and Roberts, K. H. (1993) *Collective Mind in Organizations: Heedful Interrelating on Flight Decks*. *Administrative Science Quarterly* 38, 350-385.

Weick, K. E and Westley, F (1996) *Organizational Learning: Affirming an Oxymoron*. *Handbook of Organization Studies*. London, Sage.

Weick, K. E. (2001) *Making Sense of the Organization*. Malden, MA, Blackwell Publishers.

Wenger, E. (2004) *Knowledge Management as a Doughnut: Shaping Your Knowledge Strategy through Communities of Practice*. *Ivey Business Journal* (January/February) 1-12.

Wenger, E. McDermott, R, A et al. (2002) *Cultivating Communities of Practice: A Guide to Managing Knowledge*. Boston, Mass., Harvard Business School Press.

Wheatley, M. J. (1999) *Leadership and the New Science: Discovering Order in a Chaotic World*. San Francisco, Berrett-Koehler Publishers.

Whitener, E. M. (2001) *Do "high commitment" human resource practices affect employee commitment? A cross-level analysis using hierarchical linear modeling*. *Journal of Management* 27, 510-545.

Wiig, K. M. (1997) *Knowledge Management: An Introduction and Perspective*. *The Journal of Knowledge Management* 1 (1), 5-19.

Wiig, K. (1993) *Knowledge management, the central management focus for intelligent acting organisations*. Schema Press 2.

Wiig, K.M. (1997) *Knowledge Management: Where Did It Come From and Where Will It Go? Expert Systems with Applications* 13 (1), 1-14.

Willmott, H. (2005) *Theorizing Contemporary Control: Some PostStructuralist Responses to Some Critical Realist Questions. Organization* 2 (5).

Winch, A and Ingram, H (2002) *Re-Defining the Focus of Workplace Learning. International journal of contemporary hospitality management* 14 (7), 351-369.

Wright, P, M and Gardner, T, M. (2003) *The human resource–firm performance relationship: methodological and theoretical challenges*. London, John Wiley and Sons.

Wright, P, M and Haggerty, J, J. (2005) *Missing variables in theories of strategic human resource management: time, cause, and individuals. Management Review* 16, 158–172.

Wright, P,M and McMahan, G, C. (1992) *Theoretical perspectives for strategic human resource management. Journal of Management* 18, 290-320.

Yang, J. (2005) *Knowledge integration and innovation: Securing new product advantage in high technology industry. Journal of High Technology Management Research* 16, 120-130.

Yin, R, K. (1994) *Case Study Research. Design and Methods*. Thousand Oaks, Sage.

**Sheffield Hallam University databases used:**

AMADEUS

Business Insights

Business Source Premier

Emerald Management Reviews

FAME

Global Marketing Information Database

GLOBUS and NTDB

IMID: Institute of Management International Database

Lexus Nexus Executive

MINTEL (Marketing Intelligence)

## **Appendix A**

### **Participants' information**

Doctorate of Business Research Project by Paul Allan

Learning and Knowing in Organisations

The aim of this research is to gain a greater understanding on workplace learning experiences and how this supports knowledge creation, development, sharing and institutionalisation. The researcher wishes to explore the experiences of organisational members in their learning and sharing of knowledge, so a theory can be developed about learning and knowledge management in organisations.

### **Your role as a participant**

Focus groups

As a volunteer you will take part in a discussion lasting between one/two hours with up to five other organisational members. The researcher will help facilitate these sessions and the participants will be encouraged to share their experiences about knowledge in the organisation. The researcher will start the discussions with questions like, *'Would you like to share your experiences about what has led to the creation of new knowledge, and/or its development, sharing institutionalisation in this organisation? For example, 'Have you ever had a really good idea that has made a significant or some difference to the work you do, your colleague or even the customers over a period of time'?, Can you think of a time when you learnt something new from an unusual source'?, Could you describe to us a time when you thought of something that made change happen in your work?',* these are used to prompt the narratives.

The researcher may ask you questions relating to your experiences and other participants may do the same to create an atmosphere of sharing, rather than critique.

The researcher will record the workshops using a Dictaphone and these recordings will be confidential and kept secure by the researcher. Once the recordings have been transcribed (selectively) they will not include any identifying descriptions and once this has been completed you will receive your groups' 'metanarrative' or combined narrative (summary). Following this exercise you will have the opportunity to provide feedback and confirm whether this was an accurate reflection of the workshop.

### **Theme finding workshop**

Following these workshops, one group of five volunteers from the original eighteen or so focus group members will take part in a further two workshops. This will be a very lengthy exercise but will be rewarded by providing a greater understanding of learning and knowledge in their organisation and will provide a very novel approach to problem solving and planning.

These participants will work together and help develop a list of emerging themes and categories from the narratives. These workshops will draw heavily on the participant's experiences and understandings. Once again these sessions will be recorded using a Dictaphone.

At the end of these workshops, participants would have developed a list of emerging themes and clustered them together. Participants in these workshops would have helped develop a map of interrelating themes and a learning and knowledge framework.

## Appendix B

### Grounded Theory-Open Coding

Discussions drawn from:

- Glaser and Strauss (1967) *The Discovery of Grounded Theory*.
- Strauss and Corbin (1990) *Basics of Qualitative Research*.
- Charmaz (2006) *Constructing Grounded Theory*

Open coding is the part of the analysis concerned with identifying, naming, categorising and describing phenomena found in the text. Essentially, each line, sentence, paragraph etc. is read in search of the answer to the repeated question **"what is this about? What is being referenced here?"**

These labels refer to things like hospitals, information gathering, friendship, social loss, etc. They are the nouns and verbs of a conceptual world. Part of the analytic process is to identify the more general categories that these things are instances of, such as institutions, work activities, social relations, social outcomes, etc.

We also seek out the adjectives and adverbs - the properties of these categories. For example, about a friendship we might ask about its duration, and its closeness, and its importance to each party. Whether these properties or dimensions come from the data itself, from respondents, or from the mind of the researcher depends on the goals of the research.

It is important to have fairly abstract categories in addition to very concrete ones, as the abstract ones help to generate general theory.

Consider what is implied in the following passage of text (Strauss and Corbin, 1990, p78)

## Text Fragment 1

***Pain relief is a major problem when you have arthritis. Sometimes, the pain is worse than other times, but when it gets really bad, whew! It hurts so bad, you don't want to get out of bed. You don't feel like doing anything. Any relief you get from drugs that you take is only temporary or partial.***

One thing that is being discussed here is PAIN. Implied in the text is that the speaker views pain as having certain properties, one of which is INTENSITY: it varies from a little to a lot. (When is it a lot and when is it a little?) When it hurts a lot, there are consequences: don't want to get out of bed, don't feel like doing things (what are other things you don't do when in pain?). In order to solve this problem, you need PAIN RELIEF. One AGENT OF PAIN RELIEF is drugs (what are other members of this category?). Pain relief has a certain DURATION (could be temporary), and EFFECTIVENESS (could be partial).

One can see that this sort of analysis has a very emic cast to it, even though I think that most grounded theorists believe they are theorising about how the world 'is' rather than how respondents see it.

The process of naming or labelling things, categories, and properties is known as coding. Coding can be done very formally and systematically or quite informally. In grounded theory, it is normally done quite informally. For example, if after coding much text, some new categories are invented; grounded theorists do not normally go back to the earlier text to code for that category. However, maintaining an inventory of codes with their descriptions (i.e., creating a codebook) is useful, along with pointers to text that contain them. In addition, as codes are developed, it is useful to write memos known as code notes that discuss the codes. These memos become fodder for later development into reports.