

CHAPTER 1

INTRODUCTION

1.1 CONTEXT OF THE RESEARCH PROBLEM

The global economy of the modern world, also called the New Economy, is characterised by globalisation, growing customer demands, greater competition and continual advances in technology. This has forced organisations to rethink the way(s) in which they operate and do business. Knowledge has become one of the most important assets that can enable organisations to be among the top players. Knowledge in organisations can be explicit and recorded, or can be tacit (i.e. in people's minds). In the past, organisations were good at creating, disseminating, organising, recording and retrieving explicit knowledge (also called information). Organisations have however found that it is the tacit knowledge (expertise, know-how, skills, etc.) of their staff and clients that give them the edge above their competitors. Tacit knowledge, though, is situated in people's heads and when people leave the organisation, the knowledge leaves with them. Some tacit knowledge can be recorded (made explicit), but a big part of it can never be recorded, documented or captured. This has created a very real need. How can tacit knowledge, which is very valuable to organizations, be disseminated and embedded in the organisation for future use? The answer lies in the utilization of Communities of Practice.

A literature review revealed that a vast array of Internet articles and journal articles on the topic were published, but books specifically focusing on the topic were found to be few. The reason for this could be that the term Communities of Practice was only used for the first time at the end of the 1990's. The review also showed that Communities of Practice have been utilized with great success by organisations in the business and manufacturing sectors. It was also found that research have mostly focused on the functioning and utilization of Communities of Practice in these sectors. A search on the Nexus database of the National Research Foundation of South Africa however showed that little research had been done on the application of Communities of Practice in learning organisations such as libraries, especially in South Africa. Academic libraries, in much the same manner as business and manufacturing organisations, are confronted

with the ever-increasing problem of capturing and embedding the tacit knowledge of not only their own staff, but also of clients, in this case academics, researchers and students, at their respective universities. This presented an opportunity for research. During the literature survey it was also found that much were written on knowledge management in academic libraries, as well as on academic libraries as learning organisations. The researcher realised that these concepts are interrelated to the concept of Communities of Practice, and decided to include them in the research.

The aim of this study was thus to determine how knowledge can be managed through Communities of Practice in a learning organisation such as an academic library. The Academic Information Service at the University of Pretoria, South Africa was chosen as a case study because the researcher worked for the organisation and was aware of Communities of Practice initiatives in the organisation. With this in mind, the researcher then formulated a problem statement, which will be discussed in the next section.

1.2 PROBLEM STATEMENT

The central research problem centred on the question of how knowledge can be managed through Communities of Practice in a learning organisation such as an academic library.

To address the central research problem, the following questions were formulated:

- What is meant with the concepts knowledge management, learning organisation and Communities of Practice?
- What interrelationship exists between the knowledge management, learning organisation and Communities of Practice concepts?
- What role does Communities of Practice play in the management of knowledge in a learning organisation?
- What are the development stages in the implementation of Communities of Practice to support knowledge management?
- What are the critical factors for the success of Communities of Practice in the management of knowledge in a learning organisation?

In addressing the research problem, a shortcoming in the literature on knowledge management was looked into, namely the role that Communities of Practice play in a learning organisation, and specifically in an academic library.

1.3 DEMARCATION OF THE STUDY

Though other methods can be used to manage knowledge in organisations, the focus of this study was on Communities of Practice as a method to manage knowledge. Furthermore, while Communities of Practice can be found in organisations across all sectors of society, this study concentrated on the management of knowledge through Communities of Practice in a specific academic library operating as a learning organisation. It was felt that lessons learned from this study could assist other academic libraries in the management of their tacit knowledge. The Academic Information Service of the University of Pretoria, South Africa, was chosen as a case study, and respondents from different sections of the organisation, who are involved in such Communities, were chosen as part of the empirical study.

1.4 RESEARCH METHOD

A qualitative research approach was followed when conducting this study. Qualitative research is described by Babbie et al. (2001: 270) as the research approach in social research that takes as its departure point the insider perspective on social action. In other words, human action is studied from the perspectives of the social actors themselves. The primary aim of studies using this approach is to describe and to understand, rather than to explain human behaviour (Babbie et al. 2001: 270). Qualitative studies use qualitative methods (e.g. snowball sampling, theoretical selection of cases, purposive sampling, etc.) to get access to research subjects. Qualitative data-collection methods can include participation, observation, semi-structured interviewing, etc. (Babbie et al. 2001: 270)

The research design used in this study includes both empirical and non-empirical study. Empirical research according to Mouton (2001: 51-52) focuses on real-life objects, for example physical objects (matter), cultural objects (art and literature), technology, human beings (individuals or groups), human actions and historical events, biological organisms and processes, social interventions (programmes or systems), social

organisations and institutions, and collectives (e.g. countries, nations or cities). Non-empirical research is described by Mouton (2001: 52) as research dealing with conceptual problems, for example scientific concepts or notions, scientific methods and techniques, the body of scientific knowledge or literature, scientific theories and models, schools of thought, scientific data, worldview and philosophies. The non-empirical part of this study thus consisted of a literature study of the concept and the empirical part of this study focused on a case study. A case study was used because case studies are rich in contextual knowledge, take various perspectives into consideration, and attempt to understand the effects of multilevel social systems on subjects' perspectives and behaviours (Babbie et al. 2001: 281).

1.4.1 LITERATURE STUDY

As a first step in the investigation of the management of knowledge through Communities of Practice in a learning organisation, a non-empirical literature study of the subject field was conducted. This was felt to be essential in order to help define the key concepts and laying a framework for the research design. Literature studies according to Mouton (2001: 87) are used to determine what has been done in the field of study through a review of the existing scholarship or available body of knowledge, so that one can get a clear picture of how other researchers have investigated the research problem you are interested in. A literature study can *"ensure that one does not duplicate a previous study"*; it can help *"to discover what the most recent and authoritative theorising about the subject is"*; it can assist one *"to find out what the most widely accepted empirical findings in the field of study are"*; it can assist in the identification of *"available instrumentation that has proven validity and reliability"*; and help *"to ascertain what the most widely accepted definitions"*, theories, models and hypotheses on *"the key concepts in the field are"* (Mouton 2001: 87). In this study, business-related literature on the topic was used as a basis for application in the academic environment. Results of this literature study can be found in Chapters 2 to 4 and are not discussed in this introductory chapter. The results of the literature study were then verified by the findings of the interviews (See Chapters 5-6).

1.4.2 CASE STUDY

As stated in the section on the context to the problem statement, the Academic Information Service of the University of Pretoria, South Africa was used as a case study for the empirical research. Five individuals in the organisation who were involved in Communities of Practice were identified through a qualitative method of purposive sampling. Purposive sampling is described by Babbie et al. (2001: 166) as the method whereby you *“select your sample on the basis of your own knowledge of the population, its elements, and the nature of your research aims”*.

In choosing the right qualitative data-collection method, the researcher had to consider the various data-collection methods that can be used in a case study. These included basic individual interviews, in-depth individual interviews, semi-structured interviews, focus group interviews, observation, etc. (Babbie et al. 2001: 289-293). The researcher then decided upon semi-structured interviews, because these interviews with their *“face-to-face interaction between the interviewer and an interviewee”* provided an *“understanding of experiences”* or situations as described *“by the interviewee in his or her own words”* (Schurink 1998: 20). Using qualitative research interviews was thus an attempt to understand the subject from the respondents' point of view, and an attempt *“to unfold and uncover their lived world prior to scientific explanations”* (Kvale 1996: 1). According to Qualitative research for social workers: phases, steps, and tasks (1996: 65) *“semi-structured interviews can sometimes be called guided interviews”*. These types of interviews, because of their flexibility, allowed the researcher to explain questions and elaborate on them. It also allowed the researcher to explore unplanned topics that came up during the interview, and made it possible for the researcher to understand the respondents' viewpoints and reasons behind it. This would not have been possible if questionnaires were used. Data collected from respondents included feelings, thoughts, opinions and experiences in the AIS, University of Pretoria (UP) concerning Communities of Practice as knowledge management instruments in the AIS.

The semi-structured interviews conducted in the AIS contained predetermined questions. All respondents were asked the same questions, which were helpful when comparisons were drawn with other respondents. After the interviews, the answers received from individuals were sent back to the respondents via e-mail to verify that the

researcher understood and interpreted the answers correctly. Changes suggested by the respondents were then implemented.

In order to further validate the findings received during the individual semi-structured interviews, a focus group interview were held where the individuals that were involved in the individual interviews were brought together in a group situation. The questions and findings from the individual interviews were then discussed and verified with the focus group. Suggestions from this interview were then implemented in the results. The advantage of using focus groups is that they *"provide an opportunity to observe a large amount of interaction on a topic in a limited period of time"* (Babbie et al. 2001: 292). Discussions in *"these groups also provide direct evidence about similarities and differences in the participants' opinions and experiences"* (Babbie et al. 2001: 292).

The methods of analysis used to analyse the results gained through the semi-structured and focus group interviews included the following:

- Pattern-matching, where patterns emerging from the data collected from the case study are matched with patterns found in the results from the literature study; and
- Explanation building, where *"the idea is to generate explanations about the case"* (Yin 1994 as cited by Babbie et al. 2001: 283).

These methods of analysis means that findings are tested for their fit with previous research and theory on the subject. Linkages between findings and previous knowledge help to demonstrate the generalisability of the findings, called *analytic generalisation* by Babbie et al. (2001: 283).

1.5 FORESEEN BENEFITS OF THE STUDY

The study aspires to contribute to the subject field in the following manner:

- Understanding how knowledge are managed in learning organisations;
- Understanding the value of Communities of Practice for an academic library;
- Identifying possible Communities of Practice in libraries;
- Identifying the possible roles library staff can play in Communities of Practice;

- Shedding light on possible technologies that can be used in Communities of Practice;
- Convincing management of the importance of Communities of Practice in their organisation, as well as their essential role in the development and nurturing of these Communities.

1.6 TERMINOLOGY

From a practical point of view, certain terms and abbreviations have been used frequently in this study. It was therefore deemed necessary to give a description of these terms and to list the abbreviations that were used with their full form.

1.6.1 EXPLANATION OF CONCEPTS

TERM/CONCEPT	DESCRIPTION
Community of Practice	A network of people emerging spontaneously, and held together by informal relationships and common purpose, that share common knowledge or a specific domain, expertise and tools, and learn from one another.
Domain	A joint enterprise or undertaking emerging from a people's shared understanding of their situation (Wenger 1998: 73, 77).
Community	A social entity that is formed through relationships of mutual engagement between people (Wenger 1998: 73).
Practice	Shared repertoire and resources such as tools, documents, routines, stories, vocabulary, symbols, artefacts, etc. that embody the accumulated knowledge of the Community (Wenger 1998: 47-50, 72-73).
Explicit knowledge	Expressed knowledge, which can be recorded, stored or searched (Collison & Parcel 2001: 16).
Information management	The application of management principles to the acquisition, organization, control, dissemination and use of information relevant to the effective operation of organizations of all kinds (International Encyclopedia of Information and Library Science 1997: 187).

Information specialist	An academic librarian who is primarily concerned with the processing of information in a particular area of knowledge rather than with the control of documents (Harrod 1990: 309).
Intellectual capital	Knowledge, which can be utilized for moneymaking or other useful benefits. It can include the skills and knowledge that an organisation has developed about how to deliver its products and services, skills and knowledge of individual or groups of employees whose knowledge is deemed critical for the organisation's success, as well as the totality of its documents on processes, customers, research results, and other information of value to competitors (Intellectual Capital SearchCRM.com: Online).
Invisible College	Unofficial/informal groups of knowledgeable researchers.
Knowledge	Capacity for informed action (Page-Shipp 2001).
Knowledge management	An organizational discipline that optimizes culture, processes and infrastructure in creating, using and especially re-using knowledge, to ensure that every client receives optimal value-addition to his/her "capacity for informed action" and thereby improves organizational sustainability (Page-Shipp 2001).
Knowledge worker	A knowledge worker is an employee whose major contribution depends on him/her employing his/her knowledge rather than his/her muscle power and co-ordination (Drucker 1988: 564).
Learning organisation	An organisation that can identify, develop and utilize its tacit and explicit knowledge capabilities, enabling the organisation to expand its capacity to learn and grow, and to modify its behaviour to reflect new knowledge and insights, and in doing so to improve its performance and success.
Listserv	A mailing list software program that automatically distributes mailing lists on a particular subject (LIS 2004: Online).
Metadata	Metadata is data about data. Metadata is commonly used to identify information that describes a Web asset, most typically an HTML file. (Upstream CIO: Online)
"New Economy"	The "New Economy" can be described as an evolution stemming from the late 20 th century, and is driven by the

	following: the personal computer, networks, the Internet, telecommunications, information and knowledge, rapid globalization, e-commerce, and elimination of barriers to trade (mobility) (Bothma 2000: 23).
Portal	<i>"An integrated and personalized web-based interface to information, applications and collaborative services. Access to most portals is limited to corporate employees (an intracompany portal) or corporate employees and certain qualified vendors, contractors, customers and other parties within the extended enterprise (an intercompany portal)"</i> (Upstream CIO: Online)
Tacit knowledge	Personal knowledge embedded in individual experience and involving such intangible factors as personal belief, perspective and values (Ponelis and Fairer-Wessels 1998: 3).

1.6.2 ABBREVIATIONS

AI	Artificial intelligence
AIDS	Acquired Immune Deficiency Syndrome
AIS	Academic Information Service
CoP	Community of Practice
CRM	Customer Relationship Management
e	Electronic
ERP	Enterprise Resource Planning
FAQ	Frequently Asked Questions
GAELIC	Gauteng Environs Libraries Consortium
GCATS	GAELIC Cataloguers
HIV	Human Immunodeficiency Virus
IMPS	Information Management Procurement Service
IT	Information Technology
KMPG	Knowledge Management Practitioners Group of Pretoria
NER	National Electricity Regulator (South Africa)
OCR	Optical Character Recognition
PARC	Palo Alto Research Centre

SARIS	South African Research Information Service
SECI	Socialisation, externalisation, combination and internalisation
TQM	Total Quality Management
UNISA	University of South Africa
UP	University of Pretoria
URL	Uniform Resource Locator

1.7 EXPOSITION OF CHAPTERS

The aim of the introductory chapter, **Chapter 1**, was to state the research problem. This was done by discussing the context to the research problem, the problem itself, the demarcation of the study and the research methodology followed to conduct this study. In the last part of the chapter, the foreseen benefits of the study were indicated and terms and concepts used in this study was defined and described.

Chapter 2 provides an overview of the concept of knowledge management. Different perspectives on knowledge are explored, followed by definitions of the concept knowledge, a discussion of knowledge work, types of knowledge and the processes of knowledge creation, knowledge transfer and knowledge capture. Following this, the concept of knowledge management is defined, after which the possibility of knowledge management as a discipline is described. This is followed by a discussion on the purpose and value of knowledge management, and the knowledge management models of value to the study. Next, different perspectives on knowledge management are discussed, followed by a discussion of the drivers that led to the development of knowledge management. An overview of the different stages through which knowledge management developed is provided, as well as an overview of the interdisciplinary character of knowledge management as a concept.

The concept of the learning organisation is discussed in **Chapter 3**. The discussion is started with an overview of definitions of learning as found in literature, as well as an overview of the different types of learning pertinent to this study. Wenger's perspective on learning as *learning in the context of lived experience and participation in the world* is also touched upon. This is followed by an investigation of the definitions and origin of the learning organisation concept. The idea of disciplines to describe learning organisations is explored next, followed by an overview of the characteristics of learning

organisations. Then the processes as well as the stages through which learning organisations develop are explored, and finally the relationship between knowledge management and learning organisations are discussed.

Chapter 4 deals with the concept of Communities of Practice. As a starting point, the origin and development of the concept is explored. Next, the meaning of the concept is investigated at the hand of definitions and characteristics as found in literature. This is followed by a discussion of the value Communities of Practice have for organisations, Communities and the individual members of these Communities. A description of techniques that inspire participation in Communities of Practice is next, followed by a discussion of the development stages of a Community of Practice. Then a short description of the possible interactions taking place in an operational Community of Practice is given. Following this, the critical factors that contribute to the success of Communities of Practice are discussed. Next, an overview of the techniques for sharing/transfer of knowledge in Communities of Practice is offered, followed by a discussion of those factors that enhance or hinder knowledge transfer in Communities of Practice, and a discussion of the differences between teams, Communities of Interest and Communities of Practice. A discussion of the idea of managing knowledge through Communities of Practice in learning organisations follows next by way of exploring the relationship of Communities of Practice and learning organisations, the management of knowledge through Communities of Practice, management of knowledge through Communities of Practice in academic libraries, as well as the role of the information professional in Communities of Practice.

The empirical study can be found in **Chapter 5**. This chapter comprises the case study, focusing on Communities of Practice as a technique for the management of knowledge in the Academic Information Service of the University of Pretoria, South Africa. The introduction to the chapter contains the aim of the empirical study. This is followed by an overview of the research methodology used to acquire the findings, and an overview of the aspects that are dealt with in the chapter. Next, an overview is given on the background of the Academic Information Service, as well as on the profiles of the respondents. The findings are then discussed in the following format: question first, followed by an overview of why the question was asked, a table with the answers from the respondents, and a deduction from the answers after the table.

In **Chapter 6**, conclusions are made regarding findings in the empirical study, based on the literature study. This is followed by recommendations to the Academic Information System, and suggestions of areas in which future research should be conducted.

1.8 SUMMARY

This chapter gave an overview of the research problem by first discussing the context to the research problem. This was followed by an overview of the research problem itself. After that followed a discussion on the demarcation of the study and on the research methodology followed to conduct this study. In the last part of the chapter, the foreseen benefits of the study were indicated and terms and concepts used in this study defined and described. Finally, an exposition was given of the different chapters in the study.

The next chapter is the starting chapter of the literature study and contains an overview of the concept of knowledge management.